SPONSOR

U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington DC 20460

USEPA TASK ORDER/BATTELLE CONTRACT NO.

TO 14/ EP-W-11-063

TEST SUBSTANCE

2-Ethylhexyl 4-Hydroxybenzoate

STUDY TITLE

Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

TEST GUIDELINE

US EPA, OCSPP 890.2200 (July 2015)

STUDY DIRECTOR

Douglas J. Fort, Ph.D.

STUDY INITIATION DATE

February 1, 2016

STUDY COMPLETION DATE

July 12, 2018

AMENDED STUDY COMPLETION DATE

October 3, 2019

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REPORT NUMBER

BATT01-00393

Total Pages: 1068

COMPLIANCE STATEMENT

This study was conducted in compliance with the following GLP principles:

- United States Environmental Protection Agency, (FIFRA), Good Laboratory Practice Standards, Title 40 Code of Federal Regulations Part 160 (effective October 16, 1989) with the following exceptions:
  - Analysis of the laboratory dilution water for organics, pesticides and metals at Red River Laboratory (Oklahoma City, Oklahoma) using standard EPA methods was not GLP-compliant;
  - Per Sponsor-mandated exception, the test substance was not chemically-characterized in a GLP-compliant manner;
  - Per Sponsor-mandated exception, range-finding studies conducted as a component of FEL study (BATT01-00385) used to determine test concentrations for the present study, BATT01-00393, were not performed in a GLP-compliant manner;
  - Per Sponsor-mandated exception, following study finalization, specimens remaining at FEL, and embedded tissues or specimens maintained by EPL will be disposed of in accordance with QMP, QAPP, and respective facility SOPs.

Since the analyses of the dilution water was conducted following standard validated methods, this exception will not be expected to impact on the study results. Lack of GLP-compliant chemical characterization or GLP-compliant range-finding studies will not be expected to impact study results, nor change the conclusions drawn from the study.

GLP Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

FEL Study No.: BATT01-00393

Test Substance: 2-Ethylhexyl 4-Hydroxybenzoate (CAS No. 5153-25-3)

Douglas J. Fort, Ph.D.
Fort Environmental Laboratories, Inc.
(Study Director)

10/3/2019
Date

Vincent J. Brown, Ph.D.
(Sponsor Representative)

30 OCT 2019
Date

1. STATEMENT OF QUALITY ASSURANCE UNIT

This study was conducted in accordance with Standard Operating Procedures (SOPs) and the protocol as approved by the Sponsor. The Fort Environmental Laboratories, Inc. (FEL) Quality Assurance Unit conducted the inspections detailed below:

Type of Inspection	Dates		
	Inspection	Reported to Study Director	Reported to Management
Protocol Review	2/1/2016	2/1/2016	2/1/2016
Technical Systems Audit	3/1/2016	3/1/2016	3/1/2016
Technical Systems Audit	3/24/2016	3/24/2016	3/24/2016
Technical Systems Audit	4/7/2016	4/7/2016	4/7/2016
Technical Systems Audit	4/12/2016	4/12/2016	4/12/2016
Technical Systems Audit	7/19/2016	7/19/2016	7/19/2016
Audit of Data Quality	6/12/2017	6/12/2017	6/12/2017
Draft Report Audit	9/19/2017	9/19/2017	9/19/2017
Final Report Audit	7/12/2018	7/12/2018	7/12/2018
Amended Final Report Audit	10/3/2019	10/3/2019	10/3/2019

This report accurately reflects the raw data obtained during the performance of this study. The protocol and all protocol amendments and deviations are presented as an attachment (Appendix A). Four protocol deviations occurred during the course of this study. Procedures pertinent to this study are described in this report. The primary goal of the Quality Assurance Unit (QAU) is to ensure the accuracy and precision of routine laboratory operations, data generated reports, and presentation of studies conducted by FEL. The final report is considered to constitute an accurate and complete reflection of the data generated from this study.

Michael Mathis, QAU Manager — 10/3/2019 Date

2. CERTIFICATION

We, the undersigned, declare that this report provides an accurate evaluation of the data obtained from this study.

Study Director:

Douglas J. Fort, Ph.D., Study Director, FEL — 10/3/2019 Date

Performing Laboratory Management:

Deanne Wehmeier, Facility Manager, FEL — 10/3/19 Date

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5. EXECUTIVE SUMMARY

A Medaka Extended One Generation Reproduction Test (MEOGRT) under EPA OCSPP Harmonized Test Guideline 890.2200 using 2-ethylhexyl 4-hydroxybenzoate (2-EHHB) was performed. This test was intended to measure chemical effects on reproduction and reproductive development in medaka exposed through multiple generations of their life-cycle. The test method began by exposing young adult fish (the P or F_0 generation) to 2-EHHB. The test was performed using a flow-through system to expose three generations of fish (F0, F1, and F2), starting with young adults 10-15 weeks post fertilization (wpf), to 5 concentrations of 2-EHHB and a control over a 32-week period (includes F2 generation). Table 1 provides test conditions. Thus, the assay allowed evaluation of both structural and activation-based endocrine pathways within and across generations.

This test measured the reproductive performance of medaka. The test was initiated by exposing 10-15 weeks post fertilization (wpf) reproductively active fish for 4 weeks, during which time the chemical was theoretically distributed to the gametes and tissues of the parental generation (F_0). Eggs were collected during the week 4 to start the F_1 generation. Fish in the F_1 generation were reared for a total of 15 wpf. For developmental endpoints, fish were sampled at 9 wpf. F_1 generation spawning was assessed from 11 through 15 wpf. A F2 generation was started after the third week of the reproduction assessment and reared until completion of hatching. The protocol for the complete F2 generation is the same as for the F1 generation with a minor difference at the beginning of F2 generation. The F1 generation is started with the pooled embryo output from six replicates in each treatment and 12 replicates in the control(s). Since the reproductive assessment is done on double the number of replicates, the F2 generation is started from the pooled embryo output from 12 replicates in each treatment and 24 replicates in the control(s). In all other aspects, the F2 generation protocol is identical to the F1 generation, except hatching survival is not measured. The in-life phase concludes during study week 32. In the conduct of the present study, FEL relied on internal SOPs, per the GLP regulations and documented QAU practices subject to sponsor and other government audit. These SOPs are not available to the public.

5.1. PERFORMANCE CRITERIA

- Maintain concentrations of the test chemical in solution within ±20% of the mean measured values over the entire test period.
    - The mean measured concentrations were consistent. Expressed as a percent of the nominal concentration, the mean measured concentrations were within 80% of nominal concentration values.
    - The coefficient of variation was >20% in the 6.25, 12.5, and 25.0 µg/L 2-EHHB treatments, however; the higher values were a function of the sole replicate sampling within each treatment and control throughout the majority of the in-life study (see Table 7). CV was based on the standard deviation of mean measured concentration of each replicate and mean measured treatment concentration per facility SOP. Overall, the mean measured concentrations were a reasonable estimation of exposure concentration, and the 22% treatment-level CV did not impact the interpretation of the results or conclusions drawn.
- The DO should be ≥ 60% of air saturation value throughout the test.

- DO was ≥4.6 mg/L or 61.3% of saturation.

- The pH should be maintained between 6.5-8.5. The inter-replicate/inter-treatment differentials should not exceed 0.5.
    - The range of pH measured in the control and treatments was between 6.5 and 8.5 and the inter-replicate/inter-treatment differentials did not exceed 0.5.
- The mean temperature throughout the test should be between 24 and 26°C over the duration of study. Replicates within a treatment should not be statistically different from each other, and treatments within the test should not be statistically different from each other.
    - The temperature in the study was maintained at 25±1ºC, and the inter-replicate range in temperature was maintained at ≤0.5ºC.
- Hatching of eggs should be ≥ 80% in the controls (in each of the F1 and F2 generations). Survival after hatching should be ≥ 80% (average) until 3 wpf.
    - Mortality in each replicate of the controls was <20% and the hatchability of eggs in the F1 and F2 generations was >80% until 3 wpf in the control.
- Survival of fish from 3 wpf to 8 wpf should be greater than 90% survival.
    - Survival in hatchlings was >90% throughout the F1 and F2 generations.
- Control XX and XY fish should have a mean weight of at least 100 mg and a mean length of at least 20 mm at the subadult sampling stage.
    - F1 control XX and XY fish mean weight was >100 mg and mean length was >20 mm in subadults sampled in the F1 and F2 generations.

- Control fecundity should be greater than 20 eggs per pair per day. These should be greater than 75% fertile. For adequate statistical power, 16 pairs in the control group should exceed these minimum requirements.
    - Mean reproductive fecundity for the F0 and F1 controls was and 19.2 and 19.1 eggs/female/day, respectively. Based on the outcome of statistical analyses relating to the effect of 2-EHHB exposure on reproductive fecundity, each treatment was found to be significantly less than the control (Joncheere-Terpstra, $p<0.05$). Thus, reproduction fecundity in the control produced adequate statistical power for the present study.
    - Fertilization of eggs produced in the F0-F2 generations was >80% during the study.
- At least 16 pairs in the control group should exceed these minimum requirements. The prevalence of XX males (determined by comparison of genotype and histological sex) in the control population should be less than 5%. In addition, less than 2% of control XY fish should have intersex of any severity in the adult histopathology samples.
    - There was no occurrence of intersex fish in the F1 and F2 controls.

5.2. TEST VALIDITY

- At least three treatment levels with three uncompromised replicates must be available for analysis. Excessive mortality, which compromises a treatment, is defined as >20% mortality in 2 or more replicates that cannot be explained by technical error.
    - Study result: none of the test concentrations, including the control, had compromised replicates.
- There should be sufficient reproduction in at least the third highest group and all lower groups of the F0 to fill the hatching incubators.

  - Study result: sufficient reproduction in at least the third highest group and all lower groups of the F0 to fill the hatching incubators was achieved.
- There should be adequate survival in the third highest test exposure and lower exposure groups in F1 to allow endpoint evaluation at the subadult sampling.
  - Study result: adequate survival in the third highest test exposure and lower exposure groups in F1 to allow endpoint evaluation at the subadult sampling was achieved.
- Survival in the second highest exposure group of the F1 should be ≥20%.
  - Study result: survival in the second highest exposure group of the F1 was ≥20%.
- Note signs of overt toxicity. Signs of overt toxicity may include, but are not limited to, floating on the surface, lying on the bottom of the tank, inverted or irregular swimming, and being nonresponsive to stimuli.
  - Study result: none of the test concentrations demonstrated overt toxicity.
- NOEC and LOEC values for each endpoint should be determined.
  - Study result: NOEC and LOEC values for each endpoint were determined (Table 75).

In summary, the present study met performance criteria and test validity established for the Medaka Extended One Generation Reproduction Test (MEOGRT) under EPA OCSPP Harmonized Test Guideline 890.2200 (3) with the exceptions noted above.

A summary of the results is provided below.

5.3. MEASURED TEST CONCENTRATIONS

- The mean measured concentrations for the 0.0 (control), 6.3, 12.5, 25.0, 50.0 and 100 µg/L 2-EHHB treatments (nominal) were 0.321 (0.212 µg/L MQL), 5.32, 11.3, 24.0, 48.8, and 101 µg/L 2-EHHB.

5.4. SURVIVAL

- No significant effects on juvenile or adult survival were observed during the study regardless of generation.

5.5. F0 GENERATION

5.5.1. REPRODUCTIVE FECUNDITY AND FERTILIZATION

- The mean number eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0414 [6.3 µg/L 2-EHHB treatment] and <0.0001 for others).
- The mean number of fertilized eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0458 [6.3 µg/L 2-EHHB treatment] and <0.0001 for others).

5.5.2. GROWTH

- The mean female body weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0027).

- Mean male body weights in each of the 2-EHHB treatments were significantly greater than in the control (Jonckheere-Terpstra test, p=0.0121, 0.0026, 0.0020, 0.0102, 0.0039, respectively).
- The mean female body length in the 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0003 and <0.0001 for remainder, respectively).
- No effect of 2-EHHB exposure on male body length was noted.

5.6. F1 GENERATION

5.6.1. HATCHING SUCCESS

- The mean hatch (%) in the 100 µg/L 2-EHHB treatment was significantly less than in the control (KW-ANOVA, Dunn's test, p=0.0156). The median time to hatch in the 12.5 - 100 µg/L 2-EHHB treatments were significantly greater than in the control (Cox Proportional Hazard Model, Chi Square, p=0.0188, 0.0105, 0.0092, and 0.0180, respectively).

5.6.2. SUBADULT GROWTH

- The mean subadult female body weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0007).
- The mean subadult female body length in the 50.0 and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0279 and 0.0003, respectively).
- The mean male body weight in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).
- The mean subadult male body length in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0355).

5.6.3. SUBADULT LIVER WEIGHT AND *VTG* 1 MRNA EXPRESSION

- The mean subadult female liver weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0392).
- Mean subadult male liver weights in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Dunnett's test, p=0.0248).
- Mean subadult female liver *vtg* 1 mRNA expression ranged from 2.436 in the 6.3 µg/L 2-EHHB treatment to 3.048 log10(copies *vtg* 1)/ng total RNA in the control.
- The mean subadult male liver *vtg* 1 mRNA expression in the 100 µg/L 2-EHHB treatment was significantly greater than in the control (Jonckheere-Terpstra test, p=0.0070). Similar levels of expression were observed in both male and female subadult fish suggesting that the state of development may have been insufficient to characterized differences.

5.6.4. SUBADULT SECONDARY SEXUAL CHARACTERISTICS AND SEX RATIO

- No papillae were observed in subadult females. Mean subadult male papillae counts in the 50.0 and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0473 and 0.0070, respectively).
- No effect of 2-EHHB exposure on subadult sex ratios were noted.

- In addition, no genotypic-phenotypic mismatches were identified.

5.6.5. REPRODUCTIVE FECUNDITY AND FERTILIZATION

- The mean number eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p<0.0001 for each).
- The mean number of fertilized eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p<0.0001 for each).

5.6.6. ADULT GROWTH

- The mean adult female body weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0407). Mean adult male body weights in the 50.0 and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0417 and 0.0169, respectively).
- No effects on adult female or male body length were observed.

5.6.7. ADULT SECONDARY SEXUAL CHARACTERISTICS

- No anal fin papillae were observed in adult females and no effect on papillae counts were noted in adult male medaka.

5.6.8. HISTOPATHOLOGY

5.6.8.1. THYROID

- No treatment-related thyroid gland findings in subadult or adult control or medaka exposed to 2-EHHB were noted.

5.6.8.2. LIVER

5.6.8.2.1. SUBADULT

- There were no liver findings in 2-EHHB-treated subadult male or female fish that were substantially different from those of F1 sub-adult controls (RSCABS, p>0.05).

5.6.8.2.2. ADULT

5.6.8.2.2.1. MALE

- Reduction in focus of cellular alteration in adult male medaka liver of minimal (RSCABS, p=0.0367) in the 100 µg/L 2-EHHB treatment and mild severity in the 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, 0.0499 and 0.0414, respectively) relative to the control was observed. Although decreases of foci of cellular alteration in males of the 50.0 and 100.0 µg/L treatment groups as compared to F1 adult control males were noted; such foci are known to occur spontaneously in medaka, and a reduction in the generally low frequency of that particular benign proliferative lesion was not considered to be toxicologically relevant.
- Decreased mild and moderate glycogen-type hepatocellular vacuolation were observed in liver from adult male medaka exposed to 25.0, 50.0, and 100 µg/L 2-EHHB (RSCABS,

p=0.0041, 0.0011, 0.0000, respectively), and 12.5, 25.0, 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0427, 0.0002, 0.0000, 0.0000, respectively) compared to control.

5.6.8.2.2.2. **FEMALE**

- Decreased mild and moderate glycogen-type hepatocellular vacuolation were also observed in adult female medaka from the 50.0, and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0061 and 0.0000, respectively), and 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0387, 0.0095) compared to control.
- In addition, increased presence of minimal eosinophilic cytoplasmic inclusions was noted in adult livers from female medaka exposed to 50.0, and 100 µg/L 2-EHHB (RSCABS, p=0.0432 and 0.0063, respectively) relative to controls.

5.6.8.3. **KIDNEY**

5.6.8.3.1. **SUBADULT**

- Based on pathological examination, no treatment-related kidney findings in 2-EHHB-treated subadult male or female fish were identified. A few findings were statistically decreased in 2-EHHB-treated females relative to control females, including cellular debris/casts in tubules (minimal) (RSCABS, p=0.0488 and 0.0131 for 50 and 100 µg/L treatment groups), tubule dilation (minimal) (RSCABS, p=0.0489 for 100 µg/L treatment groups), and vacuolation of the tubular epithelium (minimal) (RSCABS, p=0.0416, 0.0365, 0.431, 0.328, and 0.0161 for the 6.25, 12.5, 26, 50.0, and 100 for 50 and 100 µg/L treatment groups, respectively); however, decreases in these particular types of minor background findings are not considered to be toxicologically relevant.

5.6.8.3.2. **ADULT**

5.6.8.3.2.1. **MALE**

- Reduction in minimal kidney tubule cellular debris/cast (RSCABS, p=0.0314); and minimal, mild, and moderate tubule dilation (RSCABS, p=0.0227, 0.0034, and 0.0357, respectively) in adult male medaka exposed to 100 µg/L 2-EHHB and mild severity in the 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, 0.0499 and 0.0414, respectively) relative to the control was observed.
- Decreases in tubular cellular debris/casts and tubular dilation in the 100.0 µg/L treatment group males relative to control males; were background-type findings and thus, not considered toxicologically significant. Similar decreases did not occur in females.

5.6.8.3.2.2. **FEMALE**

- Increased presence of mild eosinophilia of tubule kidney epithelium was noted in adult female medaka from the 100 µg/L 2-EHHB treatment (RSCABS, p=0.0021) relative to controls.

5.6.8.4. GONADS

5.6.8.4.1. SUBADULT

5.6.8.4.1.1. MALE

- The predominant finding in the testes of male subadults exposed to 2-EHHB was an increase in the prevalence of testicular hypoplasia/atrophy (moderate to severe) in males of the 50 and 100 µg/L treatment groups relative to controls (RSCABS, p=0.0003 and 0.0000 for minimal, 0.0008 and 0.0000 for mild and moderate, and 0.0061 for severe [100 µg/L treatment group only]). In each instance, testicular hypoplasia/atrophy presented as a small, underdeveloped gonad populated primarily by spermatogonia and spermatocytes. Given the age of these sub-adult fish, it is more likely that affected testes were hypoplastic than atrophic. Mean testis stage scores results were not considered to be a reliable indicator of effect for males of this sacrifice due to the large number of testes that were too small to reasonably stage (i.e., the central efferent duct was not evident in the acquired sections). The occurrence of intraluminal histiocytic cells (mild) in the testis of a single 100.0 µg/L treatment group male, although statistically significant (RSCABS, p=0.0307), was not considered toxicologically relevant. Despite the statistical increase in Stage 3 scores in the 12.5, 25.0, 50.0 and 100.0 µg/L dose groups relative to controls (RSCABS, p=0.0152, 0.0219, 0.0468, 0.0051, respectively), mean testis stage scores results were not considered to be a reliable indicator of effect for males of this sacrifice due to the large number of testes that were too small to reasonably stage (i.e., the central efferent duct was not evident in the acquired sections).

5.6.8.4.1.2. FEMALE

- There were no ovary findings in 2-EHHB-treated subadult females that were substantially different from those of F1 subadult control females. Mean ovary stage scores results were not considered to be a reliable indicator for this sacrifice due to the small number of ovaries examined per group. There were no ovary findings in 2-EHHB-treated subadult females that were substantially different from those of F1 subadult control females. Mean ovary stage scores results were not considered to be a reliable indicator for this sacrifice due to the small number of ovaries examined per group.

5.6.8.4.2. ADULT

5.6.8.4.2.1. MALE

-
- Increased occurrence of minimal testicular degeneration in adult males was observed in each of the treatments relative to the control (RSCABS, p=0.0180, 0.0280, 0.0339, 0.0069, and 0.0070, respectively).
- Although a decrease in the prevalence of interstitial fibrosis in adult males of all 2-EHHB treated groups relative to control males was observed; a reduction in the frequency of this particular finding was not considered toxicologically relevant.

5.6.8.4.2.2. FEMALE

- Increased necrosis of minimal post-ovulatory follicles in adult female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0348) was observed. However, overall no findings were

related to 2-EHHB exposure in the ovaries of female medaka. Mean ovary stage scores were generally comparable among control and treated females.

- Although instances of accelerated necrosis of post-ovulatory follicles were recorded in single adult females in each of the 50 and 100.0 µg/L treatment groups, its relationship to treatment remains at most uncertain.

5.7. F2 GENERATION

5.7.1. HATCHING SUCCESS

- The mean hatch in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).
- The median time to hatch in the 12.5 - 100 µg/L 2-EHHB treatments were significantly greater than in the control (Cox Proportional Hazard Model, Chi Square, p=0.0188, 0.0105, 0.0092, and 0.0180, respectively).

5.7.2. SUBADULT GROWTH

- The mean subadult female body weights in the 12.5 - 100 µg/L 2-EHHB treatments were significantly greater than in the control (Jonckheere-Terpstra test, p=0.0018, 0.0278, 0.0098, and 0.0243, respectively).
- The mean male body weights in the 100 µg/L 2-EHHB treatment was significantly greater than in the control (Jonckheere-Terpstra test, p=0.0446).
- No effect of 2-EHHB exposure on female or male body lengths were observed.

5.7.3. SUBADULT LIVER WEIGHT AND *VTG* 1 MRNA EXPRESSION

- The mean female subadult liver weight in the 6.3, 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0005, <0.0001, <0.0001, <0.0001, and 0.0001, respectively).
- The mean subadult male liver weight the 6.3, 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatmenst were significantly less than in the control (Jonckheere-Terpstra test, p=0.0273, <0.0001, <0.0001, <0.0001, and 0.0002, respectively).
- The mean subadult male liver *vtg* 1 mRNA expression in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0491).
- No effect of 2-EHHB exposure was noted in subadult female liver *vtg* 1 mRNA expression relative to controls. As with F1 subadult fish, similar levels of expression were observed in both male and female subadult fish suggesting that the state of development may have been insufficient to characterized differences.

5.7.4. SUBADULT SECONDARY SEXUAL CHARACTERISTICS AND SEX RATIO

- No anal fin papillae were observed in adult females and no effect on papillae counts were noted in adult male medaka.
- No effect of 2-EHHB exposure on subadult sex ratios were noted.
- In addition, no genetic-phenotype mismatches were identified.

5.7.5. REPRODUCTIVE FECUNDITY AND FERTILIZATION

- The mean number of eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0059 for the 6.3 µg/L 2-EHHB treatment, and <0.0001 for the remainder).
- The mean number of fertilized eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0038 and <0.0001 for the remainder, respectively).

5.7.6. ADULT GROWTH

- The mean adult female body weight in the 6.3, 12.5, 25.0, and 50.0 µg/L 2-EHHB treatments were significantly greater than in the control (KW-ANOVA, Dunn's test, p=0.0058, <0.0001, 0.0004, and 0.0052, respectively).
- The mean adult male body weight in the 6.3, 12.5, 25.0, and 50.0 µg/L 2-EHHB treatments were significantly greater than in the control (KW-ANOVA, Dunn's test, p=0.0004, <0.0001, <0.0001, and <0.0001, respectively).
- No effect of 2-EHHB exposure on adult female body lengths were observed.
- The mean body male body lengths in the 12.5, 25, 50.0, and 100 µg/L 2-EHHHB treatments were significantly greater than in the control (Jonckheere-Terpestra Test, p=0.0179, 0.00127. 0.0192, and 0.0354).

5.7.7. ADULT SECONDARY SEXUAL CHARACTERISTICS

- No anal fin papillae were observed in adult females.
- The mean adult male papillae count in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0074).

5.7.8. HISTOPATHOLOGY

5.7.8.1. LIVER

5.7.8.1.1. MALE

- Reduction in mild and moderate glycogen-type hepatocellular vacuolation were noted in male medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0364 and 0.0296 [mild] and 0.0341 and 0.0179 [moderate], respectively).
- Increased presence of minimal and mild cystic degeneration was noted in liver from male medaka exposed to 25.0 - 100 µg/L 2-EHHB relative to controls (RSCABS, p=0.0020, 0.0013, 0.0391 and 0.0044, 0.0486, and 0.0319, respectively).

5.7.8.1.2. FEMALE

- Increased moderate basophilia in liver from female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0183) was observed.
- Reduction in mild glycogen-type hepatocellular vacuolation (RSCABS, p=0.0023) and minimal (RSCABS, P=0.0400) and mild (RSCABS, p=0.0473) granulomatous inflammation in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0183) were observed.

- Although an increase in the severity of basophilia in females of the 100 µg/L treatment group as compared to control females; no evidence of a dose-response pattern among the lower treatment groups, and this finding was not considered to be treatment-related. The very slight decrease in the prevalence of granulomatous inflammation (a background finding) in the livers of 2-EHHB-treated females relative to controls was not considered toxicologically relevant.

5.7.8.2. KIDNEY

5.7.8.2.1. MALE

- The frequency of minimal cellular debris/casts was only slightly greater in the kidneys of 100 µg/L dose treatment males compared to controls, although this result was determined to be statistically significant. However, a similar increase was not observed in the kidneys of 2-EHHB -treated females, or in F1 adult males or females; consequently, that result was unlikely to have been treatment-related. In addition, although statistically significant, decreases in tubular dilation (50 and 100 µg/L treatment group females) and mineralization (100 µg/L treatment group males) were not considered to be toxicologically relevant.

5.7.8.2.2. FEMALE

- The occurrence of tubule dilation was significantly less in female fish exposed to 100 and 50 µg/L 2-EHHB relative to the control (RSCABS, p=0.0246 and 0.0212, respectively). The presence of tubular cellular debris of minimal severity in adult male fish exposed to 100 µg/L 2-EHHB was significantly greater than the control (RSCABS, p=0.0471). In addition, a significantly decreased occurrence of mild tubule mineralization in male fish exposed to 100 µg/L 2-EHHB was observed (RSCABS, p=0.0175).

5.7.8.3. GONADS

5.7.8.3.1. MALE

- Increased presence of testicular interstitial cells of minimal severity in the 25.0, 50.0, and 100 µg/L 2-EHHB treatments relative to the control was observed (RSCABS, p=0.0105, 0.0344 and 0.0121, respectively). This finding was most prominent in fish of the 25 and 100 µg/L treatment groups.
- Testis stage scores tended to be slightly higher in 2-EHHB-exposed males than controls, and were only substantially greater in the 50 µg/L treatment group; however, the lack of dose-response pattern suggested this is likely a spurious result.
- Other noteworthy gonad findings that were unlikely to be treatment-related included a malignant dysgerminoma (ovary-like germ cell neoplasm) with liver metastasis in a genetically male control fish (Animal No. 2570-J1).

5.7.8.3.2. FEMALE

- A reduction in minimal granulomatous inflammation in adult female medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0464 and 0.0301) and severe oocyte retention in adult female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0473) was observed.

- Increased presence of stage 2 ovaries in adult female medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0453 and 0.0307, respectively) was observed.
- Statistical differences for decreased granulomatous inflammation (50 and 100 µg/L treatment groups), decreased oocyte retention (100 µg/L treatment group), and increased ovarian stage scores (50 and 100 µg/L treatment groups) all involved spontaneous types of occurrences in which the differences were based on very small numbers of animals; all are thus considered to be spurious results unrelated to 2-EHHB treatment (decreases in granulomatous inflammation or oocyte retention would not be considered toxicologically relevant in any event).
- Other noteworthy gonad findings that were unlikely to be treatment-related included ovarian spermatogenesis in a single 100 µg/L treatment group female (Animal No. 2697-A2). The malignant dysgerminoma was comprised of mildly disorganized immature ovarian tissue that exhibited oogenic progression to the cortical alveolar and even early vitellogenic phases, although the most mature cells were generally atretic. Occasional small patches of clonal cells within the oogenic tissue resembled spermatocytes. A small amount of metastatic dysgerminoma tissue was evident in a hepatic vein in several sections, and this consisted of perinucleolar oocytes and primordial ovarian tissue. Ovarian spermatogenesis was characterized by the presence of disorganized but well-differentiated spermatogenic tissue, including spermatogonia, spermatocyte, and spermatid phases, located primarily at the anterior and ventral aspects of the affected ovary. Although this anomaly occurred in the ovary of a 100 µg/L treatment group female, there is no other evidence (e.g., findings of gender ambiguity in other 2-EHHB-treated fish) to suggest that ovarian spermatogenesis was exposure-related in this case.

5.8. OVERT TOXICITY AND BEHAVIOR

- No significant effects on behavior or signs of overt toxicity were noted throughout the study.

6. CONCLUSIONS (COMPARISON OF EFFECTS BETWEEN GENERATIONS)

6.1. SURVIVAL

- No effects on survival were observed during the study.

6.2. REPRODUCTIVE FECUNDITY AND FERTILIZATION

- Reproductive fecundity (egg production and fertilization) was markedly reduced in each generation (F0, F1, and F2) in medaka exposed to 2-EHHB compared to the control. Based on these results, 2-EHHB appeared to consistently reduce reproductive performance in medaka across generations.

6.3. HATCHING SUCCESS

- A reduction in hatching success based on both decreased percent hatch and increased time to hatch was observed in the F1 generation. In the F2 generation, percent hatch was not different from the control, but increased time to hatch in eggs from fish exposed to 2-EHHB was observed compared to the control. Although the percent hatch was not altered in the F2 generation, three of the four endpoints reflecting hatching success were impacted suggesting that 2-EHHB was capable of reducing hatching success across generations.

6.4. GROWTH

- Subadult growth (weight and length for F1 and weight only for F2 generations) was reduced in fish exposed to 2-EHHB relative to the control. Various aspects of adult growth (weight and length) in both sexes were observed in each generation. Thus, exposure to 2-EHHB at both the sub-adult and adult level reduced growth across generations.

6.5. SECONDARY SEXUAL CHARACTERISTICS AND SEX RATIOS

- No anal fin papillae were found in subadult female medaka from either F1 or F2 generations. Reduced anal fin papillae were found in F1 generation male subadult medaka exposed to 2-EHHB, but not F2 generation male subadult fish. No anal fin papillae were found in adult females, and a reduction in anal fin papillae was found in adult males in the F2 generation. 2-EHHB exposure did not affect sex ratios in subadult medaka from either the F1 or F2 generations. Overall, deciphering the trends in reduced anal fin papillae in male fish was difficult. Caution in interpreting reduction at the subadult level in the present study is warranted as the growth and development of the fish including the control may not have been adequate to assess secondary sexual characteristics. The reduction in the F2 generation adult male medaka, however; may be an indication of reduced masculinization.

6.6. LIVER WEIGHT AND LIVER *VTG*1 MRNA EXPRESSION

- Female subadult liver weight in the F1 generation and both male and female liver weight in F2 generation was reduced in fish exposed to 2-EHHB compared to controls. Liver vitellogenin mRNA expression in F1 and F2 females was not affected by 2-EHHB exposure; however, increased expression in F1 generation males and decreased expression in F2 generation males were observed. Based on the results obtained, inferring trends across generations was not warranted. Expression profiles may have reflected the state of differentiation of the subadult fish at the time of sacrifice.

6.7. HISTOPATHOLOGY

Many of the pathological findings in the present study found to be statistically significant based on RSCABS analyses were considered by the pathologist to not have toxicological-relevance to the study. One of the most prominent findings was minimal to severe testicular hypoplasia in F1 sub-adult males of the 50.0 and 100.0 µg/L 2-EHHB dose groups. Other findings associated with 2-EHHB exposure relative to concurrent controls included: a decrease in the amount of hepatocellular glycogen-type vacuolation in the livers of male and female F1 adults; a slightly higher prevalence of cytoplasmic eosinophilic inclusions among F1 adult females of the 50.0 and 100.0 µg/L dose groups; a slight increase in the severity of tubular epithelial eosinophilia in F1 adult females of the 100.0 µg/L dose group, and the 50.0 µg/L dose group to a lesser degree; a slightly greater prevalence of testicular degeneration in 2-EHHB-exposed F1 adult males; an increased prevalence of cystic degeneration of the liver in some male and female 2-EHHB–treated groups of the F2 generation; and an increase in the prevalence of increased interstitial cells in the testes of F2 adult males of especially the 25.0 and 100.0 µg/L dose groups. Decreased body growth in 2-EHHB fish may have contributed to two of the treatment-associated findings: testicular hypoplasia in F1 sub-adult males, and decrease in hepatocellular glycogen in F1 adult males and females. There were no findings associated with 2-EHHB exposure in the thyroid glands or ovaries of medaka from any of the three sacrifices.

7. INTRODUCTION

FEL was contracted by Battelle Memorial Institute to perform the Medaka Extended One Generation Reproduction Test (MEOGRT) under EPA OCSPP Harmonized Test Guideline 890.2200 using 2-ethylhexyl 4-hydroxybenzoate (2-EHHB) as directed by USEPA Task Order (TO) 14 under USEPA/Battelle Memorial Institute contract EP-W-11-063 and sponsor-approved Quality Assurance Project Plan (QAPP) (1). This study was conducted in accordance with the USEPA FIFRA, Good Laboratory Practice (GLP) Standards, Final Rule, 40 CFR Part 160 (2), Medaka Extended One Generation Reproduction Test (MEOGRT) under EPA OCSPP Harmonized Test Guideline 890.2200 (3), and under the FEL Quality Assurance Management Plan (QAMP) (4), relevant facility standard operating procedures (SOPs), and the following Study Protocol No. BATT01-8, prepared for FEL Study No. BATT01-00393. At the sponsor's request to complete a F2 generation termination following F3 generation hatch, it is noted that the methods used for the F2 generation relied on a portion of the DRAFT Test Guidelines for the MEOGRT (5). The in-life study was initiated on February 29, 2016 and concluded October 3, 2016. In the conduct of the present study, FEL relied on internal SOPs, per the GLP regulations and documented QAU practices subject to sponsor and other government audit. These SOPs are not available to the public.

This test was intended to measure chemical effects on reproduction and reproductive development in medaka exposed through multiple generations of their life-cycle. The test method began by exposing young adult fish (the P or F_0 generation) to 2-EHHB. The test was performed using a flow-through system to expose three generations of fish (F0, F1, and F2), starting with young adults 10-15 weeks post fertilization (wpf), to 5 concentrations of 2-EHHB and a control over a 32-week period (includes F2 generation), and concluded with the hatching of the F3 generation. Thus, the assay allowed evaluation of both structural and activation-based endocrine pathways within and across generations.

8. STUDY PERSONNEL

- Dr. Vince Brown, Battelle - Study Monitor
- Dr. Douglas Fort, FEL – Study Director
- Ms. Deanne Fort, FEL – Manager, In-life study facility
- Mr. Michael Mathis, FEL – QAU Manager
- Dr. Tom Leak, EAG Laboratories, Inc. – PI, analytical chemistry
- Ms. Amanda Milligan, EAG, Vitellogenin
- Dr. Jeffrey Wolf, EPL – PI, histopathology
- Mr. Kevin Todhunter, FEL – Technician
- Ms. Alex Oppenborn, FEL – Technician
- Ms. Jennifer Staines, FEL – Technician
- Ms. Franchesca Rollerson, FEL – Technician
- Mr. Troy Fort, FEL – Technician

9. ANIMAL WELFARE COMPLIANCE

This study complied with all applicable sections of the Final Rules of the Animal Welfare Act regulations (9 CFR). The Sponsor made particular note of the following:

- The Sponsor (or Representative) signature on the protocol documents for the Study Director the Sponsor's assurance that the study described in this protocol did not unnecessarily duplicate previous experiments.

- Whenever possible, procedures used in this study were designed to avoid or minimize discomfort, distress or pain to animals. All methods were described in this study protocol or in written laboratory standard operating procedures.

- By design, this study killed and/or resulted in the pain and distress of test organisms. Euthanasia of test organisms before completion of the test would have interfered with study objectives. Upon completion of the test all distressed animals were painlessly euthanized in a timely manner.

- Methods of euthanasia used during this study conformed with the above referenced regulation and are consistent with EPA Test Guidelines OCSPP 890.2200 (3).

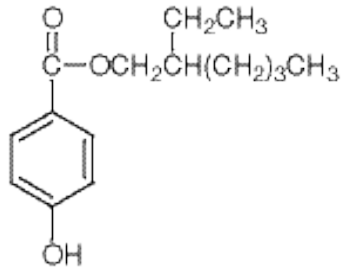
10. MATERIALS AND METHODS

10.1. TEST SUBSTANCE

2-EHHB (TCI America, Portland, OR, lot number 7CZZO, expiration and re-test date not provided, (HPLC) with 99.3% (w/w) pure (per Certificate of Analysis produced by TCI America) was received from TCI America (Appendix B). Physicochemical information is provided below:

Name: 2-ethylhexyl 4-hydroxybenzoate
IUPAC Name: 2-ethylhexyl 4-hydroxybenzoate

Structure:



Phase/Color: liquid, colorless, pale yellow
Specific Gravity: 1.04 g/mL at 25°C
Solubility (water): 6.0 mg/L at 25°C
Boiling Point: 270.0°C

Synonyms:	2-ethylhexylparaben, 4-hydroxybenzoic acid 2-ethylhexyl ester, 4-hydroxybenzoic acid octyl ester, octyl 4-hydroxybenzoate, octylparaben
CAS number:	5153-25-3
Molecular formula:	$C_{15}H_{22}O_3$
Molecular weight:	250.3 g/mole

Due to limited water solubility, a solid phase saturator column was used to maximize 2-EHHB concentrations in water and was used to prepare a master stock solution that was ultimately used to prepare each test concentration. The solid phase saturator columns were prepared by FEL. The test substance was stored in the chemical repository at room temperature (RT) while not in use as recommended by the Certificate of Analysis supplied by the TCI America. The definitive test concentrations to be used were determined by a range-finding study designed to identify the concentration of test chemical that causes lethality and morbidity.

10.2. LABORATORY WATER

FEL used dechlorinated (charcoal-filtered) tap water as the dilution water for this study. The dechlorinated laboratory water was prepared by passing tap water through a 4-filter system; a multimedia filter to remove suspended solids in the feed water; a 10" pre-treatment filter (5 µm) to remove any additional solids; a 3.6 ft^3 activated virgin carbon treatment filter to remove chlorine, ammonia, and higher molecular weight organics; and a 5 µm polishing filter to remove any carbon particles from the carbon treatment phase. The dechlorinated tap water also served as the laboratory control water. Water quality characteristics of the laboratory water were monitored bimonthly for pH, dissolved oxygen (DO), conductivity, hardness, alkalinity, ammonia, residual oxidants; and at least annually for iodide (I-), polyaromatic hydrocarbons (PAHs), pesticides, and metals. Results of dilution and laboratory control water analysis for pesticides, PAHs, and metals are attached in Appendix A. In addition, I- analyses were performed on dilution/laboratory control water on Study Day (SD) 0, F1 D 0, F1 SW 9, F1 conclusion, F2 D0, F2 SW 9, and F2 conclusion. Sufficient iodine (I-) needs to be available to the fish through a combination of aqueous and dietary sources for the thyroid gland to synthesize thyroid hormones to support normal metamorphosis. Based on I- levels measured during the present study, no supplementation was necessary.

10.3. TEST SYSTEM

The test species was medaka (*Oryzias latipes*) (3). Medaka is a well-studied laboratory animal that exhibits ease of use in the laboratory, rapid development, and simplicity of observation during development and reproduction. It was also the test organism required in the EPA Test Guidelines OCSPP Harmonized Test Guideline 890.2200 – Medaka Extended One Generation Reproduction Test (MEOGRT) (3). Medaka was readily induced to breed in captivity and published methods exist for its culture, as well as short-term lethality, early life-stage and full life-cycle tests. All fish were maintained on a 16-h light:8 h dark photoperiod. To maximize medaka reproduction within the MEOGRT, the test aquaria were visually isolated from the general laboratory environment by shielded sliding glass doors on the diluter system. A record of observations and any prophylactic and therapeutic disease treatments during the culture period preceding the test were maintained. The exposure phase was initiated with sexually dimorphic

adult fish from a laboratory supply of reproductively mature animals cultured at 25 ± 1°C. The fish were actively spawning. For the whole group of fish used in the test, the range in individual weights by sex at the start of the test was maintained within ± 20% of the arithmetic mean weight of the same sex. A sub-sample of fish was weighed before the in-life test was initiated to estimate the mean weight. The fish selected were the same age within the range of 10 to 15 weeks post fertilization (wpf) [females ≥ 300 mg; males ≥ 250 mg]. Test fish were selected from a single laboratory stock, which was acclimated for at least two weeks prior to the test under conditions of water quality and illumination similar to those used in the test. Test fish were obtained from an in-house culture, as shipping of adult fish is stressful and will interfere with reliable spawning. Mortalities in the culture fish were recorded and the following criteria applied: 1) Mortalities of greater than 10% of culture population in seven days preceding transfer to the test system: reject the entire batch; 2) Mortalities of between 5% and 10% of population: acclimation for seven additional days; if more than 5% mortality during second seven days, reject the entire batch; and, 3) Mortalities of less than 5% of population in seven days preceding transfer: accept the batch. Fish did not receive treatment for disease in the two-week acclimation period preceding the test, during pre-exposure, or during the exposure period. Moribund fish or fish with clinical signs of disease were not used.

10.3.1. FEEDING

The fish were fed brine shrimp (*Artemia*) twice per day throughout the holding period and during the exposure phase. Feeding rates were consistent with standard MEOGRT guidance (3).

10.4. EXPOSURE SYSTEM

The route of exposure was aqueous, which was the most appropriate method for aquatic organisms and readily water soluble test materials. A continuous-flow mini-diluter system with 10-L glass aquaria plumbed for 4-L, but partitioned to 1.8 L, was used for the exposure system. Each aquarium or test chamber contained 1.8 L of test solution, which was automatically renewed once every 72 min. (ca. 20 mL/min with ca. 16 volume exchanges per day). This animal loading per water renewal rate was within recommended guidelines and, in studies conducted per this method, has maintained acceptable water quality while not utilizing an excessive amount of test material. The test system was set up and operated for at least 5 days before testing to demonstrate that the diluter system has come to equilibration. After initial diluter calibration, a sample of test solution from each diluter concentration was sampled for chemical analysis during the diluter equilibration phase. A longer equilibration phase was used in the event of technical problems associated with the calibration phase, as determined by the analytical results. 2-EHHB feed stock was prepared and pumped to the master mixing cell of the diluter using continuous flow dual solid-liquid saturator columns in which ca. 10 g of 2-EHHB was loaded on each column in acetone. Saturator columns were prepared on December 2, 2015. The acetone was evacuated prior to use using a vacuum pump and 2 to 3-week continuous column flushing during the equilibration phase. The columns were plumbed in series and dechlorinated tap water was pumped through the columns at a rate of ca. 4 mL/min. to produce one stock solution pumped into the master mixing cell of the diluter. The same columns were used for the BATT01-00388 (Amphibian Metamorphosis Assay using 2-EHHB) and BATT01-00390 (Larval Amphibian Growth and Development Assay using 2-EHHB) studies; and the entire pre-exposure and exposure periods of the present study (BATT01-00393). The stock

solution produced was shared between the present study and the BATT01-00390 study (exposure phase initiated on March 21, 2016) since they were conducted during the same general timeframe. Following completion of the BATT01-00388 study and prior to the initiation of the present study, the columns were maintained in-line filled with dechlorinated tap water at room temperature, but dechlorinated tap water flow to the columns was terminated. Prior to exposure phase of the present study (BATT01-00393), dechlorinated tap water flow to the columns was resumed and the columns were equilibrated for at least two weeks prior to use. Equilibration was noted by the production of a consistent stock concentration. Since the stock was produced by the saturator columns, the nominal concentration was estimated based on solubility and diluter operation (flows) were based strictly on measured stock concentrations. Diluter operation was based on stock concentration based on PD=HCxDD/SC, where PD is pump delivery rate, HC is high test concentration, DD is the diluter delivery rate (volume), and SC is the stock concentration.

A randomized block design was used for the MEOGRT (3). This design randomized effects associated with the local environment (i.e., light and water) and possible trends associated with the diluter during testing. All test animals were assigned on an impartial basis to tanks before exposure.

The mini-diluter system was checked at least twice daily to ensure proper delivery and function. Exposure tanks were evaluated for siphoning on a daily basis and siphoned as needed to remove uneaten food and waste products. Care was taken to minimize stress and trauma to the animals, especially during movement, cleaning of aquaria, and manipulation of the testing apparatus. Stressful conditions/activities were avoided such as loud and/or incessant noise, tapping on aquaria, vibrations in the aquaria, excessive activity in the laboratory, and rapid changes in environmental conditions (light availability, temperature, pH, DO, water flow rates, etc.). After initial diluter calibration, a sample of test solution from each diluter concentration was sampled for chemical analysis during the diluter equilibration phase. A longer equilibration phase was used in the event of technical problems associated with the calibration phase, as determined by the 2-EHHB analytical results. During the exposure phase water samples were collected from one replicate tank of the control and each test concentration. The replicate selected for weekly sampling rotated (week 1 – A, week 2 – B, week 3 – C, week 4 –D, week 5 – E, and week 6 - F) and repeated every 7th week of the in-life phase. A laboratory blank was also collected with the batch of samples. Water samples were collected in amber glass vials and stored at 4ºC (1-9ºC) until shipped to EAG Laboratories. The solubility, purity, and stability (volatility and degradation rate) of 2-EHHB was provided by the supplier (TCI America) prior to in-life test initiation. Based on this information, FEL determined the frequency at which fresh stock solutions was prepared. Each new stock solution was sampled for analysis.

10.4.1. CHEMICAL ANALYSIS

The analytical measurement method (6) for 2-EHHB determined by EAG Laboratories in conjunction with the Study Director and Study Monitor was performed in accordance with procedures and SOPs in place at EAG. Chemical stock solutions of 2-EHHB were sampled for analysis with each set of diluter samples collected during the study. Each replicate test concentration was sampled on day 0 and at test termination for 2-EHHB analysis. Samples were collected in one replicate of each treatment and the control during each sampling event in

rotation so that each replicate was sampled in succession. All samples with the exception of the blank were collected in duplicate. Duplicate samples were collected as a split of the original sample to be analyzed in the event samples were lost or broken during shipment, lab error occurred during the processing or extraction, or confirmation of original results were warranted as determined by the Study Director. Immediately following collection, the 2-EHHB stock and diluter samples were preserved 1:1 (20 mL sample:20 mL methanol) and prepared for shipment to EAG. Duplicate samples and samples not shipped on the day of collection were stored at FEL at 4°C. Samples were shipped to EAG once per week. Due to the biodegradability of 2-EHHB in aqueous conditions, analyses were performed as soon as possible following collection (Appendix C).

Test samples were analyzed for the concentration of 2-EHHB using liquid chromatography with a mass spectrometer detector (LC-MS/MS) in a multiple reaction monitoring mode (MRM). Analysis was accomplished based on methods developed and validated at EAG Laboratories. At EAG Laboratories, samples were first diluted with 5 mL of methanol at a 1:1 ratio. Samples were further diluted, if necessary, with 50:50 methanol:HPLC-grade water to produce sample concentrations that fell within the calibration curve. At least two quality control (QC) fortification spikes were prepared in a similar manner at concentrations that bracket the expected high and low test substance treatment concentrations. The samples were capped and shaken/vortexed to mix prior to being vialed for analysis by LC-MS/MS. The peak responses of 2-EHHB were integrated and quantitated using Analyst 1.6.2 software by AB SCIEX.

Instrument: UHPLC system: Shimadzu Nexera
MS Spectrometer: AB Sciex API-6500 Q-Trap

Column: Phenomenex Kinetex XB-C18 50mm x 2.1mm, 1.7µm

Ionization: Turbo Ion Spray

Mobile Phase A: 0.01% Formic Acid in Water (aq)

Mobile Phase B: 0.01% Formic Acid in Methanol

Gradient:

Time (min)	A%	B%
0.00	40	60
3.00	10	90
4.00	10	90
4.01	40	60
5.00	40	60

Flow Rate: 0.500 mL/min

Injection Volume: 5 µL

Mass Spec. Scan Mode: MRM

Polarity: Negative

Polarity: Negative

Compound	MRM transitions		
	Q1 (Da)	Q3 (Da)	Dwell Time (msec)
2-EHHB	249.0	92.0	100
2-EHHB a	249.0	136.0	100

10.5. STUDY DESIGN AND ADDITIONAL EXPERIMENTAL CONDITIONS

The proposed test consisted of continuously exposing three generations of fish to a chemical starting with young adults. Evaluation of five chemical concentrations and a dilution water control allowed determination of lowest and no effect concentrations for a series of endpoints. In accordance with Table 1 of OCSPP Harmonized Test Guideline 890.2200 – Medaka Extended One Generation Reproduction Test (MEOGRT) (3), F0 had different replication schemes during the fecundity phase such that F0 will have 6 replicates/treatment and 12 replicates/control. In addition, F1 had 12 replicates/treatment and 24 replicates/control during the fecundity phase. The endpoints measured included fecundity and fertility for evaluation of possible population-level effects, liver vitellogenin (VTG) mRNA levels and sexual phenotypic markers (such as characteristic male anal fin papillae). Samples were collected for histological evaluation of gonadal sex, and histopathology evaluation of kidney, liver, and gonad in F1 and F2 adults and thyroid histopathology in the F1 subadults and adults. Histopathological specimens were shipped to and examined by EPL. All of these endpoints were evaluated in the context of the genetic sex of the individual, based on the presence or absence of the medaka male-sex determining gene *dmy*. Non-endocrine-mediated toxicity endpoints were also measured such as embryo hatch, growth, and survival. Throughout the bioassay, chemical concentrations were held constant to allow endpoint sensitivity comparisons across and within generations. A daily schedule for conducting the test was provided as a Microsoft® Excel spreadsheet as a separate electronic file on the EPA EDSP website: http://www.epa.gov/endo/.

An overview of the test, relevant test conditions, and the general timeline are provided in Tables 1 and 2. This test measured the reproductive performance of medaka (3). The test was initiated by exposing reproductively active fish aged 10-15 wpf for 4 weeks, during which time the chemical was theoretically distributed to the gametes and tissues of the parental generation (F_0). Eggs were collected during the week 4 to start the F_1 generation. Fish in the F_1 and F2 generation were reared for a total of 15 wpf. Fish were sampled at 9 wpf for developmental endpoints and from 11 through 15 wpf for spawning. Table 2 summarizes the timelines of the exposure and measurement endpoints for the MEOGRT study including the F2 generation. An

F2 generation was initiated after the third week of the reproduction assessment and reared until completion of hatching. The protocol for the complete F2 generation was the same as for the F1 generation with a minor difference at the beginning of F2 generation. The F1 generation was started with the pooled embryo output from six replicates in each treatment and 12 replicates in the control(s). Since the reproductive assessment was completed with double the number of replicates, the F2 generation was started from the pooled embryo output from 12 replicates in each treatment and 24 replicates in the control(s). In all other aspects, the F2 generation protocol was identical to the F1 generation, except hatching survival was not measured. The in-life phase concluded during study week 32.

10.6. ENDPOINTS

The summary of study endpoints is provided in Table 3.

10.7. TEST INITIATION

The F_0 generation was initiated with reproductively competent adult medaka between 10 and 15 weeks post-fertilization (wpf) and from the same clutch. More specifically, fish used in the present study were 13 wpf. Individual female fish weights ranged from 450-550 mg with an arithmetic mean of 485 mg. Individual male fish weights ranged from 360-440 mg with an arithmetic mean of 387 mg. Thus, for the whole batch of fish used in the test, the range in individual weights by sex at the initiation of the pre-exposure phase were kept within ± 20% of the arithmetic mean weight of the same sex. Further. the wet weights of the female and male medaka were ≥300 mg and ≥250 mg, respectively.

Test fish (F0 generation) were selected from a single laboratory stock that was acclimated for at least two weeks prior to the test under conditions of water quality and illumination similar to those used in the test. Fish were fed brine shrimp twice per day throughout the holding period and during the exposure phase. One 4 in. breeding mop head constructed from inert acrylic yarn was placed in each tank to collect eggs per facility SOP. FEL has experienced markedly more consistent and productive breeding with medaka using an artificial substrate that simulates rice grass. The mop heads were removed from the tank daily, replaced with a new mop head, and the eggs were cultured directly on the mop head in a separate incubation tanks during collection phases. Each F0 breeding pair was genetically verified to be XX – XY to avoid the possible inclusion of spontaneous XX males. Small tissue samples of the tail fin was analyzed for *dmy* using the same procedures described during the in-life portion of the MEOGRT (3). A minimum of 42 breeding pairs of adult medaka (F0 generation), one pair per aquarium were considered necessary to initiate the MEOGRT to ensure adequate replication. Fin clip samples were placed in coded/labeled 96-well plates, air-dried to remove excess water, and then sealed and properly stored until genotypic sex determination. Additional breeding pairs were available for inclusion in the test in the event some required exclusion due to issues with spawning frequency and duration. All breeding pairs had daily fecundity values measured 4 to 7 days prior to the start of the test. The selected 42 breeding pairs were those in the middle of the distribution of mean fecundities. The mean daily fecundity of the selected breeding pairs were >20 eggs/pair/day. A randomized block design was used to ensure a balanced distribution of pairs to the treatments based on reproductive performance. The study was initiated with 12 replicate breeding pairs in the control treatment and six replicate breeding pairs in each of the five test substance treatment levels of 6.3, 12.5, 25, 50 and 100 µg/L 2-EHHB for a total of 42 breeding pairs to start the

MEOGRT. Each breeding pair was randomly assigned a treatment (e.g., T1-T5 and control) and a replicate (e.g., A-L in controls and A-F in treatment), and then placed in the exposure system with the appropriate flow to each replicate aquarium. Exposure starts at the F0 generation and continues through development and successful reproduction by the F1 generation and was terminated upon the hatch of embryos constituting the F2 generation.

10.8. TEST TIMELINE

The following timeline provides a description by week and is based on guidance from USEPA (3) with minor modification (Table 2).

10.8.1. PARENTAL GENERATION (F0)

Test Weeks 1-3:
The F0 generation spawning fish, that have met the selection criteria detailed above, were exposed for three weeks to allow the developing gametes and gonadal tissues to be exposed to the test substance. Each replicate aquarium housed a single XX – XY breeding pair of fish. There were a total of 42 breeding pairs. Spawned eggs were collected, counted, and assessed for fertility for 21 consecutive days starting at Study Day (SD) 1.

Test Week 4:
On SD 22, eggs were collected from each female within each aquarium, pooled by treatment, and distributed to suitable incubation vessels (6 per treatment and 12 for controls). The vessels were placed in separate incubator aquaria for each treatment. Embryos used to start F1 were collected over a two-day collection period (SD 22 and 23) to ensure a sufficient number of viable embryos were collected. All embryos from both days were pooled and redistributed to each of the treatment replicates with 20 embryos per tank. Mortalities were recorded daily. If a single treatment required a second day of collection, all treatments, including controls, followed this process. On Test Day 24, the F0 breeding pairs were humanely euthanized, and weight and length was recorded. If necessary, F0 breeding pairs were maintained for an additional 1-2 days in order to restart the F1.

10.8.2. FIRST GENERATION (F1)

Test Weeks 5-6:
One day prior to the anticipated initiation of hatching, agitation (aeration) of the incubating embryos was reduced to expedite hatching. As embryos hatched on each day, eleutheroembryos were pooled by treatment and then systematically distributed to each replicate aquarium within a specific treatment with no more than 12 eleutheroembryos placed into each aquarium. This was performed by randomly selecting eleutheroembryos and placing eleutheroembryos in successive replicates using indiscriminate draw until all replicates within the treatment had 12 eleutheroembryos. The appropriate data were collected to calculate the hatching success of each replicate incubator. Embryos that did not hatch by twice the median control day of hatch were considered non-viable and appropriately discarded. The number of eleutheroembryos was recorded and hatching success was calculated in each replicate.

Test Week 6-11:
On Study Day 44, the accumulative survival of the juvenile fish was recorded as the number per replicate out of the initial number of eleutheroembryos, nominally 12. The exposure continued as the juvenile fish developed into sub-adults.

Test Week 12:
On Study Day 78, a fin clip sample was collected from the caudal fin of each fish to determine the genotypic sex of the individual by *dmy* analysis. This information was used to establish XX – XY breeding pairs. The *dmy* genotpyic data for all the remaining sub-adult samples ensured that all endpoint data was related to the genetic sex of each individual fish. On Study Days 80 and 81, after the genotypic sex of each fish was determined, 12 breeding pairs per treatment and 24 breeding pairs for controls were randomly established. The remaining fish (maximum 8 fish per replicate) were humanely euthanized and were sampled for the various sub-adult endpoints.

Test Week 13-14:
The exposure continued as the sub-adult breeding pairs develop into adults.

Test Week 14:
The exposure continued as the sub-adult breeding pairs developed into adults, and eggs were removed from tanks at least twice weekly.

Test Weeks 15-17:
On Study Day 98, eggs were removed from the aquaria and from females to guarantee an accurate enumeration of egg numbers spawned the next day. Spawned eggs were collected daily for 21 consecutive days (Study Days 99-119) in each replicate, and assessed for fecundity and fertility.

Test Week 18:
On Study Day 120, eggs were collected, pooled from each treatment, and systematically distributed to incubation vessels (6 per treatment and 12 for controls) with no more than 20 embryos per replicate (120 embryos for each test substance treatment and 240 embryos for the controls) allowed to incubate. A second day of embryo collection (SD 121) was required to ensure a sufficient number of viable embryos were collected. All embryos from the first day (SD 120) were pooled with the embryos from the second day and redistributed to each of the treatment replicates. After embryo collection, the F1 breeding pairs were humanely euthanized and analyzed for the various adult endpoints.

10.8.3. **SECOND GENERATION (F2)**

Test Week 19:
One day prior to the anticipated initiation of hatching, agitation (aeration) of the incubating embryos was reduced to expedite hatching. As embryos hatched on each day, eleutheroembryos were pooled by treatment and then systematically distributed to each replicate aquarium within a specific treatment with no more than 12 eleutheroembryos placed into each aquarium. This was performed by randomly selecting eleutheroembryos and placing eleutheroembryos in successive replicates using indiscriminate draw until all replicates within the treatment had 12 eleutheroembryos. The appropriate data were collected to calculate the hatching success of each

replicate incubator. Embryos that did not hatch by twice the median control day of hatch were considered non-viable and appropriately discarded. The number of eleutheroembryos were recorded and hatching success was calculated in each replicate.

Test Weeks 20-25:
On Study Day 142, the accumulative survival of the juvenile fish was recorded as the number per replicate out of the initial number of eleutheroembryos, nominally 12. The exposure continued as the juvenile fish developed into sub-adults.

Test Week 26:
On Study Day 176, a fin clip sample was collected from the caudal fin of each fish to determine the genotypic sex of the individual by *dmy* analysis. This information was used to establish XX – XY breeding pairs. The *dmy* genotypic data for all the remaining sub-adult samples ensured that all endpoint data could be be related to the genetic sex of each individual fish. On Study Days 178 and 179, after the genotypic sex of each fish was determined, 12 breeding pairs per treatment and 24 breeding pairs for controls were randomly established. The remaining fish (maximum 8 fish per replicate) were humanely euthanized and were sampled for the various sub-adult endpoints.

Test Week 27-28:
The exposure continued as the sub-adult breeding pairs developed into adults.

Test Week 28:
The exposure continued as the sub-adult breeding pairs developed into adults, and eggs were removed from tanks at least twice weekly.

Test Week 29-32:
On Study Day 196, eggs were removed from the aquaria and from females to guarantee an accurate enumeration of egg numbers spawned the next day. Spawned eggs were collected daily for 21 consecutive days (Study Days 197-217) in each replicate, and assessed for fecundity and fertility. After embryo collection, the F2 breeding pairs were humanely euthanized and analyzed for the various adult endpoints.

10.9. OBSERVATIONS

Endpoints were assessed over the course of and at conclusion of the assay. For those endpoints measured at test termination, growth (length and weight) measurements were taken immediately after anesthetization of an individual specimen.

10.9.1. SURVIVAL

All test tanks were checked daily for dead animals and the number of survivors recorded for each tank, along with the date, concentration, and replicate ID.

10.9.2. EGG COLLECTION, HATCH, AND PROPAGATION OF F1 AND F2 GENERATIONS

Eggs were collected SD 22 and 23 of Study Week 4 for initiating the F1 generation phase and SD 120 and 121 of Study Week 20 for initiating the F2 generation phase. After spawning,

mop heads were removed from the tank daily, and replaced with a new mop head. In the F1 and F2 generations, eggs were collected from 12 replicate breeding pairs per treatment (24 replicates in controls); whereas, in the F0 generation, there were six replicate breeding pairs per treatment (12 replicates in controls). The mop heads were removed from the tank daily, replaced with a new mop head, and the eggs were cultured directly on the mop head in a separate brood chamber. Fertile, healthy fertilized eggs were then randomly selected for incubation. If available, 120 embryos from each treatment and 240 from the controls were placed in appropriate tanks containing 20 embryos per incubator until hatch. The incubators received an adequate flow of the test substance for the duration of the incubation period.

Incubation tanks were checked daily for survival. Survival was recorded, and any dead embryos were removed from the incubation tanks. For each treatment and control, the hatched larvae (*e.g.*, eleutheroembryos) were counted daily, pooled, and distributed to each of the replicate aquaria. Each replicate aquarium received 12 eleutheroembryos. Any additional eleutheroembryos were humanely euthanized with MS-222 (2 g/L, pH 7). Embryos that had not hatched after a prolonged incubation time (as twice the median day of hatching in controls) were considered non-viable and not used in the study.

10.9.3. SET-UP OF BREEDING PAIRS AND GENETIC SEX DETERMINATION

Determination of genotypic sex via fin clips were performed at 9 wpf (Test Week 12 and 26 for F1 and F2 generations, respectively). All fish within a tank were anesthetized using 200 mg/L buffered MS-222 (pH 7) and either the dorsal or ventral tip of the caudal fin of each fish was clipped and air-dried to remove excess water. Once the DNA was extracted, a polymerase chain reaction (PCR) method was used to amplify the *dmy* gene, if present (3). The presence of the *dmy* gene was a definitive indication of an XY (male) individual, regardless of phenotype. The *dmy* gene information was used to establish XX – XY breeding pairs (in both F0 and F1 generation adults) regardless of external phenotype, which could be altered by exposure to an endocrine-disrupting chemical. The fish from a replicate was housed individually in small vessels**.** After the genotypic sex of each fish was determined, two XX fish and two XY fish from each replicate were randomly selected for pooling. After the 12 total XX fish (24 for control(s)) and the 12 total XY fish (24 for control(s)) for each treatment were pooled, fish were randomly selected to produce breeding pairs.

10.9.4. SAMPLING OF NON-BREEDING FISH (SUB-ADULTS)

After the breeding pairs were established, the fish not selected as breeding pairs were humanely euthanized in MS-222 (pH 7) for measurement of sub-adult endpoints. The replicate identity of each sampled sub-adult fish and the genotypic sex of each fish was maintained since all endpoint data analyzed was in the context of the genotypic sex of the specific fish. Each fish was humanely euthanized using 2 g/L MS-222 (pH 7) and measured for a variety of endpoints including: 9 wpf survival, growth, liver vitellogenin (mRNA copy number or protein concentration), and anal fin papillae number (secondary sexual characters (SSC)). Liver vitellogenin was only measured in the sub-adult fish (16). Liver was dissected for quantification of vitellogenin. Vitellogenin mRNA was quantified by extracting RNA and the copy number of the *vitellogenin I (vtg1)* gene per ng of total mRNA determined. The tail of the fish, including the anal fin, was fixed in Davidson's solution and subsequently photographed so that anal fin papillae could be counted at a later date. For the purposes of calculating a simple sex ratio,

medaka with more than one anal fin papillary process were defined as phenotypic males and those with no anal fin papillae were defined as phenotypic females (3).

10.9.5. REPRODUCTIVE MEASUREMENT

Fecundity and fertility were assessed in Study Weeks 1 through 3 in the F0 generation, Study Weeks 15 through 17 in the F1 generation, and Study Weeks 29-31 in the F2 generation. F0-F2 eggs were collected daily from each breeding pair for 21 consecutive days. During the daily egg collection, both fecundity and fertility were recorded daily for each replicate breeding pair. Fecundity was defined as the number of eggs spawned, and fertility was functionally defined as the number of fertile and viable eggs at the time of counting. Counting was performed as soon as possible after egg collection. To assess embryo viability and hatching success, the mop heads were removed from the tank daily, and eggs were cultured directly on the mop head all viable embryos were pooled and systematically distributed to six replicate incubators (12 incubators for controls). The hatch per replicate incubator was recorded so that the percent hatch could be calculated.

10.9.6. SAMPLING OF ADULT BREEDING PAIRS

The adults were humanely euthanized in 2 g/L MS-222 (pH 7), and various endpoints were assessed at 15 wpf for the F1 and F2 generations. A fin clip sample was taken to repeat the *dmy* analysis to verify the genetic sex of specific fish when necessary. The remainder of the tail was removed and fixed for assessing the number of anal fin papillae (3). No other tissue dissection was performed.

The body cavity was opened to allow perfusion with fixative prior to whole body fixation. Histopathology of the gonads, kidneys and liver tissue for each adult fish was evaluated (3,7) (analyses performed by EPL, Sterling, VA) (Appendix D). The gonad phenotype was determined from this evaluation. The *dmy* analysis could be repeated to verify the genetic sex of specific fish when necessary.

10.9.7. ANAL FIN PAPILLAE NUMBER

The anal fin was removed from the fish, laid flat and bathed in Davidson's fixative for ca.30 seconds to prevent curling, and subsequently photographed to assess the number of anal fin papillae.

10.10. VITELLOGENIN (*VTG1*) ANALYSIS – EAG, INC TEST SITE

In both the F1 and F2 generations, liver *vtg1* mRNA expression was only measured in the sub-adult fish (16). It is noted that this sub-adult only approach was contrary to the information in the Final Test Guideline for MEOGRT on page 6, Table 2; and page 16 (3). The livers of sacrificed fish were removed and immediately placed into RNAlater at room temperature. When all samples had been collected, they were placed in a refrigerator at 4ºC (1-9ºC) overnight and then moved to the lab freezer and stored at -20 ºC ± 10°C until analyzed. Samples were shipped to EAG, Inc. for analyses via overnight courier (Appendix E).

10.11. HISTOPATHOLOGY - EPL TEST SITE

The body cavity of each fish was opened using a scalpel or dissection scissors to allow perfusion of Davidson's fixative, and the entire carcass was immersed for 48-96 hours. After this time, each carcass was rinsed thoroughly in dechlorinated culture water, and then placed in 10% neutral buffered formalin (NBF) for storage. EPL, under the direction of the Sponsor, performed the tissue preparation, histology, and histopathological interpretation in accordance with appropriate facility guidance documents (SOPs) and the relevant guidance documents on histopathology for the MEOGRT (3,7). Following the conclusion of exposure, FEL sent NBF preserved specimens to EPL via overnight courier for histopathological processing and analyses (Appendix D).

10.12. DATA ANALYSIS

All data were tabulated in data entry spreadsheet templates (DEST) by FEL (Appendix F). The DESTs were then used by FEL to prepare the final report. The statistical report (Battelle) is provided in Appendix G. In an effort to present the most realistic estimation of exposure concentrations, analytical chemistry analysis results of duplicate analytical samples were averaged with the original sample result and both the individual results and average were reported in the DESTs. In the event a result from an original sample or its duplicate was found to be an outlier as defined as being outside the interquartile range (IQR), both results were included in the DEST, but the outlier (either original or duplicate) was not used in the analysis of the mean measured concentration used to estimate exposure concentration in the report. Outliers were determined by (Q1 – 1.5*IQR) and (Q3 + 1.5*IQR), where IQR was the interquartile difference defined as Q3 minus Q1. In the event both the original and duplicate were found to be outside the bounds of the IQR, the original and duplicate results were averaged and reported. Statistical analyses of the data was performed by Battelle and was consistent with OCSPP Harmonized Test Guideline 890.2200 – Medaka Extended One Generation Reproduction Test (MEOGRT) (3), the TO 14 QAPP (1), and generally followed procedures described in the document Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application (8). Descriptive statistics included the mean, median, standard deviation, minimum value, maximum value, first and third quartiles (Q1 and Q3), and the coefficient of variation (CV). For the toxicological endpoint data, statistical outliers were defined as those values outside the bounds determined by Q1 – 1.5*IQD and Q3 + 1.5*IQD where IQD was the interquartile difference defined as Q3 minus Q1. Analyses of the biological data were conducted both with and without suspected outliers (3,4,11). Potential outliers were identified by values that exceed the median plus three times the interquartile range (i.e., the difference between the 75th and 25th percentiles). If an explanation could not be made for the divergence of data, then both analyses were presented, assuming that the results differ. If the outlier did not alter the results, then the analysis including the outliers was presented. Analysis of the data from this study report revealed 130 potential outliers occurring in the following biological endpoints: Fecundity (n=9, i.e., 3 from F1 and 6 from F2), Fertility (n=6, i.e., 3 from F1 and 3 from F2), Hatchability (n=4, i.e., 2 from F1 and 2 from F2), F0 Body Weight (n=3, male), F0 Body Length (n=4, i.e., 2 female and 2 male), F1 Subadult Body Weight (n=23, i.e., 10 female and 13 male), F1 Subadult Body Length (n=14, i.e., 6 female and 8 male), F1 Subadult Liver Weight (n=7, i.e., 3 female and 4 male), F1 Subadult VTG (n=1, male), F1 Subadult Anal Fin Papillae (n=5, male), Sex Ratio (n=9, i.e., 5 from F1 and 4 from F2), F1 Adult Body Weight (n=1, female), F1 Adult Body Length (n=1, male), F1 Adult Anal Fin Papillae (n=2, male), F2 Subadult Body Weight

(n=5, i.e., 2 female and 3 male), F2 Subadult Liver Weight (n=9, i.e., 8 female and 1 male), F2 Subadult VTG (n=3, male), F2 Subadult Anal Fin Papillae (n=19, male), F2 Adult Body Weight (n=3, male), F2 Adult Body Length (n=1, female), F2 Anal Fin Papillae (n=1, male), (Appendix G). No biological endpoint outliers were removed from the analyses presented in the present report for study BATT01-00393.

Data were first checked for monotonicity by rank transforming the data, fitting to a mixed effects ANOVA model, and evaluating linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant; otherwise the data were determined to be monotonic. For endpoints that followed a monotonic concentration-response, the Jonckheere-Terpstra test was applied in a step-down manner. For endpoints that were not consistent with a monotonic concentration-response, the data were evaluated for normality (Shapiro-Wilk's test) and homogeneity of variance (Levene's test). If a data set was found to have a non-normal distribution or a heterogeneous distribution of variance, a normalizing, variance stabilizing transformation was used. If data sets were normally distributed with homogeneous variance following transformation, the data set was evaluated using Dunnett's test. If the data set was normally distributed with heterogeneous variance following data transformation, the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used to evaluate the data. Where no normalizing transformation was found, the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used to evaluate the data sets. The Jonckheere-Terpstra test was performed on replicate medians, and the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as post hoc test and the Dunnett's test were performed on replicate means. Time-to-hatch data were evaluated using a mixed-effects Cox proportional hazard model. RSCABS (Rao-Scott Cochran-Armitage by Slices) or the equivalent using step-down trend analysis on each level of severity in a histopathology response was performed. For all statistical evaluations, the replicate was considered as the experimental unit and α=0.05.

11. RESULTS

11.1. RANGE FINDING

The range-finding study was conducted separately (FEL Study No. BATT01-00385) and was not required to be GLP-compliant. Based on range-finding, the maximum tolerable concentration (MTC) (1) was determined to be 100 µg/L (Appendix H). The test concentration series was 1x, 0.5x, 0.25x, 0.13x, and 0.06x, where x was the MTC value. Therefore, the test concentrations were 100.0, 50.0, 25.0, 12.5, and 6.3 µg/L.

11.2. WATER QUALITY MEASUREMENTS AND TEST SYSTEM PERFORMANCE

Results of water quality measurements and test system performance are presented in Table 4. All physicochemical water quality parameters in study were within acceptable ranges.

11.3. CONFIRMATION OF TEST CONCENTRATIONS

Nominal 2-EHHB concentrations selected for the MEOGRT study were 0.0 (control), 6.3, 12.5, 25.0, 50.0, and 100 µg/L. Concentrations of 2-EHHB measured in samples collected from the control and treatments during the study are provided in Table 5. The mean measured concentration represents the average of week 0 and weekly data points. On SD 0 and in-life phase termination all control replicates (n=12) and treatment replicates (n=6) were sampled and analyzed. On the weeks between these two points, a sample was collected from one replicate tank of the control and each test concentration. The replicate selected for weekly sampling rotated. Since time interval between sample collection events was consistent throughout study, the mean measured concentration represented an accurate estimation of exposure concentration. The mean measured concentration represented the average of each weekly data point from SD 7 through in-life study conclusion and the average of replicates for SD 0 and the control (A-L during non-reproductive phase and A-X during reproductive phase) and each treatment (A-F during non-reproductive phase and A-L during reproductive phase) per facility SOP. The coefficient of variation [CV, (Standard deviation/mean) *100] was based on the standard deviation of the replicate means (n=12 or 24) for the control and the replicate means (n=6 or 12) for the treatment groups per facility SOP. IQRs determined for the 0.0 (control), 6.3, 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatments were 0.58-1.80, -6.61-15.4, -11.7-30.1, -5.53-46.3, 19.7-71.3, and 41.4-158 µg/L 2-EHHB, respectively. Based on IQR analysis of the control and each treatment group, 50.0 and 100 µg/L replicate A original samples from Study Week (SW) 0; 6.3, 12.5, and 25.0 µg/L replicate B original sample from SW 1; 0.0 µg/L replicate C original and duplicate samples from SW 2; 0.0 µg/L replicate E original and duplicate samples from SW 4; 0.0 µg/L replicate F original sample from SW 5; 0.0 µg/L replicate I original sample from SW 8; and 0.0 µg/L replicate J original and duplicate samples from SW 9, were considered outliers (Appendix F). The corresponding mean measured concentrations in the definitive study were 0.321 (control), 5.32, 11.3, 24.0, 48.8, and 101 µg/L 2-EHHB (Table 6). In some cases, variability in analytical measurement was noted with duplicate samples. Treatment CVs for the 6.3, 12.5, 25.0, 50.0, and 100 µg/L treatments were 49%, 39%, 33%, 19% and 13%, respectively. The percent of nominal concentrations were 84%, 90%, 96%, 98%, and 101%, respectively. Thus, the mean measured concentrations were generally consistent with nominal concentrations. Although a large number of replicates was used in the study, only one replicate per treatment was sampled and analyzed for 2-EHHB concentration each week after SD 0 and prior to in-life

conclusion. This sampling scheme resulting in the collection of few data points for each replicate during the study (1-2 for the control and 4 for the treatments over a 32 week in-life study). Since the standard deviation used to calculate the CV was based on the replicate means, higher values were obtained. Overall, the mean measured concentrations were a reasonable estimation of exposure concentration.

11.4. IN-LIFE

The experimental designs of the in-life phase of the F0, F1, and F2 embryo-larval, F1 and F2 sub-adult, and F2 adult generations are summarized in Tables 7-11, respectively. The results are presented in chronological order of study starting with the F0 generation, and culminating with the F2 generation. Results are separated by generation, then subdivided by life-phase. The F0 generation only utilized the adult life phase.

11.4.1. F0 GENERATION

11.4.1.1. SURVIVAL

Test organism survival during the F0 generation of the study is presented in Table 12. No mortality was observed during this phase. Since all fish survived during the F0 generation, no statistical analyses were performed.

11.4.1.2. REPRODUCTIVE FECUNDITY

The effect of 2-EHHB exposure on reproductive fecundity is presented in Table 13. Mean eggs produced/female/day ranged from 10.4 in the 100 µg/L 2-EHHB treatment to 19.2 in the control. The mean number eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0414 [6.3 µg/L 2-EHHB treatment] and <0.0001 for others).

11.4.1.3. FERTILIZATION

The effect of 2-EHHB exposure on fertilization is presented in Table 14. The mean number of fertilized eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0458 [6.3 µg/L 2-EHHB treatment] and <0.0001 for others).

11.4.1.4. GROWTH

11.4.1.4.1. BODY WEIGHT

The effect of 2-EHHB exposure on female body weight is presented in Table 15. The mean female body weight ranged from 0.307 g in the 100 µg/L 2-EHHB treatment to 0.437 g in the control. The mean female body weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0027).

The effect of 2-EHHB exposure on male body weight is presented in Table 16. The mean male body weight ranged from 0.345 g in the control to 0.483 g in the 100 µg/L 2-EHHB treatment. Mean male body weights in each of the 2-EHHB treatments were significantly greater

than in the control (Jonckheere-Terpstra test, p=0.0121, 0.0026, 0.0020, 0.0102, and 0.0039 respectively).

11.4.1.4.2. BODY LENGTH

The effect of 2-EHHB exposure on female body length is presented in Table 17. The mean female standard body length ranged from 31.7 mm in the 100 µg/L 2-EHHB treatment to 37.3 mm in the control. The mean female body length in the 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0003 and <0.0001 for remainder, respectively).

The effect of 2-EHHB exposure on male body length is presented in Table 18. The mean male standard body length ranged from 34.4 mm in the control to 35.3 mm in the 100 µg/L 2-EHHB treatment. The mean male body length in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).

11.4.2. F1 GENERATION

11.4.2.1. SURVIVAL

Test organism survival during the F1 generation of the study is presented in Table 19. No mortality was observed during this phase. Since all fish survived during the F1 generation, no statistical analyses were performed.

11.4.2.2. HATCHING SUCCESS

The effect of 2-EHHB exposure on hatching success expressed as percent hatch is presented in Table 20. Mean hatch ranged from 95.2% in the 100 µg/L 2-EHHB treatment to 100% in the control. The mean hatch in the 100 µg/L 2-EHHB treatment was significantly less than in the control (KW-ANOVA, Dunn's test, p=0.0156).

The effect of 2-EHHB exposure on hatching success expressed as time to hatch is presented in Table 21. The median time to hatch ranged from 9 days in the control to 11 days in the 12.5 - 100 µg/L 2-EHHB treatments. The median time to hatch in the 12.5 - 100 µg/L 2-EHHB treatments were significantly greater than in the control (Cox Proportional Hazard Model, Chi Square, p=0.0188, 0.0105, 0.0092, and 0.0180, respectively).

11.4.2.3. SUBADULT GROWTH

11.4.2.3.1. BODY WEIGHT

The effect of 2-EHHB exposure on female body weight is presented in Table 22. The mean female body weight ranged from 0.054 g in the 100 µg/L 2-EHHB treatment to 0.127 g in the control. The mean female body weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0007).

The effect of 2-EHHB exposure on male body weight is presented in Table 23. The mean male body weight ranged from 0.087 g in the 100 µg/L 2-EHHB treatment to 0.140 g in the 50 µg/L 2-EHHB treatment. The mean male body weight in the 2-EHHB treatments was not significantly different from the control (Jonckheere-Terpstra test, p>0.05).

11.4.2.3.2. BODY LENGTH

The effect of 2-EHHB exposure on female body length is presented in Table 24. The mean female body length ranged from 16.5 mm in the 100 µg/L 2-EHHB treatment to 20.4 mm in the 12.5 µg/L 2-EHHB treatment. The mean female body length in the 50.0 and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0279 and 0.0003, respectively).

The effect of 2-EHHB exposure on male body length is presented in Table 25. The mean male body length ranged from 19.0 mm in the 100 µg/L 2-EHHB treatment to 22.5 mm in the 25.0 µg/L 2-EHHB treatment. The mean male body length in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0355).

11.4.2.4. SUBADULT LIVER WEIGHT

The effect of 2-EHHB exposure on female liver weight is presented in Table 26. The mean female liver weight ranged from 0.005 g in the 100 µg/L 2-EHHB treatment to 0.012 g in the 12.5 µg/L 2-EHHB treatment. The mean female liver weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0392).

The effect of 2-EHHB exposure on male liver weight is presented in Table 27. The mean male liver weight ranged from 0.006 g in the 6.3 µg/L 2-EHHB treatment to 0.011 g in the control and 25.0 µg/L 2-EHHB treatment. Mean male liver weights in the 6.3 µg/L 2-EHHB treatment was significantly less than in the control (Dunnett's test, p=0.0248).

11.4.2.5. SUBADULT LIVER VITELLOGENIN

The effect of 2-EHHB exposure on female liver *vtg* 1 mRNA expression is presented in Table 28. Mean female liver VTG mRNA expression ranged from 2.436 in the 6.3 µg/L 2-EHHB treatment to 3.898 log10(copies *vtg* 1)/ng total RNA in the 25.0 µg/L 2-EHHB treatment.

The effect of 2-EHHB exposure on male liver *vtg* 1 mRNA expression is presented in Table 29. Mean male liver *vtg* 1 mRNA expression ranged from 2.098 in the control to 3.299 log10(copies VTG)/ng total RNA in the 100 µg/L 2-EHHB treatment. The mean male liver *vtg* 1 mRNA expression in the 100 µg/L 2-EHHB treatment was significantly greater than in the control (Jonckheere-Terpstra test, p=0.0070). Similar levels of expression were observed in both male and female subadult fish suggesting that the state of development may have been insufficient to characterized differences.

11.4.2.6. SECONDARY SEXUAL CHARACTERISTICS

11.4.2.6.1. SUBADULT ANAL FIN PAPILLAE

The effect of 2-EHHB exposure on the presence of anal fin papillae in subadult females is presented in Table 30. No papillae were observed in subadult females.

The effect of 2-EHHB exposure on the presence of anal fin papillae in subadult males is presented in Table 31. Mean papillae counts ranged from 5.2 in the 100 µg/L 2-EHHB treatment to 24.2 in the control. Mean male papillae counts in the 50.0 and 100 µg/L 2-EHHB treatments

were significantly less than in the control (Jonckheere-Terpstra test, p=0.0473 and 0.0070, respectively).

11.4.2.7. SUBADULT SEX RATIO

The effect of 2-EHHB exposure on the subadult phenotypic sex ratios (M:F) is presented in Table 32. Phenotypic sex ratios ranged from 0.902 (M:F) in the 12.5 µg/L 2-EHHB treatment to 4.333 (M:F) in the 25 µg/L 2-EHHB treatment (1.267 in control). Phenotypic sex ratios in 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p<0.05). No genotypic-phenotypic mismatches were identified.

11.4.2.8. ADULT REPRODUCTIVE FECUNDITY

The effect of 2-EHHB exposure on reproductive fecundity is presented in Table 33. Mean eggs produced/female/day ranged from 5.8 in the 100 µg/L 2-EHHB treatment to 19.1 in the control. The mean number eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p<0.0001 for each).

11.4.2.9. ADULT FERTILITY

The effect of 2-EHHB exposure on fertilization is presented in Table 34. The mean number of fertilized eggs/female/day ranged from 4.8 in the 100 µg/L 2-EHHB treatment to 19.0 in the control. The mean number of fertilized eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p<0.0001 for each).

11.4.2.10. ADULT GROWTH

11.4.2.10.1. BODY WEIGHT

The effect of 2-EHHB exposure on female body weight is presented in Table 35. The mean female body weight ranged from 0.325 g in the 100 µg/L 2-EHHB treatment to 0.381 g in the 6.3 µg/L 2-EHHB treatment. The mean female body weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0407).

The effect of 2-EHHB exposure on male body weight is presented in Table 36. The mean male body weight ranged from 0.252 g in the 50.0 µg/L 2-EHHB treatment to 0.312 in the 12.5 µg/L 2-EHHB treatment. Mean male body weights in the 50.0 and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0147, 0.0169, respectively).

11.4.2.10.2. BODY LENGTH

The effect of 2-EHHB exposure on female body length is presented in Table 37. The mean female standard body length ranged from 26.8 mm in the 50.0 µg/L 2-EHHB treatment to 28.6 mm in the 100 µg/L 2-EHHB treatment. The mean female body length in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).

The effect of 2-EHHB exposure on male body length is presented in Table 38. The mean male standard body length ranged from 25.1 mm in the 50.0 µg/L 2-EHHB treatment to 28.6 mm in the 100 µg/L 2-EHHB treatment. The mean male body length in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).

11.4.2.11. ADULT SECONDARY SEXUAL CHARACTERISTICS

11.4.2.11.1. ADULT ANAL FIN PAPILLAE

The effect of 2-EHHB exposure on the presence of anal fin papillae in adult females is presented in Table 39. No papillae were observed in adult females.

The effect of 2-EHHB exposure on the presence of anal fin papillae in adult males is presented in Table 40. Mean papillae counts ranged from 59.1 in the 50.0 µg/L 2-EHHB treatment to 65.6 in the control. The mean male papillae counts in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).

11.4.2.12. F1 HISTOPATHOLOGY

The number of male and female medaka examined per exposure groups is provided in Table 41.

11.4.2.12.1. SUBADULT THYROID HISTOPATHOLOGY

No treatment-related thyroid gland findings in F1 subadult control or medaka exposed to 2-EHHB (RSCABS, p=0.3305). For both sexes, the thyroid glands consisted of relatively low numbers of small scattered colloid-filled follicles that were lined by flattened epithelium; such glands were recorded as not remarkable (Appendix D).

11.4.2.12.2. SUBADULT LIVER HISTOPATHOLOGY

There were no liver findings in 2-EHHB-treated F1 subadult male or female fish that were substantially different from those of F1 subadult controls (RSCABS, p>0.05).

11.4.2.12.3. SUBADULT KIDNEY HISTOPATHOLOGY

Based on pathological examination, no treatment-related kidney findings in 2-EHHB-treated F1 subadult male or female fish were identified (Table 42). A few findings were statistically decreased in 2-EHHB-treated females relative to control females, including cellular debris/casts in tubules (minimal) (RSCABS, p=0.0488 and 0.0131 for 50 and 100 µg/L treatment groups), tubule dilation (minimal) (RSCABS, p=0.0489 for 100 µg/L treatment groups), and vacuolation of the tubular epithelium (minimal) (RSCABS, p=0.0416, 0.0365, 0.431, 0.328, and 0.0161 for the 6.25, 12.5, 26, 50.0, and 100 for 50 and 100 µg/L treatment groups, respectively); however, decreases in these particular types of minor background findings are not considered to be toxicologically relevant.

11.4.2.12.4. SUBADULT TESTIS HISTOPATHOLOGY

The predominant finding in the testes of male F1 subadults exposed to 2-EHHB (Table 43) was an increase in the prevalence of testicular hypoplasia/atrophy (moderate to severe) in males of the 50 and 100 µg/L treatment groups relative to controls (RSCABS, p=0.0003 and 0.0000 for

minimal, 0.0008 and 0.0000 for mild and moderate, and 0.0061 for severe [100 µg/L treatment group only]). In each instance, testicular hypoplasia/atrophy presented as a small, underdeveloped gonad populated primarily by spermatogonia and spermatocytes. Given the age of these sub-adult fish, it is more likely that affected testes were hypoplastic than atrophic. Mean testis stage scores results were not considered to be a reliable indicator of effect for males of this sacrifice due to the large number of testes that were too small to reasonably stage (i.e., the central efferent duct was not evident in the acquired sections). The occurrence of intraluminal histiocytic cells (mild) in the testis of a single 100.0 µg/L treatment group male, although statistically significant (RSCABS, p=0.0307), was not considered toxicologically relevant. Despite the statistical increase in Stage 3 scores in the 12.5, 25.0, 50.0 and 100.0 µg/L dose groups relative to controls (RSCABS, p=0.0152, 0.0219, 0.0468, 0.0051, respectively), mean testis stage scores results were not considered to be a reliable indicator of effect for males of this sacrifice due to the large number of testes that were too small to reasonably stage (i.e., the central efferent duct was not evident in the acquired sections).

11.4.2.12.5. SUBADULT OVARY HISTOPATHOLOGY

There were no ovary findings in 2-EHHB -treated F1 subadult females that were substantially different from those of F1 subadult control females (Table 44). Mean ovary stage scores results were not considered to be a reliable indicator for this sacrifice due to the small number of ovaries examined per group.

11.4.2.12.6. ADULT THYROID HISTOPATHOLOGY

The effect of 2-EHHB exposure on adult male thyroid pathology is provided in Table 45. Minimal and mild thyroid follicular hypertrophy/hyperplasia were not observed in greater frequency than the control (RSCABS, p=0.3322 and 0.4090, respectively). The effect of 2-EHHB exposure on adult female thyroid pathology is provided in Table 42. Minimal thyroid follicular hypertrophy/hyperplasia was not observed in greater frequency than the control (RSCABS, p=0.0759). Thus, no treatment-related thyroid gland findings in F1 adult control or medaka exposed to 2-EHHB were observed.

11.4.2.12.7. ADULT LIVER HISTOPATHOLOGY

The effect of 2-EHHB exposure on adult male liver pathology is provided in Table 46. Reduction in focus of cellular alteration in male medaka of minimal severity (RSCABS, p=0.0367) in the 100 µg/L 2-EHHB treatment and mild severity in the 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, 0.0499 and 0.0414, respectively) relative to the control was observed (see Appendix D). Decreased mild and moderate glycogen-type hepatocellular vacuolation were observed in the 25.0, 50.0, and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0041, 0.0011, 0.0000, respectively), and 12.5, 25.0, 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0427, 0.0002, 0.0000, 0.0000, respectively) compared to control. Although decreases of foci of cellular alteration in males of the 50.0 and 100.0 µg/L treatment groups as compared to F1 adult control males were noted; such foci are known to occur spontaneously in medaka, and a reduction in the generally low frequency of that particular benign proliferative lesion was not considered to be toxicologically relevant.

The effect of 2-EHHB exposure on adult female liver pathology is provided in Table 46. Decreased mild and moderate glycogen-type hepatocellular vacuolation were observed in the

50.0, and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0061 and 0.0000, respectively), and 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0387, 0.0095) compared to control. In addition, increased presence of minimal eosinophilic cytoplasmic inclusions was noted in the 50.0, and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0432 and 0.0063, respectively) relative to controls. A benign hepatocellular adenoma was diagnosed in the liver of a single 12.5 µg/L dose group female, Animal No. 1478-G2. This was the only neoplasm observed in F1 adult medaka, and there was no additional evidence to suggest that it was exposure-related.

11.4.2.12.8. **ADULT KIDNEY HISTOPATHOLOGY**

The effect of 2-EHHB exposure on adult male kidney pathology is provided in Table 47. Reduction in minimal tubule cellular debris/cast (RSCABS, p=0.0314); and minimal, mild, and moderate tubule dilation (RSCABS, p=0.0227, 0.0034, and 0.0357, respectively) in male medaka exposed to 100 µg/L 2-EHHB and mild severity in the 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, 0.0499 and 0.0414, respectively) relative to the control was observed.

The effect of 2-EHHB exposure on adult female kidney pathology is provided in Table 47. Increased presence of mild eosinophilia of tubule epithelium was noted in the 100 µg/L 2-EHHB treatment (RSCABS, p=0.0021) relative to controls. Decreases in tubular cellular debris/casts and tubular dilation in the 100.0 µg/L treatment group males relative to control males; were background-type findings and thus, not considered toxicologically significant. Similar decreases did not occur in females.

11.4.2.12.9. **ADULT TESTIS HISTOPATHOLOGY**

The effect of 2-EHHB exposure on adult male testis pathology is provided in Table 48. Increased occurrence of minimal testicular degeneration was observed in each of the treatments relative to the control (RSCABS, p=0.0180, 0.0280, 0.0339, 0.0069, and 0.0070, respectively). In addition, a reduction in minimal interstitial fibrosis in male medaka exposed to 50.0 and 100 µg/L 2-EHHB treatments were observed relative to control (RSCABS, p=0.0499 and 0.0414). Although a decrease in the prevalence of interstitial fibrosis in males of all 2-EHHB treated groups relative to control males was observed; a reduction in the frequency of this particular finding was not considered toxicologically relevant.

11.4.2.12.10. **ADULT OVARY HISTOPATHOLOGY**

The effect of 2-EHHB exposure on adult female ovary pathology is provided in Table 49. Increased necrosis of minimal post-ovulatory follicles in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0348) was observed. However, overall no findings were related to 2-EHHB exposure in the ovaries of female medaka. Mean ovary stage scores were generally comparable among control and treated females. Although instances of accelerated necrosis of post-ovulatory follicles were recorded in single females in each of the 50 and 100.0 µg/L treatment groups, its relationship to treatment remains at most uncertain.

11.4.3. F2 GENERATION

11.4.3.1. SURVIVAL

Test organism survival during the F2 generation of the study is presented in Table 50. No mortality was observed during this phase. Since all fish survived during the F2 generation, no statistical analyses were performed.

11.4.3.2. HATCHING SUCCESS

The effect of 2-EHHB exposure on hatching success expressed as percent hatch is presented in Table 51. Mean hatch ranged from 97.8% in the 6.3 μg/L 2-EHHB treatment to 88.5% in the 100 μg/L 2-EHHB treatment. The mean hatch in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, $p>0.05$).

The effect of 2-EHHB exposure on hatching success expressed as time to hatch is presented in Table 52. The median time to hatch in the control and each 2-EHHB treatment was 10 days. The median time to hatch in the 12.5 - 100 μg/L 2-EHHB treatments were significantly greater than in the control (Cox Proportional Hazard Model, Chi Square, $p=0.0188$, 0.0105, 0.0092, and 0.0180, respectively).

11.4.3.3. SUBADULT GROWTH

11.4.3.3.1. BODY WEIGHT

The effect of 2-EHHB exposure on female body weight is presented in Table 53. The mean female body weight ranged from 0.076 g in the control to 0.101 g in the 12.5 μg/L 2-EHHB treatment. The mean female body weights in the 12.5 - 100 μg/L 2-EHHB treatments were significantly greater than in the control (Jonckheere-Terpstra test, $p=0.0018$, 0.0278, 0.0098, and 0.0243, respectively).

The effect of 2-EHHB exposure on male body weight is presented in Table 54. The mean male body weight ranged from 0.091 g in the 25 μg/L 2-EHHB treatment to 0.122 g in the 12.5 μg/L 2-EHHB treatment. The mean male body weights in the 100 μg/L 2-EHHB treatment was significantly greater than in the control (Jonckheere-Terpstra test, $p=0.0446$).

11.4.3.3.2. BODY LENGTH

The effect of 2-EHHB exposure on female body length is presented in Table 55. The mean female body length ranged from 15.3 mm in the control to 16.4 in the 50.0 μg/L 2-EHHB treatment. The mean female body length in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, $p>0.05$).

The effect of 2-EHHB exposure on male body length is presented in Table 56. The mean male body length ranged from 15.8 mm in the 25.0 μg/L 2-EHHB treatment to 17.7 mm in the 12.5 μg/L 2-EHHB treatment. The mean male body length in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, $p>0.05$).

11.4.3.4. SUBADULT LIVER WEIGHT

The effect of 2-EHHB exposure on female liver weight is presented in Table 57. The mean female liver weight ranged from 0.003 g in the control to 0.006 g in the 12.5 and 25.0 µg/L 2-EHHB treatments. The mean female subadult liver weights in the 6.3, 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatments were significantly less than the control (Jonckheere-Terpstra test, p=0.0005, <0.0001, <0.0001, <0.0001, and 0.0001, respectively)

The effect of 2-EHHB exposure on male liver weight is presented in Table 58. The mean male liver weight ranged from 0.003 g in the control to 0.007 g in the 12.5 and 25.0 µg/L 2-EHHB treatments. The mean subadult male liver weights in the 6.3, 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0273, <0.0001, <0.0001, <0.0001, and 0.0002, respectively).

11.4.3.5. SUBADULT LIVER VITELLOGENIN

The effect of 2-EHHB exposure on female liver *vtg* 1 mRNA expression is presented in Table 59. Mean female liver *vtg* 1 mRNA expression ranged from 2.407 in the 25 µg/L 2-EHHB treatment to 3.574 log10(copies *vtg* 1)/ng total RNA in the 12.5 µg/L 2-EHHB treatment.

The effect of 2-EHHB exposure on male liver *vtg* 1 mRNA expression is presented in Table 60. Mean male liver *vtg* 1 mRNA expression ranged from 2.501 in the 25 µg/L 2-EHHB treatment to 3.627 log10(copies *vtg* 1)/ng total RNA in the 6.3 µg/L 2-EHHB treatment. The mean male liver *vtg* 1 mRNA expression in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0491). As with F1 subadult fish, similar levels of expression were observed in both male and female subadult fish suggesting that the state of development may have been insufficient to characterized differences.

11.4.3.6. SECONDARY SEXUAL CHARACTERISTICS

11.4.3.6.1. SUBADULT ANAL FIN PAPILLAE

The effect of 2-EHHB exposure on the presence of anal fin papillae in subadult females is presented in Table 61. No papillae were observed in subadult females.

The effect of 2-EHHB exposure on the presence of anal fin papillae in subadult males is presented in Table 62. Mean papillae counts ranged from 0.7 in the 6.3 µg/L 2-EHHB treatment to 6.3 in the 50 µg/L 2-EHHB treatment. Mean male papillae counts in 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p<0.05).

11.4.3.7. SUBADULT SEX RATIO

The effect of 2-EHHB exposure on the subadult phenotypic sex ratios (M:F) is presented in Table 63. Phenotypic sex ratios 0.492 (M:F) in the 12.5 µg/L 2-EHHB treatment to 2.0 (M:F) in the 100 µg/L 2-EHHB treatment (0.795 in control). Phenotypic sex ratios in 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p<0.05). No genetypic-phenotypic mismatches were identified.

11.4.3.8. ADULT REPRODUCTIVE FECUNDITY

The effect of 2-EHHB exposure reproductive fecundity is presented in Table 64. Mean eggs produced/female/day ranged from 5.4 in the 100 µg/L 2-EHHB treatment to 19.8 in the control. The mean number of eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0059 for the 6.3 µg/L 2-EHHB treatment, and <0.0001 for the remainder).

11.4.3.9. FERTILIZATION

The effect of 2-EHHB exposure on fertilization is presented in Table 65. The mean number of fertilized eggs/female/day ranged from 3.1 in the 100 µg/L 2-EHHB treatment to 19.6 in the control. The mean number of fertilized eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0038 and <0.0001, respectively).

11.4.3.10. GROWTH

11.4.3.10.1. BODY WEIGHT

The effect of 2-EHHB exposure on female body weight is presented in Table 66. The mean female body weight ranged from 0.353 g in the 100 µg/L 2-EHHB treatment to 0.557 g in the 12.5 µg/L 2-EHHB treatment. The mean body weight in the 6.3 – 50.0 µg/L 2-EHHB treatments were significantly greater than in the control (KW-ANOVA, Dunn's test, p=0.0058, <0.0001, 0.0004, and 0.0052, respectively).

The effect of 2-EHHB exposure on male body weight is presented in Table 67. The mean male body weight ranged from 0.282 g in the control to 0.415 in the 12.5 µg/L 2-EHHB treatment. The mean body weight in the 6.3 – 50.0 µg/L 2-EHHB treatments were significantly greater than in the control (KW-ANOVA, Dunn's test, p=0.0004, and <0.0001, respectively).

11.4.3.10.2. BODY LENGTH

The effect of 2-EHHB exposure on female body weight is presented in Table 68. The mean female body weight ranged from 25.78 g in 6.3 µg/L 2-EHHB treatment to 28.18 g in the 12.5 µg/L 2-EHHB treatment. The mean body weights in the 12.5 - 100 µg/L 2-EHHB treatments were significantly greater than in the control (Jonckheere-Terpstra test, p=0.0179, 0.0127, 0.0192, and 0.0354, respectively).

The effect of 2-EHHB exposure on male body weight is presented in Table 69. The mean male body weight ranged from 25.18 g in the 6.3 µg/L 2-EHHB treatment to 26.65 g in the 100 µg/L 2-EHHB treatment.

11.4.3.11. SECONDARY SEXUAL CHARACTERISTICS

11.4.3.11.1. ADULT ANAL FIN PAPILLAE

The effect of 2-EHHB exposure on the presence of anal fin papillae in adult females is presented in Table 70. No papillae were observed in subadult females.

The effect of 2-EHHB exposure on the presence of anal fin papillae in adult males is presented in Table 71. Mean papillae counts ranged from 43.83 in the 100.0 µg/L 2-EHHB treatment to 68.1 in the 12.5 µg/L 2-EHHB treatment. The mean papillae count in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0074).

11.4.3.12. F2 HISTOPATHOLOGY

11.4.3.12.1. ADULT LIVER HISTOPATHOLOGY

The effect of 2-EHHB exposure on adult female liver pathology is provided in Table 72. Increased moderate basophilia in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0183) was observed. Reduction in mild glycogen-type hepatocellular vacuolation (RSCABS, p=0.0023) and minimal (RSCABS, P=0.0400) and mild (RSCABS, p=0.0473) granulomatous inflammation in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0183) were observed. Reduction in mild glycogen-type hepatocellular vacuolation (RSCABS, p=0.0023) and minimal (RSCABS, P=0.0400) and mild (RSCABS, p=0.0473) granulomatous inflammation in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0183) were observed. Reduction in mild and moderate glycogen-type hepatocellular vacuolation were noted in male medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0364 and 0.0296 [mild] and 0.0341 and 0.0179 [moderate], respectively). Although an increase in the severity of basophilia in females of the 100.0 µg/L treatment group as compared to control females; no evidence of a dose-response pattern among the lower treatment groups, and this finding was not considered to be treatment-related. The very slight decrease in the prevalence of granulomatous inflammation (a background finding) in the livers of 2-EHHB-treated females relative to controls was not considered toxicologically relevant.

The effect of 2-EHHB exposure on adult male liver pathology is provided in Table 73. Increased presence of minimal and mild cystic degeneration was noted in the 25.0 - 100 µg/L 2-EHHB treatments relative to controls (RSCABS, p=0.0020, 0.0013, 0.0391 and 0.0044, 0.0486, and 0.0319, respectively).

11.4.3.12.2. ADULT KIDNEY HISTOPATHOLOGY

The occurrence of tubule dilation was significantly less in female fish exposed to 100 and 50 µg/L 2-EHHB relative to the control (RSCABS, p=0.0246 and 0.0212, respectively). The presence of tubular cellular debris of minimal severity in adult male fish exposed to 100 µg/L 2-EHHB was significantly greater than the control (RSCABS, p=0.0471). In addition, a significantly decreased occurrence of mild tubule mineralization in male fish exposed to 100 µg/L 2-EHHB was observed (RSCABS, p=0.0175).

The frequency of minimal cellular debris/casts was only slightly greater in the kidneys of 100 µg/L dose treatment males compared to controls, although this result was determined to be statistically significant. However, a similar increase was not observed in the kidneys of 2-EHHB -treated females, or in F1 adult males or females; consequently, that result was unlikely to have been treatment-related. In addition, although statistically significant, decreases in tubular dilation (50 and 100.0 µg/L dose group females) and mineralization (100.0 µg/L dose group males) were not considered to be toxicologically relevant.

11.4.3.12.3. ADULT TESTIS HISTOPATHOLOGY

The effect of 2-EHHB exposure on adult male testis pathology is provided in Table 73. Increased presence of testicular interstitial cells of minimal severity in the 25.0 - 100 µg/L 2-EHHB treatments relative to the control was observed (RSCABS, p=0.0105, 0.0344 and 0.0121, respectively).

11.4.3.12.4. ADULT OVARY HISTOPATHOLOGY

The effect of 2-EHHB exposure on adult female ovary pathology is provided in Table 74. A reduction in minimal granulomatous inflammation in female medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0464 and 0.0301) and severe oocyte retention in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0473) was observed. Increased presence of stage 2 ovaries in female medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0453 and 0.0307, respectively) was observed. Statistical differences for decreased granulomatous inflammation (50 and 100.0 µg/L dose groups), decreased oocyte retention (100 µg/L treatment group), and increased ovarian stage scores (50 and 100 µg/L treatment groups) all involved spontaneous types of occurrences in which the differences were based on very small numbers of animals; all are thus considered to be spurious results unrelated to 2-EHHB treatment (decreases in granulomatous inflammation or oocyte retention would not be considered toxicologically relevant in any event).

Other noteworthy gonad findings that were unlikely to be treatment-related included a malignant dysgerminoma (ovary-like germ cell neoplasm) with liver metastasis in a genetically male control fish (Animal No. 2570-J1), and ovarian spermatogenesis in a single 100 µg/L treatment group female (Animal No. 2697-A2). The malignant dysgerminoma was comprised of mildly disorganized immature ovarian tissue that exhibited oogenic progression to the cortical alveolar and even early vitellogenic phases, although the most mature cells were generally atretic. Occasional small patches of clonal cells within the oogenic tissue resembled spermatocytes. A small amount of metastatic dysgerminoma tissue was evident in a hepatic vein in several sections, and this consisted of perinucleolar oocytes and primordial ovarian tissue. Ovarian spermatogenesis was characterized by the presence of disorganized but well-differentiated spermatogenic tissue, including spermatogonia, spermatocyte, and spermatid phases, located primarily at the anterior and ventral aspects of the affected ovary. Although this anomaly occurred in the ovary of a 100 µg/L treatment group female, there is no other evidence (e.g., findings of gender ambiguity in other 2-EHHB-treated medaka) to suggest that ovarian spermatogenesis was exposure-related in this case.

12. CONCENTRATION MEASUREMENT ENDPOINTS

The No Observable Effect Concentration (NOEC) and Lowest Observable-Effect Concentration (LOEC) for the various endpoints measured are summarized in Table 75. Although no formal statistical analyses were performed, results are presented to illustrate effects across generations for each measurement endpoint.

13. DISCUSSION

13.1. PERFORMANCE CRITERIA AND VALIDITY

Performance of the present study and the relationship to the performance criteria and test validity established in the study protocol and amendments in Appendix A and OCSPP test guideline (890.2200) (3) are discussed below and summarized in Table 76.

13.1.1. PERFORMANCE CRITERIA

- Maintain concentrations of the test chemical in solution within ±20% of the mean measured values over the entire test period.
    - The mean measured concentrations were consistent. Expressed as a percent of the nominal concentration, the mean measured concentrations were within 80% of nominal concentration values.
    - The coefficient of variation was >20% in the 6.25, 12.5, and 25.0 µg/L 2-EHHB treatments, however; the higher values were a function of the sole replicate sampling within each treatment and control throughout the majority of the in-life study (see Table 7). CV was based on the standard deviation of mean measured concentration of each replicate and mean measured treatment concentration per facility SOP. Overall, the mean measured concentrations were a reasonable estimation of exposure concentration, and the 22% treatment-level CV did not impact the interpretation of the results or conclusions drawn.
- The DO should be ≥ 60% of air saturation value throughout the test.
    - DO was ≥4.6 mg/L or 61.3% of saturation.
- The pH should be maintained between 6.5-8.5. The inter-replicate/inter-treatment differentials should not exceed 0.5.
    - The range of pH measured in the control and treatments was between 6.5 and 8.5 and the inter-replicate/inter-treatment differentials did not exceed 0.5.
- The mean temperature throughout the test should be between 24 and 26°C over the duration of study. Replicates within a treatment should not be statistically different from each other, and treatments within the test should not be statistically different from each other.
    - The temperature in the study was maintained at 25±1ºC, and the inter-replicate range in temperature was maintained at ≤0.5ºC.
- Hatching of eggs should be ≥ 80% in the controls (in each of the F1 and F2 generations). Survival after hatching should be ≥ 80% (average) until 3 wpf.
    - Mortality in each replicate of the controls was <20% and the hatchability of eggs in the F1 and F2 generations was >80% until 3 wpf in the control.
- Survival of fish from 3 wpf to 8 wpf should be greater than 90% survival.
    - Survival in hatchlings was >90% throughout the F1 and F2 generations.
- Control XX and XY fish should have a mean weight of at least 100 mg and a mean length of at least 20 mm at the subadult sampling stage.
    - F1 control XX and XY fish mean weight was >100 mg and mean length was >20 mm in subadults sampled in the F1 and F2 generations.

- Control fecundity should be greater than 20 eggs per pair per day. These should be greater than 75% fertile. For adequate statistical power, 16 pairs in the control group should exceed these minimum requirements.
    - Mean reproductive fecundity for the F0 and F1 controls was and 19.2 and 19.1 eggs/female/day, respectively. Based on the outcome of statistical analyses relating to the effect of 2-EHHB exposure on reproductive fecundity, each treatment was found to be significantly less than the control (Joncheere-Terpstra, $p<0.05$). Thus, reproduction fecundity in the control produced adequate statistical power for the present study.
    - Fertilization of eggs produced in the F0-F2 generations was >80% during the study.
- At least 16 pairs in the control group should exceed these minimum requirements. The prevalence of XX males (determined by comparison of genotype and histological sex) in the control population should be less than 5%. In addition, less than 2% of control XY fish should have intersex of any severity in the adult histopathology samples.
    - There was no occurrence of intersex fish in the F1 and F2 controls.

13.1.2. **TEST VALIDITY**

- At least three treatment levels with three uncompromised replicates must be available for analysis. Excessive mortality, which compromises a treatment, is defined as >20% mortality in 2 or more replicates that cannot be explained by technical error.
    - Study result: none of the test concentrations, including the control, had compromised replicates.
- There should be sufficient reproduction in at least the third highest group and all lower groups of the F0 to fill the hatching incubators.
    - Study result: sufficient reproduction in at least the third highest group and all lower groups of the F0 to fill the hatching incubators was achieved.
- There should be adequate survival in the third highest test exposure and lower exposure groups in F1 to allow endpoint evaluation at the subadult sampling.
    - Study result: adequate survival in the third highest test exposure and lower exposure groups in F1 to allow endpoint evaluation at the subadult sampling was achieved.
- Survival in the second highest exposure group of the F1 should be $\geq$20%.
    - Study result: survival in the second highest exposure group of the F1 was $\geq$20%.
- Note signs of overt toxicity. Signs of overt toxicity may include, but are not limited to, floating on the surface, lying on the bottom of the tank, inverted or irregular swimming, and being nonresponsive to stimuli.
    - Study result: none of the test concentrations demonstrated overt toxicity.
- NOEC and LOEC values for each endpoint should be determined.
    - Study result: NOEC and LOEC values for each endpoint were determined (Table 75).

In summary, the present study met performance criteria and test validity established for the Medaka Extended One Generation Reproduction Test (MEOGRT) under EPA OCSPP Harmonized Test Guideline 890.2200 (3) with the exceptions noted above.

13.2. ASSESSMENT OF THE MEOGRT RESULTS

The following results were considered, using the framework outlined in Ankley and Jensen (9), as a basis for concluding if 2-EHHB has the potential to interact with the endocrine system.

13.3. MEASURED TEST CONCENTRATIONS

- The mean measured concentrations for the 0.0 (control), 6.3, 12.5, 25.0, 50.0 and 100 µg/L 2-EHHB treatments (nominal) were 0.321 (0.212 µg/L MQL), 5.32, 11.3, 24.0, 48.8, and 101 µg/L 2-EHHB.

13.4. SURVIVAL

- No significant effects on juvenile or adult survival were observed during the study regardless of generation.

13.5. F0 GENERATION

13.5.1. REPRODUCTIVE FECUNDITY AND FERTILIZATION

- The mean number eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0414 [6.3 µg/L 2-EHHB treatment] and <0.0001 for others).
- The mean number of fertilized eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0458 [6.3 µg/L 2-EHHB treatment] and <0.0001 for others).

13.5.2. GROWTH

- The mean female body weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0027).
- Mean male body weights in each of the 2-EHHB treatments were significantly greater than in the control (Jonckheere-Terpstra test, p=0.0121, 0.0026, 0.0020, 0.0102, 0.0039, respectively).
- The mean female body length in the 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0003 and <0.0001 for remainder, respectively).
- No effect of 2-EHHB exposure on male body length was noted.

13.6. F1 GENERATION

13.6.1. HATCHING SUCCESS

- The mean hatch (%) in the 100 µg/L 2-EHHB treatment was significantly less than in the control (KW-ANOVA, Dunn's test, p=0.0156). The median time to hatch in the 12.5 - 100 µg/L 2-EHHB treatments were significantly greater than in the control (Cox Proportional Hazard Model, Chi Square, p=0.0188, 0.0105, 0.0092, and 0.0180, respectively).

13.6.2. SUBADULT GROWTH

- The mean subadult female body weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0007).
- The mean subadult female body length in the 50.0 and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0279 and 0.0003, respectively).
- The mean male body weight in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).
- The mean subadult male body length in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0355).

13.6.3. SUBADULT LIVER WEIGHT AND *VTG* 1 MRNA EXPRESSION

- The mean subadult female liver weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0392).
- Mean subadult male liver weights in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Dunnett's test, p=0.0248).
- Mean subadult female liver *vtg* 1 mRNA expression ranged from 2.436 in the 6.3 µg/L 2-EHHB treatment to 3.048 log10(copies *vtg* 1)/ng total RNA in the control.
- The mean subadult male liver *vtg* 1 mRNA expression in the 100 µg/L 2-EHHB treatment was significantly greater than in the control (Jonckheere-Terpstra test, p=0.0070). Similar levels of expression were observed in both male and female subadult fish suggesting that the state of development may have been insufficient to characterized differences.

13.6.4. SUBADULT SECONDARY SEXUAL CHARACTERISTICS AND SEX RATIO

- No papillae were observed in subadult females. Mean subadult male papillae counts in the 50.0 and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0473 and 0.0070, respectively).
- No effect of 2-EHHB exposure on subadult sex ratios were noted.
- In addition, no genotypic-phenotypic mismatches were identified.

13.6.5. REPRODUCTIVE FECUNDITY AND FERTILIZATION

- The mean number eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p<0.0001 for each).
- The mean number of fertilized eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p<0.0001 for each).

13.6.6. ADULT GROWTH

- The mean adult female body weight in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0407). Mean adult male body weights in the 50.0 and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0417 and 0.0169, respectively).
- No effects on adult female or male body length were observed.

13.6.7. ADULT SECONDARY SEXUAL CHARACTERISTICS

- No anal fin papillae were observed in adult females and no effect on papillae counts were noted in adult male medaka.

13.6.8. HISTOPATHOLOGY

13.6.8.1. THYROID

- No treatment-related thyroid gland findings in subadult or adult control or medaka exposed to 2-EHHB were noted.

13.6.8.2. LIVER

13.6.8.2.1. SUBADULT

- There were no liver findings in 2-EHHB-treated subadult male or female fish that were substantially different from those of F1 sub-adult controls (RSCABS, $p>0.05$).

13.6.8.2.2. ADULT

13.6.8.2.2.1. MALE

- Reduction in focus of cellular alteration in adult male medaka liver of minimal (RSCABS, $p=0.0367$) in the 100 µg/L 2-EHHB treatment and mild severity in the 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, 0.0499 and 0.0414, respectively) relative to the control was observed. Although decreases of foci of cellular alteration in males of the 50.0 and 100.0 µg/L treatment groups as compared to F1 adult control males were noted; such foci are known to occur spontaneously in medaka, and a reduction in the generally low frequency of that particular benign proliferative lesion was not considered to be toxicologically relevant.
- Decreased mild and moderate glycogen-type hepatocellular vacuolation were observed in liver from adult male medaka exposed to 25.0, 50.0, and 100 µg/L 2-EHHB (RSCABS, $p=0.0041$, 0.0011, 0.0000, respectively), and 12.5, 25.0, 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, $p=0.0427$, 0.0002, 0.0000, 0.0000, respectively) compared to control.

13.6.8.2.2.2. FEMALE

- Decreased mild and moderate glycogen-type hepatocellular vacuolation were also observed in adult female medaka from the 50.0, and 100 µg/L 2-EHHB treatments (RSCABS, $p=0.0061$ and 0.0000, respectively), and 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, $p=0.0387$, 0.0095) compared to control.
- In addition, increased presence of minimal eosinophilic cytoplasmic inclusions was noted in adult livers from female medaka exposed to 50.0, and 100 µg/L 2-EHHB (RSCABS, $p=0.0432$ and 0.0063, respectively) relative to controls.

13.6.8.3. KIDNEY

13.6.8.3.1. SUBADULT

- Based on pathological examination, no treatment-related kidney findings in 2-EHHB-treated subadult male or female fish were identified. A few findings were statistically decreased

in 2-EHHB-treated females relative to control females, including cellular debris/casts in tubules (minimal) (RSCABS, p=0.0488 and 0.0131 for 50 and 100 µg/L treatment groups), tubule dilation (minimal) (RSCABS, p=0.0489 for 100 µg/L treatment groups), and vacuolation of the tubular epithelium (minimal) (RSCABS, p=0.0416, 0.0365, 0.431, 0.328, and 0.0161 for the 6.25, 12.5, 26, 50.0, and 100 for 50 and 100 µg/L treatment groups, respectively); however, decreases in these particular types of minor background findings are not considered to be toxicologically relevant.

13.6.8.3.2. **ADULT**

13.6.8.3.2.1. **MALE**

- Reduction in minimal kidney tubule cellular debris/cast (RSCABS, p=0.0314); and minimal, mild, and moderate tubule dilation (RSCABS, p=0.0227, 0.0034, and 0.0357, respectively) in adult male medaka exposed to 100 µg/L 2-EHHB and mild severity in the 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, 0.0499 and 0.0414, respectively) relative to the control was observed.
- Decreases in tubular cellular debris/casts and tubular dilation in the 100.0 µg/L treatment group males relative to control males; were background-type findings and thus, not considered toxicologically significant. Similar decreases did not occur in females.

13.6.8.3.2.2. **FEMALE**

- Increased presence of mild eosinophilia of tubule kidney epithelium was noted in adult female medaka from the 100 µg/L 2-EHHB treatment (RSCABS, p=0.0021) relative to controls.

13.6.8.4. **GONADS**

13.6.8.4.1. **SUBADULT**

13.6.8.4.1.1. **MALE**

- The predominant finding in the testes of male subadults exposed to 2-EHHB was an increase in the prevalence of testicular hypoplasia/atrophy (moderate to severe) in males of the 50 and 100 µg/L treatment groups relative to controls (RSCABS, p=0.0003 and 0.0000 for minimal, 0.0008 and 0.0000 for mild and moderate, and 0.0061 for severe [100 µg/L treatment group only]). In each instance, testicular hypoplasia/atrophy presented as a small, underdeveloped gonad populated primarily by spermatogonia and spermatocytes. Given the age of these sub-adult fish, it is more likely that affected testes were hypoplastic than atrophic. Mean testis stage scores results were not considered to be a reliable indicator of effect for males of this sacrifice due to the large number of testes that were too small to reasonably stage (i.e., the central efferent duct was not evident in the acquired sections). The occurrence of intraluminal histiocytic cells (mild) in the testis of a single 100.0 µg/L treatment group male, although statistically significant (RSCABS, p=0.0307), was not considered toxicologically relevant. Despite the statistical increase in Stage 3 scores in the 12.5, 25.0, 50.0 and 100.0 µg/L dose groups relative to controls (RSCABS, p=0.0152, 0.0219, 0.0468, 0.0051, respectively), mean testis stage scores results were not considered to be a reliable indicator of effect for males of this

sacrifice due to the large number of testes that were too small to reasonably stage (i.e., the central efferent duct was not evident in the acquired sections).

13.6.8.4.1.2. **FEMALE**

- There were no ovary findings in 2-EHHB-treated subadult females that were substantially different from those of F1 subadult control females. Mean ovary stage scores results were not considered to be a reliable indicator for this sacrifice due to the small number of ovaries examined per group. There were no ovary findings in 2-EHHB-treated subadult females that were substantially different from those of F1 subadult control females. Mean ovary stage scores results were not considered to be a reliable indicator for this sacrifice due to the small number of ovaries examined per group.

13.6.8.4.2. **ADULT**

13.6.8.4.2.1. **MALE**

-
- Increased occurrence of minimal testicular degeneration in adult males was observed in each of the treatments relative to the control (RSCABS, p=0.0180, 0.0280, 0.0339, 0.0069, and 0.0070, respectively).
- Although a decrease in the prevalence of interstitial fibrosis in adult males of all 2-EHHB treated groups relative to control males was observed; a reduction in the frequency of this particular finding was not considered toxicologically relevant.

13.6.8.4.2.2. **FEMALE**

- Increased necrosis of minimal post-ovulatory follicles in adult female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0348) was observed. However, overall no findings were related to 2-EHHB exposure in the ovaries of female medaka. Mean ovary stage scores were generally comparable among control and treated females.
- Although instances of accelerated necrosis of post-ovulatory follicles were recorded in single adult females in each of the 50 and 100.0 µg/L treatment groups, its relationship to treatment remains at most uncertain.

13.7. **F2 GENERATION**

13.7.1. **HATCHING SUCCESS**

- The mean hatch in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).
- The median time to hatch in the 12.5 - 100 µg/L 2-EHHB treatments were significantly greater than in the control (Cox Proportional Hazard Model, Chi Square, p=0.0188, 0.0105, 0.0092, and 0.0180, respectively).

13.7.2. **SUBADULT GROWTH**

- The mean subadult female body weights in the 12.5 - 100 µg/L 2-EHHB treatments were significantly greater than in the control (Jonckheere-Terpstra test, p=0.0018, 0.0278, 0.0098, and 0.0243, respectively).

- The mean male body weights in the 100 µg/L 2-EHHB treatment was significantly greater than in the control (Jonckheere-Terpstra test, p=0.0446).
- No effect of 2-EHHB exposure on female or male body lengths were observed.

13.7.3. SUBADULT LIVER WEIGHT AND *VTG*1 MRNA EXPRESSION

- The mean female subadult liver weight in the 6.3, 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0005, <0.0001, <0.0001, <0.0001, and 0.0001, respectively).
- The mean subadult male liver weight the 6.3, 12.5, 25.0, 50.0, and 100 µg/L 2-EHHB treatmenst were significantly less than in the control (Jonckheere-Terpstra test, p=0.0273, <0.0001, <0.0001, <0.0001, and 0.0002, respectively).
- The mean subadult male liver *vtg* 1 mRNA expression in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0491).
- No effect of 2-EHHB exposure was noted in subadult female liver *vtg* 1 mRNA expression relative to controls. As with F1 subadult fish, similar levels of expression were observed in both male and female subadult fish suggesting that the state of development may have been insufficient to characterized differences.

13.7.4. SUBADULT SECONDARY SEXUAL CHARACTERISTICS AND SEX RATIO

- No anal fin papillae were observed in adult females and no effect on papillae counts were noted in adult male medaka.
- No effect of 2-EHHB exposure on subadult sex ratios were noted.
- In addition, no genetic-phenotype mismatches were identified.

13.7.5. REPRODUCTIVE FECUNDITY AND FERTILIZATION

- The mean number of eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0059 for the 6.3 µg/L 2-EHHB treatment, and <0.0001 for the remainder).
- The mean number of fertilized eggs produced/female/day in each of the treatments were significantly less than in the control (Jonckheere-Terpstra test, p=0.0038 and <0.0001 for the remainder, respectively).

13.7.6. ADULT GROWTH

- The mean adult female body weight in the 6.3, 12.5, 25.0, and 50.0 µg/L 2-EHHB treatments were significantly greater than in the control (KW-ANOVA, Dunn's test, p=0.0058, <0.0001, 0.0004, and 0.0052, respectively).
- The mean adult male body weight in the 6.3, 12.5, 25.0, and 50.0 µg/L 2-EHHB treatments were significantly greater than in the control (KW-ANOVA, Dunn's test, p=0.0004, <0.0001, <0.0001, and <0.0001, respectively).
- No effect of 2-EHHB exposure on adult female body lengths were observed.
- The mean body male body lengths in the 12.5, 25, 50.0, and 100 µg/L 2-EHHHB treatments were significantly greater than in the control (Jonckheere-Terpestra Test, p=0.0179, 0.00127. 0.0192, and 0.0354).

13.7.7. ADULT SECONDARY SEXUAL CHARACTERISTICS

- No anal fin papillae were observed in adult females.
- The mean adult male papillae count in the 100 µg/L 2-EHHB treatment was significantly less than in the control (Jonckheere-Terpstra test, p=0.0074).

13.7.8. HISTOPATHOLOGY

13.7.8.1. LIVER

13.7.8.1.1. MALE

- Reduction in mild and moderate glycogen-type hepatocellular vacuolation were noted in male medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0364 and 0.0296 [mild] and 0.0341 and 0.0179 [moderate], respectively).
- Increased presence of minimal and mild cystic degeneration was noted in liver from male medaka exposed to 25.0 - 100 µg/L 2-EHHB relative to controls (RSCABS, p=0.0020, 0.0013, 0.0391 and 0.0044, 0.0486, and 0.0319, respectively).

13.7.8.1.2. FEMALE

- Increased moderate basophilia in liver from female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0183) was observed.
- Reduction in mild glycogen-type hepatocellular vacuolation (RSCABS, p=0.0023) and minimal (RSCABS, P=0.0400) and mild (RSCABS, p=0.0473) granulomatous inflammation in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0183) were observed.
- Although an increase in the severity of basophilia in females of the 100 µg/L treatment group as compared to control females; no evidence of a dose-response pattern among the lower treatment groups, and this finding was not considered to be treatment-related. The very slight decrease in the prevalence of granulomatous inflammation (a background finding) in the livers of 2-EHHB-treated females relative to controls was not considered toxicologically relevant.

13.7.8.2. KIDNEY

13.7.8.2.1. MALE

- The frequency of minimal cellular debris/casts was only slightly greater in the kidneys of 100 µg/L dose treatment males compared to controls, although this result was determined to be statistically significant. However, a similar increase was not observed in the kidneys of 2-EHHB -treated females, or in F1 adult males or females; consequently, that result was unlikely to have been treatment-related. In addition, although statistically significant, decreases in tubular dilation (50 and 100 µg/L treatment group females) and mineralization (100 µg/L treatment group males) were not considered to be toxicologically relevant.

13.7.8.2.2. FEMALE

- The occurrence of tubule dilation was significantly less in female fish exposed to 100 and 50 µg/L 2-EHHB relative to the control (RSCABS, p=0.0246 and 0.0212, respectively). The presence of tubular cellular debris of minimal severity in adult male fish exposed to 100 µg/L 2-EHHB was significantly greater than the control (RSCABS, p=0.0471). In addition, a

significantly decreased occurrence of mild tubule mineralization in male fish exposed to 100 µg/L 2-EHHB was observed (RSCABS, p=0.0175).

13.7.8.3. GONADS

13.7.8.3.1. MALE

- Increased presence of testicular interstitial cells of minimal severity in the 25.0, 50.0, and 100 µg/L 2-EHHB treatments relative to the control was observed (RSCABS, p=0.0105, 0.0344 and 0.0121, respectively). This finding was most prominent in fish of the 25 and 100 µg/L treatment groups.
- Testis stage scores tended to be slightly higher in 2-EHHB-exposed males than controls, and were only substantially greater in the 50 µg/L treatment group; however, the lack of dose-response pattern suggested this is likely a spurious result.
- Other noteworthy gonad findings that were unlikely to be treatment-related included a malignant dysgerminoma (ovary-like germ cell neoplasm) with liver metastasis in a genetically male control fish (Animal No. 2570-J1).

13.7.8.3.2. FEMALE

- A reduction in minimal granulomatous inflammation in adult female medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0464 and 0.0301) and severe oocyte retention in adult female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0473) was observed.
- Increased presence of stage 2 ovaries in adult female medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0453 and 0.0307, respectively) was observed.
- Statistical differences for decreased granulomatous inflammation (50 and 100 µg/L treatment groups), decreased oocyte retention (100 µg/L treatment group), and increased ovarian stage scores (50 and 100 µg/L treatment groups) all involved spontaneous types of occurrences in which the differences were based on very small numbers of animals; all are thus considered to be spurious results unrelated to 2-EHHB treatment (decreases in granulomatous inflammation or oocyte retention would not be considered toxicologically relevant in any event).
- Other noteworthy gonad findings that were unlikely to be treatment-related included ovarian spermatogenesis in a single 100 µg/L treatment group female (Animal No. 2697-A2). The malignant dysgerminoma was comprised of mildly disorganized immature ovarian tissue that exhibited oogenic progression to the cortical alveolar and even early vitellogenic phases, although the most mature cells were generally atretic. Occasional small patches of clonal cells within the oogenic tissue resembled spermatocytes. A small amount of metastatic dysgerminoma tissue was evident in a hepatic vein in several sections, and this consisted of perinucleolar oocytes and primordial ovarian tissue. Ovarian spermatogenesis was characterized by the presence of disorganized but well-differentiated spermatogenic tissue, including spermatogonia, spermatocyte, and spermatid phases, located primarily at the anterior and ventral aspects of the affected ovary. Although this anomaly occurred in the ovary of a 100 µg/L treatment group female, there is no other evidence (e.g., findings of gender ambiguity in other 2-EHHB-treated fish) to suggest that ovarian spermatogenesis was exposure-related in this case.

13.8. OVERT TOXICITY AND BEHAVIOR

- No significant effects on behavior or signs of overt toxicity were noted throughout the study.

14. CONCLUSIONS (COMPARISON OF EFFECTS BETWEEN GENERATIONS)

14.1. SURVIVAL

- No effects on survival were observed during the study.

14.2. REPRODUCTIVE FECUNDITY AND FERTILIZATION

- Reproductive fecundity (egg production and fertilization) was markedly reduced in each generation (F0, F1, and F2) in medaka exposed to 2-EHHB compared to the control. Based on these results, 2-EHHB appeared to consistently reduce reproductive performance in medaka across generations.

14.3. HATCHING SUCCESS

- A reduction in hatching success based on both decreased percent hatch and increased time to hatch was observed in the F1 generation. In the F2 generation, percent hatch was not different from the control, but increased time to hatch in eggs from fish exposed to 2-EHHB was observed compared to the control. Although the percent hatch was not altered in the F2 generation, three of the four endpoints reflecting hatching success were impacted suggesting that 2-EHHB was capable of reducing hatching success across generations.

14.4. GROWTH

- Subadult growth (weight and length for F1 and weight only for F2 generations) was reduced in fish exposed to 2-EHHB relative to the control. Various aspects of adult growth (weight and length) in both sexes were observed in each generation. Thus, exposure to 2-EHHB at both the sub-adult and adult level reduced growth across generations.

14.5. SECONDARY SEXUAL CHARACTERISTICS AND SEX RATIOS

- No anal fin papillae were found in subadult female medaka from either F1 or F2 generations. Reduced anal fin papillae were found in F1 generation male subadult medaka exposed to 2-EHHB, but not F2 generation male subadult fish. No anal fin papillae were found in adult females, and a reduction in anal fin papillae was found in adult males in the F2 generation. 2-EHHB exposure did not affect sex ratios in subadult medaka from either the F1 or F2 generations. Overall, deciphering the trends in reduced anal fin papillae in male fish was difficult. Caution in interpreting reduction at the subadult level in the present study is warranted as the growth and development of the fish including the control may not have been adequate to assess secondary sexual characteristics. The reduction in the F2 generation adult male medaka, however; may be an indication of reduced masculinization.

14.6. LIVER WEIGHT AND LIVER *VTG*1 MRNA EXPRESSION

- Female subadult liver weight in the F1 generation and both male and female liver weight in F2 generation was reduced in fish exposed to 2-EHHB compared to controls. Liver

vitellogenin mRNA expression in F1 and F2 females was not affected by 2-EHHB exposure; however, increased expression in F1 generation males and decreased expression in F2 generation males were observed. Based on the results obtained, inferring trends across generations was not warranted. Expression profiles may have reflected the state of differentiation of the subadult fish at the time of sacrifice.

14.7. HISTOPATHOLOGY

- Many of the pathological findings in the present study found to be statistically significant based on RSCABS analyses were considered by the pathologist to not have toxicological-relevance to the study. One of the most prominent findings was minimal to severe testicular hypoplasia in F1 sub-adult males of the 50.0 and 100.0 µg/L 2-EHHB dose groups. Other findings associated with 2-EHHB exposure relative to concurrent controls included: a decrease in the amount of hepatocellular glycogen-type vacuolation in the livers of male and female F1 adults; a slightly higher prevalence of cytoplasmic eosinophilic inclusions among F1 adult females of the 50.0 and 100.0 µg/L dose groups; a slight increase in the severity of tubular epithelial eosinophilia in F1 adult females of the 100.0 µg/L dose group, and the 50.0 µg/L dose group to a lesser degree; a slightly greater prevalence of testicular degeneration in 2-EHHB-exposed F1 adult males; an increased prevalence of cystic degeneration of the liver in some male and female 2-EHHB–treated groups of the F2 generation; and an increase in the prevalence of increased interstitial cells in the testes of F2 adult males of especially the 25.0 and 100.0 µg/L dose groups. Decreased body growth in 2-EHHB fish may have contributed to two of the treatment-associated findings: testicular hypoplasia in F1 sub-adult males, and decrease in hepatocellular glycogen in F1 adult males and females. There were no findings associated with 2-EHHB exposure in the thyroid glands or ovaries of medaka from any of the three sacrifices.

15. SAMPLE HANDLING AND CUSTODY

All samples received, generated during the course of testing, and submitted to EAG, Inc. and EPL in this study were accompanied by an appropriately signed chain of custody and handled in accordance with facility SOPs. Samples were entered into a sample check-in logbook and assigned a unique sample tracking number. Each sample was also properly labeled with its assigned sample tracking number. Sets of test solution samples collected by FEL and preserved as described by EAG, Inc. were shipped to EAG, Inc. by commercial carrier. Whole body tissue samples collected at the conclusion of the in-life phase were shipped to EPL via commercial carrier. Samples, when not in use, were properly preserved and stored, based on sample matrix.

16. RECORD MAINTENANCE AND ARCHIVAL

Test facility-related records (personnel training, equipment calibration and maintenance, storage temperature records, etc.) were retained at the Test Facility. No records were disposed of without the authorization of the Sponsor. The records were organized and included an index.

Certified exact copies of the original raw data, derived data (DEST), QA reports, study guidance documents, correspondence, and draft and final reports were electronically maintained at the In-life test facility in accordance with facility SOPs until study finalization. All original raw data and the original Final Study Report were kept in designated file cabinets located in a secured file room at the Test Facility. After final approval of all reports and conclusion of the

study, all electronic files were transferred to compact discs (CDs) and verified as exact copies of the original. Copies of the electronic disc and the Final Study Report were sent to the Sponsor. Immediately following finalization of the final report, all original handwritten raw data, original raw data files, the original Final Study Report, protocol and protocol amendments associated with the study will be maintained in the archive at FEL until shipped to the archive location below. In addition, all EPL-generated histology data records will be shipped to the Sponsor for archiving. Original raw analytical data and original analytical reports from EAG, Inc. will be sent to the Sponsor for archiving. The archive location is:

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201-2696
Attn: Vincent J. Brown, Ph.D.
614-424-5928
brownv@battelle.org

17. SPECIMENS ARCHIVAL

The preserved test specimens were labeled and stored at FEL until study finalization in accordance with facility SOPs. Per Sponsor mandated exception, following study finalization, specimens remaining at FEL, and embedded tissues or specimens maintained by EPL will be disposed of in accordance with QMP, QAPP, and respective facility SOPs. All slides produced during the histopathological analyses were stored at EPL until study finalization. After study finalization, all slides will be shipped to the sponsor at the address below.

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18. TEST SUBSTANCE WASTE DISPOSAL

Disposal of waste material generated by the study was performed in accordance with those requirements provided in the Material Safety Data Sheets (MSDS) and facility SOPs. A retention sample of the test substance was collected per facility SOP. Unused test substance will be disposed of in accordance with those requirements provided in the facility SOPs.

19. STUDY PROTOCOL ADHERENCE

The study was performed in accordance with Study Protocol No. BATT01-8 (Appendix A). There were thirteen amendments to and four deviations from the Study Protocol (Appendix A). The following protocol deviations were noted:

1. On Test Day 24, the F0 breeding pairs will be humanely euthanized, and weight and length will be recorded. If necessary F0 breeding pairs will be maintained for

an additional 1-2 days in order to restart the F1." The cited activities occurred on Test Day 32. Additional days were needed to ensure proper set up and propagation of the F1 hatchlings. No impact on study results was anticipated with the additional elapsed time since the controls and treatments were handled in the same manner during the interim period with continuous exposure, and controls and treatments were processed on the same test day.

2. From protocol amendment 03, Sampling at F1, 9 wpf.
   a) There are no changes to the MEOGRT test guideline, 890.2200, for fish euthanized and necropsied for measurement of survival, growth, liver vitellogenin (mRNA copy number of protein concentration), and anal fin papillae number (secondary sexual characteristic, SSC).
   b) Two (2) additional animals will be randomly selected from each replicate tank ONLY for thyroid histopathology. The subadult fish should be fixed intact (the in-life laboratory does not open the body cavity to allow for perfusion of fixative, as is done for the adult fish), individually identified, and shipped to the designated histopathology laboratory. For the F1 sub-adult generation of 00393, the kidney, liver, and gonads in addition to the thyroid were evaluated by the pathologist (EPL). Inadvertent oversight of the process. Only examination of the thyroids was to be performed. Deviation will have no negative impact on the study. The additional data will be reported in EPL's PI report in a separate table. EPL's PI report will be appended to FEL's study report. The additional data will not be included in the DESTs to ensure the DESTs are consistent with the amended protocol and consistent amongst the MEOGRT studies performed by the participating laboratories under TO 14. The data/results will not be discussed directly in FEL's report.
3. "Kruskal-Wallis ANOVA (KW ANOVA) test followed by a step-down pairwise Dunn's test if the KW ANOVA test is significant will be used when assumptions of monotonicity and normality and homogeneity of within class variances are not met. The step-down pair-wise comparison will minimize the number of comparisons conducted. The first comparison will be between the control and the highest treatment dose and only proceeds to a comparison between the control and the next lower dose if the comparison with the highest dose was significant. For all statistical evaluations, the replicate will be considered the experimental unit and α=0.05." A step-down process was not performed with Dunn's test. For MEOGRT (OCSPP. 890.2200), Dunn's test is specified, but the 'step-down' procedure is not appropriate with that test. No impact as the correct statistical practice was applied. Kruskal-Wallis ANOVA (KW ANOVA) test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-values if the KW ANOVA test is significant will be used when assumptions of monotonicity and normality and homogeneity of within class variances are not met. For all statistical evaluations, the replicate will be considered the experimental unit and α=0.05.
4. "If the responses are monotonic, the William's test of ordered alternatives will be used to estimate the LOEC/NOEC when the assumptions of normality and homogeneity of within class variances are met by the raw or appropriately transformed data. The Jonckheere-Terpstra nonparametric test of ordered

alternatives will be used to estimate the LOEC/NOEC when the assumptions of normality and homogeneity of within class variances are not met (8)." "If the responses are monotonic, the Jonckheere-Terpstra nonparametric test of ordered alternatives will be used to estimate the LOEC/NOEC (8)." In OCSPP 890.2200, the MEOGRT test guideline, the Jonckheere-Terpstra trend test is recommended (page 26). It is also shown in the Figure 2 flow chart (page 27). In OECD 2006 "Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application" (Protocol Reference #8), both William's test and Jonckheere-Terpstra test are listed as step-down trend procedures (page 57). There are extensive discussions on William's test and Jonckheere-Terpstra test (pages 57-59). Item 218 on page 59 states "The Jonckheere-Terpstra test has many appealing properties. Among them is the requirement of monotonicity rather than linearity in the dose response." Another is that the Jonckheere-Terpstra test is readily available in SAS, whereas William's test may need extensive programming. Supported by the above guidelines, the Jonckheere-Terpstra test was used rather than William's test. There was no impact on the conduct of the study conduct, analysis of the results, or conclusion drawn.

20. REFERENCES

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2. U.S. Environmental Protection Agency (USEPA). Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice (GLP) Standards, Final Rule, 40 CFR Part 160. Revised 1998.

3. U.S. Environmental Protection Agency (USEPA). OCSPP 890:2200: Medaka Extended One Generation Reproduction Test (MEOGRT), EPA No. 740-C-15-002, July 2015.

4. Fort Environmental Laboratories (FEL). Quality Assurance Management Plan, Version 4. July 23, 2010.

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6. EAG Laboratories. Validated Analytical Chemistry Test Method for 2-Ethylhexyl 4-Hydroxybenzoate in Aquatic Assays for EPA EDSP. Under subcontract with Battelle for U.S. EPA Prime Contract No. EP-W-11-063, Task Order 14, 2015.

7. Wolf, J. (12 Aug 2015). Draft Procedures for EDSP Studies. EPL (Experimental Pathology Laboratories, Inc.) internal document.

8. Organisation of Economic Co-operation and Development (OECD). Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application. Environ Health Safety Pub, Paris, 2006.

9. Ankley, G.T., Jensen, K.M. 2014. A novel framework for interpretation of data from the fish short-term reproduction assay (FSTRA) for the detection of endocrine-disrupting chemicals. Environ. Toxicol. Chem. 33.1: 2529–2540.

TABLES

Table 1. Experimental Specifications for 2-EHHB MEOGRT (with F2 Generation) Study

Parameter	Conditions
Test species	Medaka (*Oryzias latipes*)
Diluent; Negative control	Dechlorinated tap water (carbon filtered)
Test chemical	2-ethylhexyl 4-hydroxybenzoate
Test chemical concentrations (µg/L)	0.0, 6.25, 12.5, 25.0, 50.0, and 100.0
Test chamber size	10 L glass aquarium (tank) partitioned to 4L
Test media volume	1.8 L per partition
Media flow rate	20 mL/min
Rate of media exchange	16 exchanges/tank/day
Replicates/treatment Replicates/control	6 replicates/treatment for F0; 12 replicates/treatment for F1 12 replicates/control for F0; 24 replicates/control for F1
Animals/replicate	At F0, 2 fish per rep at start (Day 0)
Feed	Brine shrimp
Photoperiod	16 h light : 8 h dark with 30 min. transition
Media temperature	25°C ± 1°C
Light intensity	100-500 lux
Dissolved oxygen (DO)	≥ 60% saturation
pH	6.5 to 8.5 ± 0.5
Hardness, alkalinity, conductivity	At test initiation and twice monthly in the control and high concentration of one replicate. Replicates will be chosen on a rotating basis.
Aeration	Eggs mandatory, only if needed for fish (i.e., if DO reaches <60%)
Apical endpoints	See Tables 3 and 4
Control/dilution water	Dechlorinated tap water previously demonstrated to be suitable for medaka
Sample frequency for water	One water sample from each of the 6 replicates per treatment (and control) will be collected weekly through the duration of exposure. Replicates will be sampled on a rotational basis.
Exposure Period	32 weeks (F0 to F2)

Table 2. MEOGRT Measurement Endpoint Timelines for Complete F2 Generation

MEOGRT Exposure and Endpoint Timeline																																
F2 Endpoints																																
F0	1	2	3	4																												
F1				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15														
F2																		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Study Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Endpoints																																
Fecundity	F_0														F_1														F_2			
Fertility	F_0														F_1														F_2			
Hatch					F1													F_2														
Survival						F1						F_1						F_1		F_2						F_2						F_2
Growth				F_0[1]								F_1						F_1								F_2						F_2
Vitellogenin												F_1														F_2						
Secondary sex												F_1						F_1								F_2						F_2
Histopathology																		F_1														F_2
Study Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Life-stage Key
Embryo
Eleutheroembryo
Juvenile
Subadult
Adult

Experimental design (F0, F1, and F2)

7 groups of replicates
- 5 for test substance treatments
- 2 for controls

Within-group design
- 12 reps for reproduction, pathology, growth, SSC (wks 10-18)
- 6 reps for hatching, survival, *vtg* (sub-adult only), growth, (wks 1-9)

Abbreviations: SSC: secondary sex characters; Wks: weeks; Vtg: vitellogenin

[1] Performed on Study Day 32.

Table 3. Summary of Study Endpoints

Life Stage	Endpoint	Generation
Embryo (2 wpf)	Hatchability (% and time to hatch)	F1, F2
Juvenile (4 wpf)	Survival (hatch to 4 wpf)	F1, F2
Subadult (9 wpf)	Survival (4 to 9 wpf), F1 Growth (length and weight), Vitellogenin, Secondary sex characteristics (anal fin papillae), External sex ratio, Time to 1st spawn, and Thyroid histopathology (F1 only for thyroid histopathology)	F1, F2
Adult (12-14 wpf)	Reproduction (fecundity and fertility for 21 days)	F0, F1, F2
Adult[1] (15 wpf)	Survival (from 9 to 15 wpf), Growth (length and weight), Secondary sex characteristics (anal fin papillae), Histopathology (gonad, liver, kidney, and thyroid [thyroid histopathology on F1 only])	F1, F2 (no thyroid histopathology on F2)

[1] F0 also includes survival and growth endpoints (see Table 3).

Table 4. Summary of Water Quality Parameters

Parameter	Minimum	Maximum	Measurement Interval
Temperature (ºC)	24.0	26.8	Weekly in one replicate per control/treatment
pH (s.u.)	7.1	8.0	Weekly in one replicate per control/treatment
Dissolved oxygen (mg/L)	4.6	8.3	Weekly in one replicate per control/treatment
Light Intensity (Lux)	138	497	Weekly in one replicate per control/treatment
Conductivity (µS/cm)	349	781	Weekly in one control and one treatment replicate
Hardness (mg/L as CaCO3)	88	140	Weekly in one control and one treatment replicate
Alkalinity (mg/L as CaCO3)	20	63	Weekly in one control and one treatment replicate
Iodide (µg/L)	6.2	8.6	Twice monthly

Table 5. Summary of Treatment Concentrations

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)
0	0.0	A	<MQL
	6.3	A	2.13
	12.5	A	5.61
	25	A	12.2
	50	A	43.3
	100	A	109
7	0.0	B	<MQL
	6.3	B	1.57
	12.5	B	3.81
	25	B	14.0
	50	B	49.3
	100	B	105
14	0.0	C	1.71
	6.3	C	1.66
	12.5	C	4.12
	25	C	13.4
	50	C	37.0
	100	C	80.4
21	0.0	D	<MQL
	6.3	D	1.58
	12.5	D	5.60
	25	D	15.7
	50	D	30.1
	100	D	62.0
28	0.0	E	0.551
	6.3	E	0.712
	12.5	E	3.19
	25	E	10.9
	50	E	36.9
	100	E	89.7
35	0.0	F	<MQL
	6.3	F	0.796
	12.5	F	3.28
	25	F	13.0
	50	F	46.3
	100	F	118

[1] Minimum Quantitation Level (MQL) = 0.208 µg/L.

Table 5. Summary of Treatment Concentrations (continued)

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)
42	0.0	G	<MQL
	6.3	A	0.919
	12.5	A	2.93
	25	A	10.6
	50	A	47.1
	100	A	124
49	0.0	H	<MQL
	6.3	B	4.43
	12.5	B	6.56
	25	B	13.8
	50	B	40.8
	100	B	127
56	0.0	I	0.256
	6.3	C	2.47
	12.5	C	3.35
	25	C	13.6
	50	C	37.1
	100	C	118
63	0.0	J	6.34
	6.3	D	3.18
	12.5	D	2.28
	25	D	14.6
	50	D	50.0
	100	D	113
70	0.0	K	<MQL
	6.3	E	4.19
	12.5	E	9.62
	25	E	24.5
	50	E	51.8
	100	E	125
77	0.0	L	<MQL
	6.3	F	1.07
	12.5	F	2.82
	25	F	11.8
	50	F	40.4
	100	F	117

[1] Minimum Quantitation Level (MQL) = 0.208 µg/L.

Table 5. Summary of Treatment Concentrations (continued)

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)
84	0.0	M	<MQL
	6.3	G	2.44
	12.5	G	8.11
	25	G	18.9
	50	G	42.9
	100	G	92.6
93	0.0	N	<MQL
	6.3	H	3.14
	12.5	H	7.23
	25	H	18.9
	50	H	40.3
	100	H	93.2
98	0.0	O	0.228
	6.3	I	5.01
	12.5	I	10.6
	25	I	23.0
	50	I	46.3
	100	I	94.4
105	0.0	P	<MQL
	6.3	J	2.63
	12.5	J	11.0
	25	J	28.4
	50	J	67.0
	100	J	119
112	0.0	Q	<MQL
	6.3	K	7.18
	12.5	K	17.5
	25	K	34.1
	50	K	61.9
	100	K	115
119	0.0	R	<MQL
	6.3	L	12.6
	12.5	L	22.6
	25	L	43.8
	50	L	58.8
	100	L	114

[1] Minimum Quantitation Level (MQL) = 0.208 µg/L.

Table 5. Summary of Treatment Concentrations (continued)

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)
127	0.0	S	<MQL
	6.3	A	12.5
	12.5	A	21.0
	25	A	34.5
	50	A	58.3
	100	A	106
133	0.0	T	<MQL
	6.3	B	10.2
	12.5	B	16.7
	25	B	34.7
	50	B	56.4
	100	B	101
140	0.0	I	<MQL
	6.3	C	10.6
	12.5	C	18.0
	25	C	27.1
	50	C	51.1
	100	C	92.8
147	0.0	J	<MQL
	6.3	D	6.50
	12.5	D	12.8
	25	D	22.9
	50	D	48.2
	100	D	103
154	0.0	K	<MQL
	6.3	E	8.36
	12.5	E	15.3
	25	E	26.6
	50	E	52.1
	100	E	94.8
161	0.0	L	<MQL
	6.3	F	7.51
	12.5	F	15.5
	25	F	30.4
	50	F	53.6
	100	F	102

[1] Minimum Quantitation Level (MQL) = 0.208 µg/L.

Table 5. Summary of Treatment Concentrations (continued)

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)
168	0.0	A	<MQL
	6.3	A	6.49
	12.5	A	12.9
	25	A	25.0
	50	A	47.5
	100	A	102
175	0.0	B	<MQL
	6.3	B	7.80
	12.5	B	15.4
	25	B	28.1
	50	B	43.6
	100	B	98.6
182	0.0	C	<MQL
	6.3	C	4.78
	12.5	C	10.3
	25	C	20.8
	50	C	52.2
	100	C	96.8
191	0.0	D	<MQL
	6.3	D	3.63
	12.5	D	9.33
	25	D	20.9
	50	D	40.8
	100	D	86.2
196	0.0	E	<MQL
	6.3	E	7.13
	12.5	E	14.1
	25	E	23.9
	50	E	47.0
	100	E	84.3
203	0.0	F	<MQL
	6.3	F	3.61
	12.5	F	8.71
	25	F	19.0
	50	F	34.9
	100	F	77.8

[1] Minimum Quantitation Level (MQL) = 0.208 µg/L.

Table 5. Summary of Treatment Concentrations (continued)

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)
210	0.0	G	<MQL
	6.3	A	4.02
	12.5	A	8.76
	25	A	18.1
	50	A	37.8
	100	A	65.9
217	0.0	H	<MQL
	6.3	B	6.40
	12.5	B	11.3
	25	B	19.8
	50	B	34.8
	100	B	69.1

[1] Minimum Quantitation Level (MQL) = 0.208 µg/L.

Table 6. Summary of Treatment Concentrations in the MEOGRT Assay

Nominal Concentration (µg/L)	Measured Concentration		
	Mean[1] (µg/L)	CV[2] (%)	% of Nominal[3]
0.0[4]	0.321	---	---
6.25	5.32	49	84
12.5	11.3	39	90
25.0	24.0	33	96
50.0	48.8	19	98
100	101	13	101

[1] Since time interval between sample collection events was consistent throughout study, the mean measured concentration represents an accurate estimation of exposure concentration. The mean measured concentration represents the average of weekly data points. On SD 0 and in-life phase termination all replicate control replicates (n=12) and treatment replicates (n=6) were sampled and analyzed. During the reproductive phases of the F1 and F2 generations, n=24 in the control and 12 in the treatments. On the weeks between these two points, a sample was collected from one replicate tank of the control and each test concentration. The replicate selected for weekly sampling rotated.

[2] Coefficient of variation = (Standard deviation / mean). CV based on the standard deviation of mean measured concentration of each replicate and mean measured treatment concentration per FEL SOP 6.1. Thus, the mean measured concentrations were generally consistent with nominal concentrations. Higher CVs for the treatments were the result of expected intra-treatment sample variability. Although a large number of replicates was used in the study, only one replicate per treatment was sampled and analyzed for 2-EHHB concentration each week after SD 0 and prior to in-life conclusion. This sampling scheme resulting in the collection of few data points for each replicate during the study (1-2 for the control and 4 for the treatments over a 32 week in-life study). Since the standard deviation used to calculate the CV was based on the replicate means, higher values were obtained.

[3] % of nominal concentration.

[4] MQL=0.208 (µg/L).

Table 7. Experimental Design for F0 Generation

Group Number	Treatment Group (µg/L)	Number of Replicates	Number of Animals per Replicate	Total Number of Animals per Treatment Group
1	0.0 (control)	12	2 (1M/1F)	24
2	6.3	6	2 (1M/1F)	12
3	12.5	6	2 (1M/1F)	12
4	25	6	2 (1M/1F)	12
5	50	6	2 (1M/1F)	12
6	100.0	6	2 (1M/1F)	12
TOTAL				84

Table 8. Experimental Design for Embryo-Larval Phase for F1 and F2 Generations

Group Number	Treatment Group (µg/L)	Number of Replicates	Number of Embryos per Replicate	Total Number of Embryos per Treatment Group
1	0.0 (control)	12	20	240
2	6.3	6	20	120
3	12.5	6	20	120
4	25	6	20	120
5	50	6	20	120
6	100.0	6	20	120
TOTAL				840

Table 9. Experimental Design for Juvenile Phase for F1 and F2 Generations

Group Number	Treatment Group (µg/L)	Number of Replicates	Number of Animals per Replicate	Total Number of Animals per Treatment Group
1	0.0 (control)	12	12	144
2	6.3	6	12	72
3	12.5	6	12	72
4	25	6	12	72
5	50	6	12	72
6	100.0	6	12	72
TOTAL				504

Table 10. Experimental Design for Subadult Phase for F1 and F2 Generations.

Group Number	Treatment Group (µg/L)	Number of Replicates	Number of Animals per Replicate	Total Number of Animals per Treatment Group
1	0.0 (control)	12	8	96
2	6.3	6	8	48
3	12.5	6	8	48
4	25	6	8	48
5	50	6	8	48
6	100.0	6	8	48
TOTAL				336

Table 11. Experimental Design for Adult Phase for F1 and F2 Generations.

Group Number	2-EHHB Treatment Group (µg/L)	Number of Replicates	Number of Animals per Replicate	Total Number of Animals per Treatment Group
1	0.0 (control)	24	2 (1M/1F)	48
2	6.3	12	2 (1M/1F)	24
3	12.5	12	2 (1M/1F)	24
4	25	12	2 (1M/1F)	24
5	50	12	2 (1M/1F)	24
6	100.0	12	2 (1M/1F)	24
TOTAL				168

[F0 Generation]

Table 12. Effect of 2-EHHB Exposure on Survivability for F0 Generation[1]

		Adult Survivability - Survival from SD0 to SD21 (%)				
Treatment (µg/L)	**Replicate**	**N[2]**	**Replicate**	**Mean[3]**	**Std Dev**	**CV (%)**
0.0	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
	G	2	100			
	H	2	100			
	I	2	100			
	J	2	100			
	K	2	100			
	L	2	100			
6.3	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
12.5	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
25	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
50	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
100	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			

[1]Std dev=Standard deviation. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Treatment mean.

Table 13. Effect of 2-EHHB Exposure on Adult Reproductive Fecundity (eggs/female/d) for F0 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
				Mean	Std Dev	SEM	CV (%)
	ID	N[2]	Mean				
0.0	A	1	17.667	19.238	3.006	0.868	15.625
	B	1	15.048				
	C	1	16.619				
	D	1	15.857				
	E	1	18.476				
	F	1	19.190				
	G	1	18.714				
	H	1	17.714				
	I	1	21.190				
	J	1	23.143				
	K	1	23.143				
	L	1	24.095				
6.3	A	1	15.762	16.651[3]	1.727	0.705	10.374
	B	1	16.429				
	C	1	16.619				
	D	1	14.095				
	E	1	19.095				
	F	1	17.905				
12.5	A	1	10.381	11.056[4]	1.069	0.436	9.668
	B	1	12.810				
	C	1	10.667				
	D	1	11.476				
	E	1	9.714				
	F	1	11.286				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0414).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 13. Effect of 2-EHHB Exposure on Adult Reproductive Fecundity (eggs/female/d) for F0 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	10.571	10.944[3]	1.357	0.554	12.403
	B	1	11.429				
	C	1	10.619				
	D	1	13.238				
	E	1	10.714				
	F	1	9.095				
50	A	1	11.381	11.571[4]	1.235	0.504	10.671
	B	1	10.810				
	C	1	13.381				
	D	1	12.810				
	E	1	10.476				
	F	1	10.571				
100	A	1	9.000	10.429[5]	2.028	0.828	19.450
	B	1	8.667				
	C	1	9.810				
	D	1	9.143				
	E	1	13.429				
	F	1	12.524				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p<0.0001).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).
[5] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 14. Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F0 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	17.619	19.198	2.992	0.864	15.586
	B	1	15.048				
	C	1	16.571				
	D	1	15.810				
	E	1	18.476				
	F	1	19.143				
	G	1	18.714				
	H	1	17.714				
	I	1	21.000				
	J	1	23.143				
	K	1	23.143				
	L	1	24.000				
6.3	A	1	15.762	16.619[3]	1.734	0.708	10.434
	B	1	16.238				
	C	1	16.619				
	D	1	14.095				
	E	1	19.095				
	F	1	17.905				
12.5	A	1	10.381	10.952[4]	1.028	0.420	9.386
	B	1	12.571				
	C	1	10.571				
	D	1	11.429				
	E	1	9.571				
	F	1	11.190				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0458).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 14. Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F0 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	10.571	10.833[3]	1.230	0.502	11.350
	B	1	11.429				
	C	1	10.619				
	D	1	12.714				
	E	1	10.714				
	F	1	8.952				
50	A	1	11.381	11.508[2]	1.227	0.501	10.658
	B	1	10.714				
	C	1	13.381				
	D	1	12.619				
	E	1	10.429				
	F	1	10.524				
100	A	1	8.810	10.302[2]	2.012	0.822	19.534
	B	1	8.619				
	C	1	9.810				
	D	1	8.952				
	E	1	13.333				
	F	1	12.286				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, $p<0.0001$).

Table 15. Effect of 2-EHHB Exposure on Female Body Weight (g) for F0 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	0.408	0.437	0.068	0.019	15.442
	B	1	0.372				
	C	1	0.419				
	D	1	0.572				
	E	1	0.389				
	F	1	0.552				
	G	1	0.420				
	H	1	0.401				
	I	1	0.485				
	J	1	0.371				
	K	1	0.393				
	L	1	0.466				
6.3	A	1	0.539	0.427	0.064	0.026	14.909
	B	1	0.360				
	C	1	0.409				
	D	1	0.436				
	E	1	0.442				
	F	1	0.376				
12.5	A	1	0.431	0.393	0.065	0.026	16.486
	B	1	0.502				
	C	1	0.379				
	D	1	0.373				
	E	1	0.347				
	F	1	0.323				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 15. Effect of 2-EHHB Exposure on Female Body Weight (g) for F0 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.507	0.404	0.088	0.036	21.808
	B	1	0.401				
	C	1	0.331				
	D	1	0.294				
	E	1	0.385				
	F	1	0.506				
50	A	1	0.283	0.405	0.114	0.047	28.261
	B	1	0.541				
	C	1	0.503				
	D	1	0.260				
	E	1	0.441				
	F	1	0.399				
100	A	1	0.280	0.307[3]	0.033	0.014	10.836
	B	1	0.335				
	C	1	0.317				
	D	1	0.295				
	E	1	0.265				
	F	1	0.352				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0027).

Table 16. Effect of 2-EHHB Exposure on Male Body Weight (g) for F0 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	0.325	0.345	0.053	0.015	15.426
	B	1	0.467				
	C	1	0.299				
	D	1	0.381				
	E	1	0.342				
	F	1	0.265				
	G	1	0.360				
	H	1	0.292				
	I	1	0.331				
	J	1	0.385				
	K	1	0.373				
	L	1	0.323				
6.3	A	1	0.381	0.401[3]	0.033	0.013	8.241
	B	1	0.361				
	C	1	0.381				
	D	1	0.446				
	E	1	0.433				
	F	1	0.405				
12.5	A	1	0.339	0.431[4]	0.078	0.032	18.088
	B	1	0.421				
	C	1	0.361				
	D	1	0.557				
	E	1	0.456				
	F	1	0.451				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p=0.0121).
[4] Significant greater than control (Jonckheere-Terpstra test, p=0.0026).

Table 16. Effect of 2-EHHB Exposure on Male Body Weight (g) for F0 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Treatment Mean	Std Dev	SEM	CV (%)
25	A	1	0.251	0.425[3]	0.112	0.046	26.458
	B	1	0.409				
	C	1	0.452				
	D	1	0.443				
	E	1	0.394				
	F	1	0.600				
50	A	1	0.329	0.402[4]	0.071	0.029	17.648
	B	1	0.391				
	C	1	0.380				
	D	1	0.347				
	E	1	0.445				
	F	1	0.522				
100	A	1	0.597	0.483[5]	0.135	0.055	27.896
	B	1	0.653				
	C	1	0.545				
	D	1	0.356				
	E	1	0.323				
	F	1	0.425				

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[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p=0.0020).
[4] Significant greater than control (Jonckheere-Terpstra test, p=0.0102).
[5] Significant greater than control (Jonckheere-Terpstra test, p=0.0039).

Table 17. Effect of 2-EHHB Exposure on Female Body Length (mm) for F0 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	37.0	37.32	1.443	0.417	3.868
	B	1	36.5				
	C	1	37.4				
	D	1	40.5				
	E	1	36.7				
	F	1	39.9				
	G	1	36.9				
	H	1	35.7				
	I	1	36.4				
	J	1	36.5				
	K	1	36.6				
	L	1	37.7				
6.3	A	1	38.6	36.38	1.402	0.572	3.853
	B	1	35.1				
	C	1	36.3				
	D	1	37.0				
	E	1	36.6				
	F	1	34.7				
12.5	A	1	34.0	33.75[3]	1.228	0.501	3.637
	B	1	35.2				
	C	1	33.1				
	D	1	35.1				
	E	1	32.2				
	F	1	32.9				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0003).

Table 17. Effect of 2-EHHB Exposure on Female Body Length (mm) for F0 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	33.9	33.37[3]	1.699	0.694	5.092
	B	1	33.1				
	C	1	32.7				
	D	1	30.8				
	E	1	33.7				
	F	1	36.0				
50	A	1	31.4	33.55[4]	2.749	1.122	8.193
	B	1	35.6				
	C	1	36.2				
	D	1	29.3				
	E	1	35.5				
	F	1	33.3				
100	A	1	31.3	31.68[5]	1.219	0.498	3.847
	B	1	32.2				
	C	1	31.6				
	D	1	30.3				
	E	1	30.9				
	F	1	33.8				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p<0.0001).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).
[5] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 18. Effect of 2-EHHB Exposure on Male Body Length (mm) for F0 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	35.3	34.44	1.951	0.563	5.663
	B	1	37.7				
	C	1	32.5				
	D	1	36.8				
	E	1	34.0				
	F	1	31.6				
	G	1	33.9				
	H	1	31.5				
	I	1	34.3				
	J	1	36.4				
	K	1	34.7				
	L	1	34.6				
6.3	A	1	36.5	36.18	0.449	0.183	1.241
	B	1	36.5				
	C	1	35.9				
	D	1	36.5				
	E	1	35.4				
	F	1	36.3				
12.5	A	1	31.6	33.67	1.097	0.448	3.257
	B	1	34.5				
	C	1	33.3				
	D	1	34.0				
	E	1	34.3				
	F	1	34.3				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 18. Effect of 2-EHHB Exposure on Male Body Length (mm) for F0 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	27.8	32.78	2.842	1.160	8.669
	B	1	34.1				
	C	1	32.5				
	D	1	33.8				
	E	1	32.2				
	F	1	36.3				
50	A	1	33.4	33.48	1.932	0.789	5.771
	B	1	30.9				
	C	1	34.8				
	D	1	31.4				
	E	1	35.1				
	F	1	35.3				
100	A	1	39.3	35.30	2.647	1.081	7.499
	B	1	37.0				
	C	1	36.0				
	D	1	33.1				
	E	1	32.2				
	F	1	34.2				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

[F1 Generation]

Table 19. Effect of 2-EHHB Exposure on Survivability for F1 Generation[1]

		Juvenile Survivability - Survival to 4 WPF (%)					Subadult Survivability - Survival from 4 to 9 WPF (%)					Adult Survivability - Survival from 9 to 15 WPF (%)				
Treatment (µg/L)	Replicate	N[2]	Replicate	Mean	Std Dev	CV (%)	N[2]	Replicate	Mean	Std Dev	CV (%)	N[2]	Replicate	Mean	Std Dev	CV (%)
0.0	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
	G	12	100				12	100				2	100			
	H	12	100				12	100				2	100			
	I	12	100				12	100				2	100			
	J	12	100				12	100				2	100			
	K	12	100				12	100				2	100			
	L	12	100				12	100				2	100			
6.3	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
12.5	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
25	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
50	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
100	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			

[1] Std dev=Standard deviation. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 20. Effect of 2-EHHB Exposure on Hatchability (%) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N	Mean Hatchability (%)	Mean	Std Dev	SEM	CV (%)
0.0	A	2	100.0	100.000	0.000	0.000	0.000
	B	2	100.0				
	C	2	100.0				
	D	2	100.0				
	E	2	100.0				
	F	2	100.0				
	G	2	100.0				
	H	2	100.0				
	I	2	100.0				
	J	2	100.0				
	K	2	100.0				
	L	2	100.0				
6.3	A	2	90.0	91.000[2]	3.536	1.443	3.885
	B	2	89.5				
	C	2	88.5				
	D	2	98.0				
	E	2	89.0				
	F	2	91.0				
12.5	A	2	93.0	90.083[2]	2.084	0.851	2.313
	B	2	90.5				
	C	2	89.5				
	D	2	87.0				
	E	2	89.0				
	F	2	91.5				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] Significantly less than control (KW-ANOVA, Dunn's Test, $p<0.0001$).

Table 20. Effect of 2-EHHB Exposure on Hatchability (%) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	2	93.0	96.500	4.427	1.807	4.588
	B	2	100.0				
	C	2	100.0				
	D	2	96.5				
	E	2	89.5				
	F	2	100.0				
50	A	2	100.0	96.833	2.840	1.160	2.933
	B	2	94.5				
	C	2	100.0				
	D	2	98.0				
	E	2	94.5				
	F	2	94.0				
100	A	2	90.5	95.167[3]	3.371	1.376	3.543
	B	2	94.5				
	C	2	98.0				
	D	2	93.5				
	E	2	100.0				
	F	2	94.5				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significantly less than control (KW-ANOVA, Dunn's Test, p=0.0156).

Table 21. Effect of 2-EHHB Exposure on Median Time to Hatch (days) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment							
	ID	N[2]	Median	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
0.0	A	1	9.0	9.00	0.515	0.149	5.468	9.00	9.00	10.00	10.00
	B	1	10.0								
	C	1	10.0								
	D	1	9.0								
	E	1	10.0								
	F	1	9.0								
	G	1	9.0								
	H	1	10.0								
	I	1	9.0								
	J	1	9.0								
	K	1	10.0								
	L	1	9.0								
6.3	A	1	11.0	11.00	0.837	0.342	7.968	9.00	10.00	11.00	11.00
	B	1	10.0								
	C	1	11.0								
	D	1	9.0								
	E	1	11.0								
	F	1	11.0								
12.5	A	1	10.0	10.50[3]	0.548	0.224	5.216	10.00	10.00	11.00	11.00
	B	1	11.0								
	C	1	10.0								
	D	1	11.0								
	E	1	11.0								
	F	1	10.0								

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100. Min - Minimum. Q1 - First quartile. Q3 - Third quartile. Max - Maximum.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than the control (Cox Proportional Hazard Model, Chi Square p=0.0188).

Table 21. Effect of 2-EHHB Exposure on Median Time to Hatch (days) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment							
	ID	N[2]	Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
25	A	1	11.0	10.50[3]	0.548	0.224	5.216	10.00	10.00	11.00	11.00
	B	1	10.0								
	C	1	10.0								
	D	1	11.0								
	E	1	11.0								
	F	1	10.0								
50	A	1	10.0	10.50[4]	0.548	0.224	5.216	10.00	10.00	11.00	11.00
	B	1	10.0								
	C	1	11.0								
	D	1	11.0								
	E	1	10.0								
	F	1	11.0								
100	A	1	11.0	10.0[5]	0.516	0.211	4.997	10.00	10.00	11.00	11.00
	B	1	10.0								
	C	1	10.0								
	D	1	11.0								
	E	1	10.0								
	F	1	10.0								

[1]Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100. Min - Minimum. Q1 - First quartile. Q3 - Third quartile. Max - Maximum.
[2]N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than the control (Cox Proportional Hazard Model, Chi Square p=0.0105).
[4] Significant greater than the control (Cox Proportional Hazard Model, Chi Square p=0.0092).
[5] Significant greater than the control (Cox Proportional Hazard Model, Chi Square p=0.0180).

Table 22. Effect of 2-EHHB Exposure on Subadult Female Body Weight (g) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	0.412	0.127	0.093	0.027	72.935
	B	2	0.096				
	C	3	0.061				
	D	4	0.067				
	E	3	0.092				
	F	3	0.086				
	G	4	0.141				
	H	3	0.102				
	I	5	0.106				
	J	4	0.128				
	K	4	0.120				
	L	5	0.115				
6.3	A	6	0.099	0.096	0.014	0.006	14.664
	B	4	0.120				
	C	3	0.093				
	D	3	0.095				
	E	4	0.095				
	F	3	0.076				
12.5	A	6	0.090	0.101	0.035	0.014	34.330
	B	4	0.094				
	C	6	0.099				
	D	7	0.075				
	E	2	0.170				
	F	5	0.081				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 22. Effect of 2-EHHB Exposure on Subadult Female Body Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.214	0.110	0.061	0.025	55.254
	B	4	0.092				
	C	1	0.060				
	D	2	0.147				
	E	1	0.052				
	F	4	0.097				
50	A	2	0.048	0.073	0.022	0.009	29.755
	B	7	0.068				
	C	4	0.108				
	D	6	0.077				
	E	6	0.086				
	F	3	0.054				
100	A	2	0.053	0.054[3]	0.006	0.003	11.684
	B	3	0.061				
	C	2	0.060				
	D	2	0.056				
	E	5	0.048				
	F	4	0.045				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0007).

Table 23. Effect of 2-EHHB Exposure on Subadult Male Body Weight (g) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	2	0.081	0.114	0.025	0.007	21.910
	B	6	0.078				
	C	5	0.090				
	D	4	0.109				
	E	5	0.148				
	F	5	0.105				
	G	4	0.098				
	H	5	0.129				
	I	3	0.156				
	J	4	0.125				
	K	4	0.124				
	L	3	0.125				
6.3	A	2	0.122	0.105	0.021	0.008	19.802
	B	4	0.115				
	C	5	0.099				
	D	5	0.099				
	E	4	0.069				
	F	5	0.125				
12.5	A	2	0.086	0.115	0.033	0.014	29.075
	B	4	0.103				
	C	2	0.115				
	D	1	0.082				
	E	6	0.172				
	F	3	0.130				

[1]Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 23. Effect of 2-EHHB Exposure on Subadult Male Body Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	7	0.166	0.126	0.030	0.012	23.972
	B	4	0.083				
	C	7	0.104				
	D	6	0.149				
	E	7	0.121				
	F	4	0.135				
50	A	6	0.140	0.140	0.078	0.032	55.814
	B	1	0.143				
	C	4	0.261				
	D	2	0.083				
	E	2	0.035				
	F	5	0.178				
100	A	6	0.056	0.087	0.044	0.018	50.256
	B	5	0.067				
	C	6	0.087				
	D	6	0.056				
	E	3	0.087				
	F	4	0.172				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 24. Effect of 2-EHHB Exposure on Subadult Female Body Length (mm) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	16.750	20.131	2.550	0.736	12.667
	B	2	20.450				
	C	3	16.433				
	D	4	16.400				
	E	3	20.033				
	F	3	18.267				
	G	4	22.975				
	H	3	21.733				
	I	5	20.960				
	J	4	23.050				
	K	4	22.275				
	L	5	22.240				
6.3	A	6	19.483	20.299	1.716	0.700	8.453
	B	4	23.550				
	C	3	19.367				
	D	3	19.867				
	E	4	20.725				
	F	3	18.800				
12.5	A	6	19.433	20.437	1.927	0.787	9.430
	B	4	20.350				
	C	6	20.983				
	D	7	18.857				
	E	2	24.000				
	F	5	19.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 24. Effect of 2-EHHB Exposure on Subadult Female Body Length (mm) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	25.600	20.300	3.475	1.419	17.119
	B	4	19.075				
	C	1	20.700				
	D	2	22.100				
	E	1	15.200				
	F	4	19.125				
50	A	2	18.200	18.093[3]	1.011	0.413	5.588
	B	7	17.686				
	C	4	19.225				
	D	6	17.833				
	E	6	19.117				
	F	3	16.500				
100	A	2	16.250	16.538[4]	0.902	0.368	5.454
	B	3	17.133				
	C	2	17.750				
	D	2	16.950				
	E	5	15.320				
	F	4	15.825				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0279).
[4] Significant less than control (Jonckheere-Terpstra test, p=0.0003).

Table 25. Effect of 2-EHHB Exposure on Subadult Male Body Length (mm) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	2	23.300	22.008	1.769	0.511	8.040
	B	6	19.433				
	C	5	19.760				
	D	4	20.350				
	E	5	22.600				
	F	5	20.500				
	G	4	20.800				
	H	5	22.900				
	I	3	25.067				
	J	4	23.600				
	K	4	22.950				
	L	3	22.833				
6.3	A	2	20.250	21.038	1.599	0.653	7.600
	B	4	23.600				
	C	5	20.860				
	D	5	19.640				
	E	4	19.600				
	F	5	22.280				
12.5	A	2	19.000	22.008	2.671	1.091	12.138
	B	4	21.100				
	C	2	23.200				
	D	1	19.100				
	E	6	24.650				
	F	3	25.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 25. Effect of 2-EHHB Exposure on Subadult Male Body Length (mm) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	7	25.029	22.527	1.977	0.807	8.775
	B	4	19.700				
	C	7	21.657				
	D	6	24.500				
	E	7	21.729				
	F	4	22.550				
50	A	6	23.400	20.898	3.225	1.317	15.435
	B	1	23.600				
	C	4	24.125				
	D	2	19.600				
	E	2	18.000				
	F	5	16.660				
100	A	6	17.767	19.035[3]	2.638	1.077	13.859
	B	5	17.560				
	C	6	19.000				
	D	6	17.167				
	E	3	18.467				
	F	4	24.250				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significantly less than control (Jonckheere-Terpstra test, p=0.0355).

Table 26. Effect of 2-EHHB Exposure on Subadult Female Liver Weight (g) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	0.007	0.009	0.003	0.001	29.400
	B	2	0.005				
	C	3	0.005				
	D	4	0.008				
	E	3	0.009				
	F	3	0.011				
	G	4	0.011				
	H	3	0.008				
	I	5	0.012				
	J	4	0.010				
	K	4	0.013				
	L	5	0.009				
6.3	A	6	0.009	0.007	0.002	0.001	33.224
	B	4	0.005				
	C	3	0.008				
	D	2	0.003				
	E	3	0.007				
	F	3	0.008				
12.5	A	5	0.008	0.012	0.007	0.003	60.835
	B	4	0.008				
	C	5	0.007				
	D	5	0.021				
	E	2	0.022				
	F	5	0.006				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 26. Effect of 2-EHHB Exposure on Subadult Female Liver Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.023	0.011	0.007	0.003	66.536
	B	3	0.009				
	C	1	0.003				
	D	2	0.012				
	E	1	0.005				
	F	4	0.011				
50	A	2	0.005	0.008	0.002	0.001	24.903
	B	5	0.009				
	C	2	0.008				
	D	6	0.007				
	E	6	0.011				
	F	2	0.009				
100	A	2	0.006	0.005[3]	0.001	0.001	25.911
	B	3	0.006				
	C	2	0.005				
	D	2	0.004				
	E	4	0.005				
	F	4	0.003				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0392).

Table 27. Effect of 2-EHHB Exposure on Subadult Male Liver Weight (g) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	0	.	0.011	0.004	0.001	39.619
	B	4	0.006				
	C	3	0.008				
	D	2	0.011				
	E	3	0.011				
	F	3	0.007				
	G	2	0.008				
	H	3	0.011				
	I	1	0.017				
	J	2	0.020				
	K	2	0.008				
	L	1	0.011				
6.3	A	0	.	0.006	0.003	0.001	49.028
	B	2	0.007				
	C	3	0.002				
	D	4	0.005				
	E	3	0.006				
	F	3	0.011				
12.5	A	1	0.010	0.010	0.004	0.001	36.852
	B	2	0.007				
	C	1	0.013				
	D	1	0.006				
	E	4	0.014				
	F	1	0.007				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 27. Effect of 2-EHHB Exposure on Subadult Male Liver Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	5	0.009	0.011	0.003	0.001	27.771
	B	3	0.007				
	C	5	0.010				
	D	4	0.014				
	E	5	0.013				
	F	2	0.015				
50	A	4	0.012	0.010	0.002	0.001	23.274
	B	1	0.012				
	C	4	0.010				
	D	0	.				
	E	0	.				
	F	4	0.007				
100	A	4	0.006	0.009[3]	0.004	0.002	46.975
	B	3	0.005				
	C	4	0.011				
	D	4	0.005				
	E	2	0.008				
	F	2	0.016				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Dunnett's test, p=0.0248).

Table 28. Effect of 2-EHHB Exposure on Subadult Female Liver Vitellogenin [Log10(copies *vtg* 1)/ng total RNA] for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	3.212	3.048	0.738	0.213	24.208
	B	2	3.055				
	C	3	3.530				
	D	4	2.900				
	E	3	2.047				
	F	3	2.113				
	G	4	4.395				
	H	3	2.677				
	I	5	2.510				
	J	4	2.850				
	K	4	4.293				
	L	5	2.998				
6.3	A	6	3.275	2.436	0.580	0.237	23.811
	B	4	2.415				
	C	3	2.400				
	D	2	2.730				
	E	3	1.503				
	F	3	2.293				
12.5	A	5	3.790	3.742	0.262	0.107	6.989
	B	4	3.755				
	C	5	3.708				
	D	5	3.436				
	E	2	3.560				
	F	5	4.202				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 28. Effect of 2-EHHB Exposure on Subadult Female Liver Vitellogenin [Log10(copies *vtg* 1)/ng total RNA] for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	5.090	3.898	0.795	0.325	20.400
	B	3	3.507				
	C	1	3.220				
	D	2	4.465				
	E	1	3.020				
	F	4	4.088				
50	A	2	3.790	3.268	0.795	0.325	24.332
	B	5	3.408				
	C	2	4.420				
	D	6	3.200				
	E	6	2.323				
	F	2	2.465				
100	A	2	2.930	3.093	0.346	0.141	11.179
	B	3	3.070				
	C	2	3.725				
	D	2	3.090				
	E	4	3.065				
	F	4	2.680				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 29. Effect of 2-EHHB Exposure on Subadult Male Liver Vitellogenin [Log10(copies *vtg* 1)/ng total RNA] for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	0	.	2.098	0.558	0.168	26.602
	B	4	2.473				
	C	3	2.250				
	D	2	2.710				
	E	3	2.693				
	F	3	2.227				
	G	2	1.110				
	H	3	2.553				
	I	1	1.300				
	J	2	2.055				
	K	2	2.220				
	L	1	1.490				
6.3	A	0	.	2.417	0.680	0.304	28.116
	B	2	3.250				
	C	3	2.900				
	D	4	2.400				
	E	3	1.570				
	F	3	1.967				
12.5	A	1	4.460	3.223	0.915	0.374	28.388
	B	2	2.415				
	C	1	4.260				
	D	1	3.080				
	E	4	2.695				
	F	1	2.430				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 29. Effect of 2-EHHB Exposure on Subadult Male Liver Vitellogenin [Log10(copies *vtg* 1)/ng total RNA] for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	5	1.744	2.755	0.592	0.242	21.492
	B	3	2.690				
	C	5	3.356				
	D	4	2.648				
	E	5	2.744				
	F	2	3.350				
50	A	4	2.068	2.717	0.742	0.371	27.300
	B	1	2.640				
	C	4	3.773				
	D	0	.				
	E	0	.				
	F	4	2.388				
100	A	4	2.755	3.299[3]	0.604	0.247	18.314
	B	3	3.167				
	C	4	3.363				
	D	4	2.543				
	E	2	3.965				
	F	2	4.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p=0.0070).

Table 30. Effect of 2-EHHB Exposure on Subadult Female Anal Fin Papillae Number for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	0.000	0.000	0.000	0.000	.
	B	2	0.000				
	C	3	0.000				
	D	4	0.000				
	E	3	0.000				
	F	3	0.000				
	G	4	0.000				
	H	3	0.000				
	I	5	0.000				
	J	4	0.000				
	K	4	0.000				
	L	5	0.000				
6.3	A	6	0.000	0.000	0.000	0.000	.
	B	4	0.000				
	C	3	0.000				
	D	3	0.000				
	E	4	0.000				
	F	3	0.000				
12.5	A	6	0.000	0.000	0.000	0.000	.
	B	4	0.000				
	C	6	0.000				
	D	7	0.000				
	E	2	0.000				
	F	5	0.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 30. Effect of 2-EHHB Exposure on Subadult Female Anal Fin Papillae Number for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.000	0.000	0.000	0.000	.
	B	4	0.000				
	C	1	0.000				
	D	2	0.000				
	E	1	0.000				
	F	4	0.000				
50	A	2	0.000	0.000	0.000	0.000	.
	B	7	0.000				
	C	4	0.000				
	D	6	0.000				
	E	6	0.000				
	F	3	0.000				
100	A	2	0.000	0.000	0.000	0.000	.
	B	3	0.000				
	C	2	0.000				
	D	2	0.000				
	E	5	0.000				
	F	4	0.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 31. Effect of 2-EHHB Exposure on Subadult Male Anal Fin Papillae Number for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	2	40.000	24.226	11.493	3.318	47.441
	B	6	7.500				
	C	5	19.400				
	D	4	16.750				
	E	5	30.600				
	F	5	8.800				
	G	4	28.250				
	H	5	34.000				
	I	3	36.667				
	J	4	36.000				
	K	4	20.750				
	L	3	12.000				
6.3	A	2	0.000	5.942	5.637	2.301	94.873
	B	4	10.250				
	C	5	12.400				
	D	5	2.800				
	E	4	0.000				
	F	5	10.200				
12.5	A	2	0.000	17.500	19.587	7.996	111.925
	B	4	5.500				
	C	2	22.000				
	D	1	0.000				
	E	6	27.833				
	F	3	49.667				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 31. Effect of 2-EHHB Exposure on Subadult Male Anal Fin Papillae Number for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	7	51.857	23.284	18.357	7.494	78.840
	B	4	0.000				
	C	7	7.857				
	D	6	32.667				
	E	7	23.571				
	F	4	23.750				
50	A	6	20.500	8.125[3]	12.824	5.235	157.828
	B	1	0.000				
	C	4	28.250				
	D	2	0.000				
	E	2	0.000				
	F	5	0.000				
100	A	6	0.000	5.208[4]	12.758	5.208	244.949
	B	5	0.000				
	C	6	0.000				
	D	6	0.000				
	E	3	0.000				
	F	4	31.250				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0473).
[4] Significant less than control (Jonckheere-Terpstra test, p=0.0070).

Table 32. Effect of 2-EHHB Exposure on Subadult External Sex Ratio for F1 Generation[1]

		Sex Ratio (M:F)					
				Treatment			
Treatment (µg/L)	Replicate	N[2]	Replicate Mean	Mean	Std	Sem	CV (%)
0.0	A	1	0.333	1.267	0.719	0.208	56.775
	B	1	3.000				
	C	1	1.667				
	D	1	1.000				
	E	1	1.667				
	F	1	1.667				
	G	1	1.000				
	H	1	1.667				
	I	1	0.600				
	J	1	1.000				
	K	1	1.000				
	L	1	0.600				
6.3	A	1	0.333	1.222	0.544	0.222	44.536
	B	1	1.000				
	C	1	1.667				
	D	1	1.667				
	E	1	1.000				
	F	1	1.667				
12.5	A	1	0.333	0.902	1.070	0.437	118.690
	B	1	1.000				
	C	1	0.333				
	D	1	0.143				
	E	1	3.000				
	F	1	0.600				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 32. Effect of 2-EHHB Exposure on Subadult External Sex Ratio for F1 Generation[1] *(continued)*

		Sex Ratio (M:F)					
				Treatment			
Treatment (µg/L)	Replicate	N[2]	Replicate Mean	Mean	Std	Sem	CV (%)
25	A	1	7.000	4.333	3.011	1.229	69.487
	B	1	1.000				
	C	1	7.000				
	D	1	3.000				
	E	1	7.000				
	F	1	1.000				
50	A	1	3.000	1.079	1.098	0.448	101.745
	B	1	0.143				
	C	1	1.000				
	D	1	0.333				
	E	1	0.333				
	F	1	1.667				
100	A	1	3.000	2.044	1.101	0.449	53.846
	B	1	1.667				
	C	1	3.000				
	D	1	3.000				
	E	1	0.600				
	F	1	1.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 33. Effect of 2-EHHB Exposure on Adult Reproductive Fecundity (eggs/female/d) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	20.048	19.054	1.892	0.386	9.931
	B	1	18.238				
	C	1	18.190				
	D	1	21.714				
	E	1	19.667				
	F	1	22.238				
	G	1	20.524				
	H	1	18.762				
	I	1	19.000				
	J	1	17.619				
	K	1	21.381				
	L	1	20.714				
	M	1	16.190				
	N	1	16.810				
	O	1	18.667				
	P	1	19.667				
	Q	1	21.857				
	R	1	20.619				
	S	1	19.714				
	T	1	15.286				
	U	1	18.143				
	V	1	17.905				
	W	1	16.190				
	X	1	18.143				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 33. Effect of 2-EHHB Exposure on Adult Reproductive Fecundity (eggs/female/d) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	13.143	13.187[3]	4.309	1.244	32.678
	B	1	13.429				
	C	1	13.429				
	D	1	14.286				
	E	1	13.762				
	F	1	14.857				
	G	1	0.000				
	H	1	15.095				
	I	1	17.190				
	J	1	13.143				
	K	1	15.000				
	L	1	14.905				
12.5	A	1	13.667	12.508[4]	1.141	0.329	9.123
	B	1	13.238				
	C	1	11.762				
	D	1	11.762				
	E	1	11.619				
	F	1	11.143				
	G	1	14.476				
	H	1	13.714				
	I	1	12.143				
	J	1	10.810				
	K	1	13.048				
	L	1	12.714				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, $p<0.0001$).
[4] Significant less than control (Jonckheere-Terpstra test, $p<0.0001$).

Table 33. Effect of 2-EHHB Exposure on Adult Fecundity for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	12.143	11.540[3]	0.751	0.217	6.506
	B	1	12.667				
	C	1	10.571				
	D	1	11.095				
	E	1	12.143				
	F	1	11.476				
	G	1	11.429				
	H	1	12.619				
	I	1	10.524				
	J	1	11.619				
	K	1	10.619				
	L	1	11.571				
50	A	1	8.714	7.802[4]	0.506	0.146	6.490
	B	1	8.286				
	C	1	7.143				
	D	1	7.429				
	E	1	8.238				
	F	1	8.095				
	G	1	7.571				
	H	1	7.333				
	I	1	7.810				
	J	1	7.048				
	K	1	8.000				
	L	1	7.952				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p<0.0001).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 33. Effect of 2-EHHB Exposure on Adult Reproductive Fecundity (eggs/female/d) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	5.238	5.813[3]	0.692	0.200	11.908
	B	1	6.571				
	C	1	4.619				
	D	1	5.810				
	E	1	6.048				
	F	1	6.286				
	G	1	5.143				
	H	1	4.905				
	I	1	6.857				
	J	1	5.952				
	K	1	6.048				
	L	1	6.286				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, $p<0.0001$).

Table 34. Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	19.952	18.986	1.919	0.392	10.106
	B	1	18.048				
	C	1	18.190				
	D	1	21.667				
	E	1	19.619				
	F	1	22.238				
	G	1	20.476				
	H	1	18.762				
	I	1	19.000				
	J	1	17.619				
	K	1	21.286				
	L	1	20.714				
	M	1	16.143				
	N	1	16.762				
	O	1	18.619				
	P	1	19.619				
	Q	1	21.857				
	R	1	20.571				
	S	1	19.524				
	T	1	15.095				
	U	1	18.095				
	V	1	17.762				
	W	1	16.048				
	X	1	18.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 34. Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	13.143	13.071[3]	4.252	1.227	32.530
	B	1	13.381				
	C	1	13.429				
	D	1	14.238				
	E	1	13.714				
	F	1	14.714				
	G	1	0.000				
	H	1	14.952				
	I	1	16.905				
	J	1	13.048				
	K	1	14.667				
	L	1	14.667				
12.5	A	1	13.524	12.222[4]	1.222	0.353	9.997
	B	1	13.143				
	C	1	11.429				
	D	1	11.429				
	E	1	11.286				
	F	1	10.762				
	G	1	14.238				
	H	1	13.429				
	I	1	11.810				
	J	1	10.333				
	K	1	12.667				
	L	1	12.619				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, $p<0.0001$).
[4] Significant less than control (Jonckheere-Terpstra test, $p<0.0001$).

Table 34. Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	11.714	11.119[3]	0.814	0.235	7.322
	B	1	12.333				
	C	1	10.095				
	D	1	10.905				
	E	1	11.714				
	F	1	11.095				
	G	1	11.238				
	H	1	12.238				
	I	1	9.857				
	J	1	11.048				
	K	1	10.048				
	L	1	11.143				
50	A	1	8.190	7.135[4]	0.574	0.166	8.048
	B	1	7.667				
	C	1	6.619				
	D	1	6.905				
	E	1	7.571				
	F	1	7.476				
	G	1	6.810				
	H	1	6.667				
	I	1	7.000				
	J	1	6.048				
	K	1	7.333				
	L	1	7.333				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p<0.0001).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 34. Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	3.762	4.790[3]	0.692	0.200	14.448
	B	1	5.857				
	C	1	3.905				
	D	1	4.714				
	E	1	4.857				
	F	1	5.238				
	G	1	4.333				
	H	1	4.000				
	I	1	5.810				
	J	1	4.810				
	K	1	5.190				
	L	1	5.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, $p<0.0001$).

Table 35. Effect of 2-EHHB Exposure on Adult Female Body Weight (g) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	0.292	0.367	0.058	0.012	15.756
	B	1	0.442				
	C	1	0.406				
	D	1	0.409				
	E	1	0.419				
	F	1	0.378				
	G	1	0.293				
	H	1	0.310				
	I	1	0.433				
	J	1	0.310				
	K	1	0.408				
	L	1	0.371				
	M	1	0.339				
	N	1	0.418				
	O	1	0.310				
	P	1	0.360				
	Q	1	0.353				
	R	1	0.367				
	S	1	0.405				
	T	1	0.213				
	U	1	0.405				
	V	1	0.451				
	W	1	0.380				
	X	1	0.338				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 35. Effect of 2-EHHB Exposure on Adult Female Body Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	0.432	0.381	0.072	0.022	18.851
	B	1	0.411				
	C	1	0.430				
	D	1	0.493				
	E	1	0.439				
	F	1	0.370				
	G	0	.				
	H	1	0.370				
	I	1	0.236				
	J	1	0.294				
	K	1	0.362				
	L	1	0.356				
12.5	A	1	0.335	0.364	0.070	0.020	19.229
	B	1	0.328				
	C	1	0.351				
	D	1	0.250				
	E	1	0.411				
	F	1	0.408				
	G	1	0.380				
	H	1	0.322				
	I	1	0.456				
	J	1	0.431				
	K	1	0.446				
	L	1	0.251				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 35. Effect of 2-EHHB Exposure on Adult Female Body Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.367	0.370	0.069	0.020	18.512
	B	1	0.413				
	C	1	0.541				
	D	1	0.401				
	E	1	0.313				
	F	1	0.334				
	G	1	0.387				
	H	1	0.352				
	I	1	0.406				
	J	1	0.276				
	K	1	0.347				
	L	1	0.308				
50	A	1	0.460	0.368	0.097	0.028	26.276
	B	1	0.338				
	C	1	0.328				
	D	1	0.469				
	E	1	0.462				
	F	1	0.338				
	G	1	0.550				
	H	1	0.259				
	I	1	0.250				
	J	1	0.306				
	K	1	0.274				
	L	1	0.376				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 35. Effect of 2-EHHB Exposure on Adult Female Body Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	0.281	0.325[3]	0.049	0.014	14.951
	B	1	0.382				
	C	1	0.313				
	D	1	0.268				
	E	1	0.329				
	F	1	0.364				
	G	1	0.427				
	H	1	0.287				
	I	1	0.305				
	J	1	0.273				
	K	1	0.317				
	L	1	0.354				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0407).

Table 36. Effect of 2-EHHB Exposure on Adult Male Body Weight (g) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	0.278	0.301	0.045	0.009	15.014
	B	1	0.283				
	C	1	0.298				
	D	1	0.226				
	E	1	0.382				
	F	1	0.223				
	G	1	0.259				
	H	1	0.288				
	I	1	0.316				
	J	1	0.301				
	K	1	0.319				
	L	1	0.404				
	M	1	0.364				
	N	1	0.302				
	O	1	0.334				
	P	1	0.330				
	Q	1	0.232				
	R	1	0.270				
	S	1	0.313				
	T	1	0.285				
	U	1	0.302				
	V	1	0.347				
	W	1	0.277				
	X	1	0.293				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 36. Effect of 2-EHHB Exposure on Adult Male Body Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	0.242	0.304	0.056	0.016	18.438
	B	1	0.394				
	C	1	0.284				
	D	1	0.298				
	E	1	0.402				
	F	1	0.282				
	G	2	0.290				
	H	1	0.258				
	I	1	0.320				
	J	1	0.251				
	K	1	0.259				
	L	1	0.373				
12.5	A	1	0.224	0.312	0.060	0.017	19.242
	B	1	0.337				
	C	1	0.336				
	D	1	0.267				
	E	1	0.317				
	F	1	0.282				
	G	1	0.267				
	H	1	0.439				
	I	1	0.248				
	J	1	0.305				
	K	1	0.350				
	L	1	0.376				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 36. Effect of 2-EHHB Exposure on Adult Male Body Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.267	0.298	0.045	0.013	15.013
	B	1	0.269				
	C	1	0.299				
	D	1	0.246				
	E	1	0.309				
	F	1	0.251				
	G	1	0.296				
	H	1	0.387				
	I	1	0.291				
	J	1	0.270				
	K	1	0.377				
	L	1	0.309				
50	A	1	0.346	0.252[3]	0.063	0.018	25.022
	B	1	0.285				
	C	1	0.271				
	D	1	0.188				
	E	1	0.348				
	F	1	0.324				
	G	1	0.261				
	H	1	0.220				
	I	1	0.191				
	J	1	0.177				
	K	1	0.217				
	L	1	0.195				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0417).

Table 36. Effect of 2-EHHB Exposure on Adult Male Body Weight (g) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	0.181	0.274[3]	0.074	0.021	26.930
	B	1	0.265				
	C	1	0.218				
	D	1	0.257				
	E	1	0.380				
	F	1	0.236				
	G	1	0.264				
	H	1	0.334				
	I	1	0.263				
	J	1	0.160				
	K	1	0.396				
	L	1	0.331				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0169).

Table 37. Effect of 2-EHHB Exposure on Adult Female Body Length (mm) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	25.4	27.78	1.696	0.346	6.105
	B	1	26.7				
	C	1	29.8				
	D	1	28.5				
	E	1	28.8				
	F	1	27.7				
	G	1	26.1				
	H	1	26.0				
	I	1	30.3				
	J	1	27.1				
	K	1	29.7				
	L	1	28.0				
	M	1	28.4				
	N	1	28.5				
	O	1	25.6				
	P	1	27.1				
	Q	1	27.6				
	R	1	27.5				
	S	1	29.7				
	T	1	23.1				
	U	1	29.2				
	V	1	29.4				
	W	1	28.6				
	X	1	27.9				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 37. Effect of 2-EHHB Exposure on Adult Female Body Length (mm) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	29.3	27.69	2.496	0.753	9.013
	B	1	29.2				
	C	1	28.8				
	D	1	31.3				
	E	1	28.9				
	F	1	29.3				
	G	0	.				
	H	1	26.3				
	I	1	22.2				
	J	1	25.2				
	K	1	27.1				
	L	1	27.0				
12.5	A	1	26.4	27.31	2.298	0.663	8.415
	B	1	25.6				
	C	1	26.1				
	D	1	25.9				
	E	1	30.4				
	F	1	28.4				
	G	1	27.2				
	H	1	25.5				
	I	1	30.4				
	J	1	29.4				
	K	1	29.4				
	L	1	23.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 37. Effect of 2-EHHB Exposure on Adult Female Body Length (mm) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	27.7	28.14	1.802	0.520	6.404
	B	1	27.6				
	C	1	31.9				
	D	1	29.7				
	E	1	27.1				
	F	1	28.0				
	G	1	29.8				
	H	1	27.4				
	I	1	29.3				
	J	1	27.2				
	K	1	27.2				
	L	1	24.8				
50	A	1	30.4	26.81	2.705	0.781	10.090
	B	1	27.6				
	C	1	27.2				
	D	1	29.9				
	E	1	29.4				
	F	1	24.6				
	G	1	30.5				
	H	1	23.3				
	I	1	23.6				
	J	1	25.0				
	K	1	24.7				
	L	1	25.5				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 37. Effect of 2-EHHB Exposure on Adult Female Body Length (mm) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	28.2	28.60	2.385	0.688	8.338
	B	1	29.3				
	C	1	31.2				
	D	1	26.0				
	E	1	29.7				
	F	1	32.3				
	G	1	30.9				
	H	1	27.5				
	I	1	25.9				
	J	1	25.9				
	K	1	25.7				
	L	1	30.6				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 38. Effect of 2-EHHB Exposure on Adult Male Body Length (mm) for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	26.8	27.07	1.607	0.328	5.937
	B	1	25.0				
	C	1	25.6				
	D	1	22.9				
	E	1	28.2				
	F	1	25.5				
	G	1	25.7				
	H	1	26.8				
	I	1	28.1				
	J	1	28.0				
	K	1	28.0				
	L	1	30.6				
	M	1	28.6				
	N	1	27.7				
	O	1	29.3				
	P	1	27.9				
	Q	1	26.4				
	R	1	25.6				
	S	1	27.5				
	T	1	26.4				
	U	1	27.0				
	V	1	28.5				
	W	1	26.2				
	X	1	27.4				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 38. Effect of 2-EHHB Exposure on Adult Male Body Length (mm) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	27.1	27.38	2.118	0.611	7.734
	B	1	29.3				
	C	1	27.3				
	D	1	26.6				
	E	1	31.2				
	F	1	27.7				
	G	2	25.3				
	H	1	23.9				
	I	1	28.5				
	J	1	26.1				
	K	1	25.5				
	L	1	30.1				
12.5	A	1	24.9	27.18	2.198	0.635	8.087
	B	1	27.3				
	C	1	26.0				
	D	1	24.8				
	E	1	27.7				
	F	1	26.3				
	G	1	25.1				
	H	1	31.4				
	I	1	25.1				
	J	1	28.5				
	K	1	30.0				
	L	1	29.1				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 38. Effect of 2-EHHB Exposure on Adult Male Body Length (mm) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	26.5	27.28	1.005	0.290	3.685
	B	1	27.6				
	C	1	27.8				
	D	1	26.5				
	E	1	27.9				
	F	1	26.0				
	G	1	27.7				
	H	1	29.5				
	I	1	27.9				
	J	1	26.1				
	K	1	26.5				
	L	1	27.4				
50	A	1	28.3	25.14	2.972	0.858	11.823
	B	1	27.6				
	C	1	27.2				
	D	1	22.4				
	E	1	30.4				
	F	1	27.1				
	G	1	26.0				
	H	1	22.6				
	I	1	23.9				
	J	1	22.8				
	K	1	21.6				
	L	1	21.8				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 38. Effect of 2-EHHB Exposure on Adult Male Body Length (mm) for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	24.8	28.59	2.532	0.731	8.856
	B	1	25.4				
	C	1	25.3				
	D	1	28.4				
	E	1	28.9				
	F	1	27.2				
	G	1	28.3				
	H	1	30.6				
	I	1	32.7				
	J	1	29.7				
	K	1	30.6				
	L	1	31.2				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 39. Effect of 2-EHHB Exposure on Adult Female Anal Fin Papillae Number for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				
	M	1	0.0				
	N	1	0.0				
	O	1	0.0				
	P	1	0.0				
	Q	1	0.0				
	R	1	0.0				
	S	1	0.0				
	T	1	0.0				
	U	1	0.0				
	V	1	0.0				
	W	1	0.0				
	X	1	0.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 39. Effect of 2-EHHB Exposure on Adult Female Anal Fin Papillae Number for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	0	.				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				
12.5	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 39. Effect of 2-EHHB Exposure on Adult Female Anal Fin Papillae Number for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				
50	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 39. Effect of 2-EHHB Exposure on Adult Female Anal Fin Papillae Number for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 40. Effect of 2-EHHB Exposure on Adult Male Anal Fin Papillae Number for F1 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	88.0	65.58	12.864	2.626	19.614
	B	1	74.0				
	C	1	70.0				
	D	1	63.0				
	E	1	77.0				
	F	1	82.0				
	G	1	40.0				
	H	1	74.0				
	I	1	63.0				
	J	1	71.0				
	K	1	73.0				
	L	1	66.0				
	M	1	48.0				
	N	1	89.0				
	O	1	56.0				
	P	1	58.0				
	Q	1	59.0				
	R	1	51.0				
	S	1	52.0				
	T	1	59.0				
	U	1	70.0				
	V	1	73.0				
	W	1	72.0				
	X	1	46.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 40. Effect of 2-EHHB Exposure on Adult Male Anal Fin Papillae Number for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	98.0	64.79	20.072	5.794	30.979
	B	1	66.0				
	C	1	57.0				
	D	1	72.0				
	E	1	87.0				
	F	1	60.0				
	G	2	18.5				
	H	1	50.0				
	I	1	67.0				
	J	1	73.0				
	K	1	76.0				
	L	1	53.0				
12.5	A	1	67.0	61.92	8.140	2.350	13.147
	B	1	61.0				
	C	1	61.0				
	D	1	59.0				
	E	1	50.0				
	F	1	51.0				
	G	1	68.0				
	H	1	57.0				
	I	1	81.0				
	J	1	64.0				
	K	1	61.0				
	L	1	63.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 40. Effect of 2-EHHB Exposure on Adult Male Anal Fin Papillae Number for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	74.0	61.50	15.258	4.405	24.810
	B	1	54.0				
	C	1	67.0				
	D	1	54.0				
	E	1	29.0				
	F	1	56.0				
	G	1	71.0				
	H	1	76.0				
	I	1	72.0				
	J	1	60.0				
	K	1	82.0				
	L	1	43.0				
50	A	1	53.0	59.08	12.817	3.700	21.692
	B	1	55.0				
	C	1	49.0				
	D	1	50.0				
	E	1	73.0				
	F	1	63.0				
	G	1	81.0				
	H	1	67.0				
	I	1	76.0				
	J	1	54.0				
	K	1	49.0				
	L	1	39.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.

Table 40. Effect of 2-EHHB Exposure on Adult Male Anal Fin Papillae Number for F1 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	46.0	65.25	12.174	3.514	18.657
	B	1	72.0				
	C	1	50.0				
	D	1	76.0				
	E	1	56.0				
	F	1	54.0				
	G	1	73.0				
	H	1	67.0				
	I	1	83.0				
	J	1	65.0				
	K	1	60.0				
	L	1	81.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 41. Number of Male and Female Medaka Examined Per Exposure Group

Treatment Group (µg/L)	F1 Sub-Adult		F1 Adult			F2 Adult		
	Males	Females	Males	Females	Sex Unknown	Males	Females	Sex Unknown
0 (Control)	23	1	22	24	2	22	24	2
6.3	10	2	12	10	2	12	11	1
12.5	10	2	12	12	0	12	10	2
25.0	11	1	12	12	0	11	12	1
50.0	8	4	12	12	0	12	12	0
100.0	6	6	12	12	0	12	12	0
Totals	68	16	82	82	4	81	81	6

Table 42. Effect of 2-EHHB Exposure on Selected Kidney Findings for F1 Subadult Male and Female Medaka

Pathological Finding	Sex											
	Males						Females					
	Treatment Group (µg/L)											
	0.0 (Control)	6.3	12.5	25.0	50.0	100.0	0.0 (Control)	6.3	12.5	25.0	50.0	100.0
Number Examined	23	10	10	11	8	6	1	2	2	1	4	6
Tubules, Cellular Debris / Casts												
# affected	0	1	0	0	2	0	1	0	1	0	0	0
minimal	-	1	-	-	2	-	1	-	1	-	-[1]	-[2]
Tubules, Dilation												
# affected	8	5	3	6	4	1	1	2	1	-	2	2
minimal	4	1	2	5	2	-	1	2	1	-	1	-[3]
mild	4	3	-	1	2	1	-	-	-	-	1	2
moderate	-	1	1	-	-	-						
Tubules, Epithelium, Vacuolation												
# affected	5	2	3	5	3	0	1	0[4]	0[5]	0[6]	0[7]	0[8]
minimal	5	2	3	4	3	-	1	-	-	-	-	-
mild	-	-	-	1	-	-	-	-	-	-	-	-

[1] Significantly less than the control (RSCABS, p=0.0488).
[2] Significantly less than the control (RSCABS, p=0.0131).
[3] Significantly less than the control (RSCABS, p=0.0489).
[4] Significantly less than the control (RSCABS, p=0.0416).
[5] Significantly less than the control (RSCABS, p=0.0365).
[6] Significantly less than the control (RSCABS, p=0.0431).
[7] Significantly less than the control (RSCABS, p=0.0328).
[8] Significantly less than the control (RSCABS, p=0.0161).

Table 43. Effect of 2-EHHB Exposure on Selected Testis Findings for F1 Subadult Male Medaka

Pathological Finding	Treatment Group (µg/L)					
	0.0	**6.3**	**12.5**	**25.0**	**50.0**	**100.0**
Number Examined	23	10	10	11	8	6
Hypoplasia/Atrophy						
# affected	2	2	3	2	7	5
minimal	-	1	-	2	-[1]	-[2]
mild	-	-	1	-	-[3]	-[4]
moderate	1	-	2	-	4[5]	2[6]
severe	1	1	-	-	3	3[7]
Histiocytic Cells, Intraluminal						
# affected	0	0	0	0	0	1
mild	-	-	-	-	-	1[8]
Testis Stage Scores						
Stage 1	7	1	3	-	1	-
Stage 2	5	3	1	3	-	-
Stage 3	-	-	1[9]	1[10]	-[11]	1[12]
Stage 4	-	-	1	-	-	-
Mean Score	1.4	1.8	2.0	2.3	1.0	3.0
Unable to Stage	11	6	4	7	7	5

[1] Significantly greater than the control (RSCABS, p=0.0003).
[2] Significantly greater than the control (RSCABS, p=0.0000).
[3] Significantly greater than the control (RSCABS, p=0.0008).
[4] Significantly greater than the control (RSCABS, p=0.0000).
[5] Significantly greater than the control (RSCABS, p=0.0008).
[6] Significantly greater than the control (RSCABS, p=0.0000).
[7] Significantly greater than the control (RSCABS, p=0.0061).
[8] Significantly greater than the control (RSCABS, p=0.0307).
[9] Significantly greater than the control (RSCABS, p=0.0152).
[10] Significantly greater than the control (RSCABS, p=0.0219).
[11] Significantly greater than the control (RSCABS, p=0.0468).
[12] Significantly greater than the control (RSCABS, p=0.0051).

Table 44. Effect of 2-EHHB Exposure on Selected Ovary Findings for F1 Subadult Female Medaka

Pathological Finding	Treatment Group (µg/L)					
	0 (Control)	**6.3**	**12.5**	**25.0**	**50.0**	**100.0**
Number Examined	1	2	2	1	4	6
Ovary Stage Scores						
Stage 0	1	1	2	1	3	5
Stage 1	-	1	-	-	1	1
Mean Score	0.0	0.5	0.0	0.0	0.3	0.2

Table 45. Effect of 2-EHHB Exposure on Selected Thyroid Findings for F1 Adult Male and Female Medaka

Pathological Finding	Sex			
	Male		Female	
	Treatment Group (µg/L)			
	0 (Control)	100.0	0 (Control)	100.0
Number Examined[1]	22	12	24	12
Follicular Cells, Hypertrophy/Hyperplasia	21	11	0	1
minimal	18	9[2]	-	1[3]
mild	3	2[4]	-	-

[1] Does not include twocontrol fish for which the sex could not be determined. Hyaline degeneration of minimal and mild severity was not significantly different from control (RSCABS, p=0.1410, for both minimal and moderate severity).
[2] Not significantly different from control (RSCABS, p=0.3322).
[3] Not significantly different from control (RSCABS, p=0.0759).
[4] Not significantly different control (RSCABS, p=0.4090).

Table 46. Effect of 2-EHHB Exposure on Selected Liver Findings for F1 Adult Male and Female Medaka

Pathological Finding	Sex											
	Males						Females					
	Treatment Group (µg/L)											
	0 (Control)	6.3	12.5	25.0	50.0	100.0	0 (Control)	6.3	12.5	25.0	50.0	100.0
Number Examined[1]	22	12	12	12	12	12	24	10	12	12	12	12
Hepatocellular Vacuolation, Glycogen-Type	22	12	12	12	12	11	24	10	12	12	12	11
minimal	-	-	-	3	3	10	-	4	-	2	5	9
mild	8	7	8	9[2]	9[3]	1[4]	19	4	10	9	7[5]	2[6]
moderate	14	5	4[7]	-[8]	-[9]	-[10]	5	2	2	1	-[11]	-[12]
Cytoplasmic Inclusions, Eosinophilic	0	0	0	0	0	0	1	0	0	0	3	2
minimal	-	-	-	-	-	-	1	-	-	-	3[13]	1[14]
mild	-	-	-	-	-	-	-	-	-	-	-	1

[1] Does not include four fish for which the sex could not be determined. Reduction in focus of cellular alteration in male medaka of minimal (RSCABS, p=0.0367) in the 100 µg/L 2-EHHB treatment and mild severity in the 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, 0.0499 and 0.0414, respectively) relative to the control was observed.
[2] Significantly less than the control (RSCABS, p=0.0041).
[3] Significantly less than the control (RSCABS, p=0.0041).
[4] Significantly less than the control (RSCABS, p=0.0000).
[5] Significantly less than the control (RSCABS, p=0.0061).
[6] Significantly less than the control (RSCABS, p=0.0000).
[7] Significantly less than the control (RSCABS, p=0.0427).
[8] Significantly less than the control (RSCABS, p=0.0002).
[9] Significantly less than the control (RSCABS, p=0.0000).
[10] Significantly less than the control (RSCABS, p=0.0000).
[11] Significantly less than the control (RSCABS, p=0.0387).
[12] Significantly less than the control (RSCABS, p=0.0095).
[13] Significantly greater than the control (RSCABS, p=0.0432).
[14] Significantly greater than the control (RSCABS, p=0.0063).

Table 47. Effect of 2-EHHB Exposure on Selected Kidney Findings for F1 Adult Male and Female Medaka

Pathological Finding	Sex											
	Males						Females					
	Treatment Group (µg/L)											
	0 (Control)	6.3	12.5	25.0	50.0	100.0	0 (Control)	6.3	12.5	25.0	50.0	100.0
Number Examined[1]	22	12	12	12	12	12	24	10	12	12	12	12
Tubules, Epithelium, Eosinophilia	22	12	12	12	12	12	24	10	12	12	12	12
minimal	-	-	-	-	-	-	24	10	12	12	11	9
mild	-	-	-	-	-	-	-	-	-	-	1	3[2]
moderate	22	12	12	12	12	12	-	-	-	-	-	-

[1] Does not include four fish for which the sex could not be determined. Reduction in minimal tubule cellular debris/cast (RSCABS, p=0.0314); and minimal, mild, and moderate tubule dilation (RSCABS, p=0.0227, 0.0034, and 0.0357, respectively) in male medaka exposed to 100 µg/L 2-EHHB and mild severity in the 50.0 and 100 µg/L 2-EHHB treatments (RSCABS, 0.0499 and 0.0414, respectively) relative to the control was observed.
[2] Significantly greater than the control (RSCABS, p=0.0021).

Table 48. Effect of 2-EHHB Exposure on Selected Testis Findings for F1 Adult Male Medaka

	Treatment Group (µg/L)					
Pathological Finding	**0 (Control)**	**6.3**	**12.5**	**25.0**	**50.0**	**100.0**
Number Examined[1]	**22**	**12**	**12**	**12**	**12**	**12**
Testicular Degeneration	6	8	7	7	9	8
minimal	5	8[2]	7[3]	7[4]	7[5]	8[6]
mild	1	-	-	-	2	-
Testis Stage Scores						
Stage 1	6	1	3	4	5	4
Stage 2	6	5	5	2	2	2
Stage 3	4	3	2	4	1	3
Stage 4	3	3	1	1	3	1
Mean Score	2.2	2.7	2.1	2.2	2.2	2.1
Unable to Stage	3	-	1	1	1	2

[1] Does not include four fish for which the sex could not be determined. Reduction in minimal interstitial fibrosis in male medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0499 and 0.0414, respectively) was observed. The exposure-related finding of testicular hypoplasia in F_1 sub-adult males of the 50.0 and 100.0 µg/L 2-EHHB dose groups could potentially be attributed, at least in part, to a delay in reproductive tract development secondary to diminished overall somatic growth, as suggested by the decreased body weights of males in of those two highest dose groups relative to controls.
[2] Significantly greater than the control (RSCABS, p=0.0180).
[3] Significantly greater than the control (RSCABS, p=0.0280).
[4] Significantly greater than the control (RSCABS, p=0.0339).
[5] Significantly greater than the control (RSCABS, p=0.0069).
[6] Significantly greater than the control (RSCABS, p=0.0070).

Table 49. Effect of 2-EHHB Exposure on Selected Ovary Findings for F1 Adult Female Medaka

Treatment Group (µg/L)	Treatment Group (µg/L)					
	0 (Control)	6.3	12.5	25.0	50.0	100.0
Number Examined[1]	**24**	**10**	**12**	**12**	**12**	**12**
Ovary Stage Scores						
Stage 1	1	-	-	-	-	-
Stage 2	-	2	-	-	1	-
Stage 3	18	8	8	10	8	8
Stage 4	5	-	4	2	3	4
Mean Score	3.1	2.8	3.3	3.2	3.2	3.3

[1] Does not include four fish for which the sex could not be determined. Increased necrosis of minimal post-ovulatory follicles in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0348) was observed.

[F2 Generation]

Table 50. Effect of 2-EHHB Exposure on Survivability for F2 Generation[1]

		Juvenile Survivability - Survival to 4 WPF (%)					Subadult Survivability - Survival from 4 to 9 WPF (%)					Adult Survivability - Survival from 9 to 15 WPF (%)				
Treatment (µg/L)	Replicate	N	Replicate Percent	Mean[2]	Std Dev	CV (%)	N	Replicate Percent	Mean[2]	Std Dev	CV (%)	N	Replicate Percent	Mean[2]	Std Dev	CV (%)
0.0	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
	G	12	100				12	100				2	100			
	H	12	100				12	100				2	100			
	I	12	100				12	100				2	100			
	J	12	100				12	100				2	100			
	K	12	100				12	100				2	100			
	L	12	100				12	100				2	100			
6.3	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
12.5	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
25	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
50	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
100	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			

[1] Std dev=Standard deviation. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] Treatment mean.

Table 51. Effect of 2-EHHB Exposure on Hatching Success (%) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	2	91.5	92.188	2.870	0.586	3.113
	B	2	87.5				
	C	2	88.5				
	D	2	92.0				
	E	2	89.5				
	F	2	88.5				
	G	2	94.0				
	H	2	94.5				
	I	2	92.5				
	J	2	93.0				
	K	2	90.0				
	L	2	94.0				
	M	2	87.5				
	N	2	94.5				
	O	2	99.0				
	P	2	92.5				
	Q	2	92.5				
	R	2	93.5				
	S	2	94.0				
	T	2	91.5				
	U	2	88.5				
	V	2	93.5				
	W	2	96.5				
	X	2	93.5				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 51. Effect of 2-EHHB Exposure on Hatching Success (%) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	2	100.0	97.773	4.221	1.273	4.317
	B	2	87.5				
	C	2	100.0				
	D	2	100.0				
	E	2	100.0				
	F	2	100.0				
	G	0	.				
	H	2	100.0				
	I	2	100.0				
	J	2	95.5				
	K	2	100.0				
	L	2	92.5				
12.5	A	2	95.0	96.458	3.271	0.944	3.392
	B	2	100.0				
	C	2	100.0				
	D	2	95.5				
	E	2	92.5				
	F	2	96.5				
	G	2	100.0				
	H	2	100.0				
	I	2	96.0				
	J	2	96.0				
	K	2	96.5				
	L	2	89.5				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 51. Effect of 2-EHHB Exposure on Hatching Success (%) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	2	90.5	94.833	3.916	1.130	4.129
	B	2	89.5				
	C	2	94.0				
	D	2	96.5				
	E	2	90.0				
	F	2	100.0				
	G	2	100.0				
	H	2	96.0				
	I	2	94.0				
	J	2	91.5				
	K	2	100.0				
	L	2	96.0				
50	A	2	100.0	93.250	6.017	1.737	6.453
	B	2	87.0				
	C	2	96.0				
	D	2	86.5				
	E	2	94.5				
	F	2	94.0				
	G	2	100.0				
	H	2	80.5				
	I	2	95.0				
	J	2	93.5				
	K	2	100.0				
	L	2	92.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 51. Effect of 2-EHHB Exposure on Hatching Success (%) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N	Mean	Mean	Std Dev	SEM	CV (%)
100	A	2	83.5	88.458	6.236	1.800	7.049
	B	2	81.0				
	C	2	91.5				
	D	2	94.0				
	E	2	89.0				
	F	2	80.0				
	G	2	80.5				
	H	2	87.5				
	I	2	100.0				
	J	2	89.5				
	K	2	94.0				
	L	2	91.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.

Table 52. Effect of 2-EHHB Exposure on Median Time to Hatch (days) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment							
	ID	N[2]	Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
0.0	A	1	10.0	10.00	0.742	0.151	7.107	9.00	10.00	11.00	12.00
	B	1	11.0								
	C	1	11.0								
	D	1	11.0								
	E	1	11.0								
	F	1	10.0								
	G	1	10.0								
	H	1	10.0								
	I	1	11.0								
	J	1	10.0								
	K	1	9.0								
	L	1	11.0								
	M	1	10.0								
	N	1	11.0								
	O	1	10.0								
	P	1	10.0								
	Q	1	12.0								
	R	1	11.0								
	S	1	11.0								
	T	1	10.0								
	U	1	11.5								
	V	1	10.0								
	W	1	9.0								
	X	1	10.0								

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100. Min - Minimum. Q1 - First quartile. Q3 - Third quartile. Max - Maximum.
[2] N indicates observations/data points/records/entries for each replicate.

Table 52. Effect of 2-EHHB Exposure on Median Time to Hatch (days) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment							
	ID	N[2]	Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
6.3	A	1	10.0	10.00	0.505	0.152	5.236	9.00	9.00	10.00	10.00
	B	1	9.0								
	C	1	10.0								
	D	1	9.0								
	E	1	10.0								
	F	1	9.0								
	G	0	.								
	H	1	10.0								
	I	1	10.0								
	J	1	9.0								
	K	1	10.0								
	L	1	10.0								
12.5	A	1	10.0	10.00	0.515	0.149	5.193	9.00	10.00	10.00	11.00
	B	1	10.0								
	C	1	10.0								
	D	1	10.0								
	E	1	11.0								
	F	1	10.0								
	G	1	10.0								
	H	1	9.0								
	I	1	10.0								
	J	1	10.0								
	K	1	9.0								
	L	1	10.0								

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100. Min - Minimum. Q1 - First quartile. Q3 - Third quartile. Max - Maximum.
[2] N indicates observations/data points/records/entries for each replicate.

Table 52. Effect of 2-EHHB Exposure on Median Time to Hatch (days) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment							
	ID	N	Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
25	A	1	9.0	10.00	0.603	0.174	6.030	9.00	10.00	10.00	11.00
	B	1	10.0								
	C	1	11.0								
	D	1	10.0								
	E	1	11.0								
	F	1	10.0								
	G	1	10.0								
	H	1	10.0								
	I	1	10.0								
	J	1	10.0								
	K	1	10.0								
	L	1	9.0								
50	A	1	10.0	10.00	0.444	0.128	4.513	9.00	9.75	10.00	10.50
	B	1	10.0								
	C	1	10.0								
	D	1	10.0								
	E	1	9.0								
	F	1	10.0								
	G	1	10.0								
	H	1	10.0								
	I	1	10.5								
	J	1	9.5								
	K	1	10.0								
	L	1	9.0								

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100. Min - Minimum. Q1 - First quartile. Q3 - Third quartile. Max - Maximum.

Table 52. Effect of 2-EHHB Exposure on Median Time to Hatch (days) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment							
	ID	N[2]	Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
100	A	1	10.0	10.00	0.369	0.107	3.693	9.50	10.00	10.00	11.00
	B	1	10.0								
	C	1	10.0								
	D	1	10.0								
	E	1	9.5								
	F	1	10.0								
	G	1	9.5								
	H	1	10.0								
	I	1	10.0								
	J	1	11.0								
	K	1	10.0								
	L	1	10.0								

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100. Min - Minimum. Q1 - First quartile. Q3 - Third quartile. Max - Maximum.
[2] N indicates observations/data points/records/entries for each replicate.

Table 53. Effect of 2-EHHB Exposure on Subadult Female Body Weight (g) for F2 Generation[1]

Treatment (µg/L)	Replicate[2]			Treatment			
	ID	N	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	0.103	0.076	0.017	0.005	22.563
	B	5	0.091				
	C	5	0.083				
	D	4	0.054				
	E	4	0.083				
	F	4	0.051				
	G	3	0.058				
	H	4	0.065				
	I	4	0.065				
	J	7	0.087				
	K	5	0.081				
	L	5	0.092				
6.3	A	7	0.082	0.081	0.012	0.005	14.892
	B	3	0.076				
	C	4	0.072				
	D	5	0.066				
	E	4	0.096				
	F	6	0.095				
12.5	A	7	0.114	0.101[3]	0.011	0.005	11.256
	B	7	0.111				
	C	6	0.106				
	D	4	0.094				
	E	4	0.084				
	F	6	0.100				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p=0.0018).

Table 53. Effect of 2-EHHB Exposure on Subadult Female Body Weight (g) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	6	0.082	0.084[3]	0.007	0.003	8.772
	B	8	0.094				
	C	6	0.091				
	D	6	0.074				
	E	5	0.085				
	F	3	0.079				
50	A	2	0.092	0.092[4]	0.006	0.002	6.605
	B	5	0.096				
	C	6	0.102				
	D	4	0.089				
	E	5	0.084				
	F	6	0.091				
100	A	5	0.084	0.087[5]	0.007	0.003	8.050
	B	7	0.098				
	C	2	0.083				
	D	1	0.093				
	E	5	0.080				
	F	6	0.085				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p=0.0278).
[4] Significant greater than control (Jonckheere-Terpstra test, p=0.0098).
[5] Significant greater than control (Jonckheere-Terpstra test, p=0.0243).

Table 54. Effect of 2-EHHB Exposure on Subadult Male Body Weight (g) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	2	0.102	0.093	0.020	0.006	21.078
	B	3	0.113				
	C	3	0.088				
	D	4	0.072				
	E	4	0.085				
	F	4	0.096				
	G	5	0.068				
	H	4	0.062				
	I	4	0.093				
	J	1	0.121				
	K	3	0.101				
	L	3	0.122				
6.3	A	1	0.102	0.096	0.010	0.004	9.937
	B	5	0.088				
	C	4	0.092				
	D	3	0.084				
	E	4	0.102				
	F	2	0.109				
12.5	A	1	0.158	0.122	0.024	0.010	19.233
	B	1	0.135				
	C	2	0.090				
	D	4	0.115				
	E	4	0.108				
	F	2	0.129				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 54. Effect of 2-EHHB Exposure on Subadult Male Body Weight (g) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate[2]			Treatment			
	ID	N	Mean	Mean	Std Dev	SEM	CV (%)
25	A	2	0.084	0.091	0.012	0.005	12.739
	B	0	.				
	C	2	0.103				
	D	2	0.082				
	E	3	0.083				
	F	5	0.105				
50	A	6	0.106	0.104	0.004	0.002	4.208
	B	3	0.109				
	C	2	0.108				
	D	4	0.102				
	E	3	0.098				
	F	2	0.101				
100	A	3	0.112	0.110[3]	0.020	0.008	17.979
	B	1	0.143				
	C	6	0.104				
	D	7	0.090				
	E	3	0.093				
	F	2	0.121				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3]Significant greater than control (Jonckheere-Terpstra test, p=0.0446).

Table 55. Effect of 2-EHHB Exposure on Subadult Female Body Length (mm) for F2 Generation[1]

Treatment (µg/L)	Replicate[2]			Treatment			
	ID	N	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	15.550	15.309	0.921	0.266	6.018
	B	5	14.760				
	C	5	15.360				
	D	4	14.350				
	E	4	15.700				
	F	4	14.575				
	G	3	14.433				
	H	4	14.675				
	I	4	14.800				
	J	7	15.700				
	K	5	16.300				
	L	5	17.500				
6.3	A	7	16.643	15.526	0.879	0.359	5.664
	B	3	15.000				
	C	4	14.875				
	D	5	14.420				
	E	4	16.200				
	F	6	16.017				
12.5	A	7	15.986	16.201	0.627	0.256	3.869
	B	7	16.829				
	C	6	17.033				
	D	4	15.650				
	E	4	15.475				
	F	6	16.233				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 55. Effect of 2-EHHB Exposure on Subadult Female Body Length (mm) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	6	15.117	15.369	0.674	0.275	4.388
	B	8	15.775				
	C	6	15.050				
	D	6	14.433				
	E	5	15.440				
	F	3	16.400				
50	A	2	15.950	16.409	0.804	0.328	4.898
	B	5	17.920				
	C	6	16.367				
	D	4	16.575				
	E	5	15.740				
	F	6	15.900				
100	A	5	14.920	15.619	0.597	0.244	3.824
	B	7	15.571				
	C	2	15.000				
	D	1	16.100				
	E	5	16.440				
	F	6	15.683				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 56. Effect of 2-EHHB Exposure on Subadult Male Body Length (mm) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	2	16.200	16.541	1.344	0.388	8.123
	B	3	15.733				
	C	3	15.367				
	D	4	14.950				
	E	4	16.375				
	F	4	17.025				
	G	5	15.960				
	H	4	14.950				
	I	4	17.100				
	J	1	17.800				
	K	3	17.433				
	L	3	19.600				
6.3	A	1	18.000	16.570	0.900	0.367	5.430
	B	5	15.980				
	C	4	15.975				
	D	3	16.167				
	E	4	15.900				
	F	2	17.400				
12.5	A	1	17.800	17.646	0.715	0.292	4.053
	B	1	18.500				
	C	2	16.700				
	D	4	17.175				
	E	4	17.300				
	F	2	18.400				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 56. Effect of 2-EHHB Exposure on Subadult Male Body Length (mm) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	2	14.600	15.761	1.023	0.457	6.488
	B	0	.				
	C	2	15.800				
	D	2	15.150				
	E	3	15.933				
	F	5	17.320				
50	A	6	17.300	16.756	0.877	0.358	5.233
	B	3	17.167				
	C	2	15.700				
	D	4	17.300				
	E	3	15.567				
	F	2	17.500				
100	A	3	15.400	16.626	1.045	0.427	6.288
	B	1	18.100				
	C	6	16.483				
	D	7	15.857				
	E	3	16.267				
	F	2	17.650				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 57. Effect of 2-EHHB Exposure on Subadult Female Liver Weight (g) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	0.003	0.003	0.001	0.000	20.196
	B	5	0.003				
	C	5	0.005				
	D	4	0.003				
	E	4	0.004				
	F	4	0.003				
	G	3	0.003				
	H	4	0.003				
	I	4	0.002				
	J	7	0.004				
	K	5	0.003				
	L	5	0.003				
6.3	A	7	0.004	0.005[3]	0.002	0.001	38.142
	B	3	0.004				
	C	4	0.004				
	D	5	0.004				
	E	4	0.009				
	F	6	0.004				
12.5	A	7	0.005	0.006[4]	0.001	0.000	21.044
	B	7	0.006				
	C	6	0.005				
	D	4	0.005				
	E	4	0.007				
	F	6	0.008				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p=0.0005).
[4] Significant greater than control (Jonckheere-Terpstra test, p<0.0001).

Table 57. Effect of 2-EHHB Exposure on Subadult Female Liver Weight (g) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	6	0.005	0.006[3]	0.001	0.000	20.160
	B	8	0.004				
	C	6	0.006				
	D	6	0.005				
	E	5	0.007				
	F	3	0.006				
50	A	2	0.005	0.005[4]	0.001	0.000	14.040
	B	5	0.005				
	C	6	0.006				
	D	4	0.005				
	E	5	0.004				
	F	6	0.006				
100	A	5	0.004	0.005[5]	0.001	0.000	15.253
	B	7	0.005				
	C	2	0.005				
	D	1	0.006				
	E	5	0.004				
	F	6	0.004				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p<0.0001).
[4] Significant greater than control (Jonckheere-Terpstra test, p<0.0001).
[5] Significant greater than control (Jonckheere-Terpstra test, p=0.0001).

Table 58. Effect of 2-EHHB Exposure on Subadult Male Liver Weight (g) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	2	0.003	0.003	0.001	0.000	23.277
	B	3	0.003				
	C	3	0.005				
	D	4	0.003				
	E	4	0.005				
	F	4	0.003				
	G	5	0.002				
	H	4	0.003				
	I	4	0.004				
	J	1	0.003				
	K	3	0.004				
	L	3	0.005				
6.3	A	1	0.004	0.004[3]	0.001	0.000	17.667
	B	5	0.004				
	C	4	0.005				
	D	3	0.005				
	E	4	0.005				
	F	2	0.003				
12.5	A	1	0.013	0.007[4]	0.003	0.001	39.883
	B	1	0.006				
	C	2	0.005				
	D	4	0.005				
	E	4	0.006				
	F	2	0.007				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p=0.0273).
[4] Significant greater than control (Jonckheere-Terpstra test, p<0.0001).

Table 58. Effect of 2-EHHB Exposure on Subadult Male Liver Weight (g) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	2	0.005	0.007[3]	0.001	0.000	15.491
	B	0	.				
	C	2	0.006				
	D	2	0.007				
	E	3	0.007				
	F	5	0.008				
50	A	6	0.004	0.005[4]	0.001	0.000	15.311
	B	3	0.006				
	C	2	0.005				
	D	4	0.005				
	E	3	0.005				
	F	2	0.005				
100	A	3	0.005	0.006[5]	0.002	0.001	29.366
	B	1	0.009				
	C	6	0.004				
	D	7	0.005				
	E	3	0.004				
	F	2	0.007				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p<0.0001).
[4] Significant greater than control (Jonckheere-Terpstra test, p<0.0001).
[5] Significant greater than control (Jonckheere-Terpstra test, p=0.0002).

Table 59. Effect of 2-EHHB Exposure on Subadult Female Liver Vitellogenin [Log10(copies *vtg* 1)/ng total RNA] for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	3.767	2.907	0.606	0.175	20.856
	B	5	2.360				
	C	5	2.654				
	D	4	2.493				
	E	4	3.618				
	F	4	2.403				
	G	3	3.357				
	H	4	1.775				
	I	4	3.090				
	J	7	3.567				
	K	5	2.732				
	L	5	3.068				
6.3	A	7	2.253	3.090	0.717	0.293	23.194
	B	3	2.153				
	C	4	3.528				
	D	5	3.168				
	E	4	3.748				
	F	6	3.690				
12.5	A	7	3.589	3.574	0.692	0.282	19.350
	B	7	4.231				
	C	6	3.652				
	D	4	2.355				
	E	4	3.388				
	F	6	4.232				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 59. Effect of 2-EHHB Exposure on Subadult Female Liver Vitellogenin [Log10(copies *vtg* 1)/ng total RNA] for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	6	2.448	2.407	0.576	0.235	23.932
	B	8	2.746				
	C	6	2.157				
	D	6	1.828				
	E	5	1.908				
	F	3	3.353				
50	A	2	3.485	3.565	0.591	0.241	16.577
	B	5	4.214				
	C	6	4.308				
	D	4	3.385				
	E	5	3.218				
	F	6	2.782				
100	A	5	2.888	2.712	0.522	0.213	19.241
	B	7	2.946				
	C	2	2.165				
	D	1	2.160				
	E	5	3.522				
	F	6	2.588				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 60. Effect of 2-EHHB Exposure on Subadult Male Liver Vitellogenin [Log10(copies *vtg* 1)/ng total RNA] for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	2	3.355	3.101	0.641	0.185	20.666
	B	3	2.793				
	C	3	3.017				
	D	4	2.820				
	E	4	2.793				
	F	4	3.578				
	G	5	3.056				
	H	4	2.460				
	I	4	4.243				
	J	1	2.140				
	K	3	4.193				
	L	3	2.760				
6.3	A	1	5.490	3.627	1.126	0.460	31.056
	B	5	2.658				
	C	4	2.470				
	D	3	4.227				
	E	4	3.755				
	F	2	3.160				
12.5	A	1	2.920	3.154	0.602	0.246	19.088
	B	1	4.160				
	C	2	2.555				
	D	4	3.405				
	E	4	3.283				
	F	2	2.600				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 60. Effect of 2-EHHB Exposure on Subadult Male Liver Vitellogenin [Log10(copies *vtg* 1)/ng total RNA] for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	2	2.025	2.501	0.295	0.132	11.796
	B	0	.				
	C	2	2.735				
	D	2	2.520				
	E	3	2.757				
	F	5	2.468				
50	A	6	2.987	2.907	0.528	0.216	18.164
	B	3	2.387				
	C	2	3.240				
	D	4	3.235				
	E	3	3.457				
	F	2	2.135				
100	A	3	2.727	2.542[3]	0.515	0.210	20.266
	B	1	2.350				
	C	6	3.120				
	D	7	3.067				
	E	3	2.150				
	F	2	1.840				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0491).

Table 61. Effect of 2-EHHB Exposure on Subadult Female Anal Fin Papillae Number for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	6	0.000	0.000	0.000	0.000	.
	B	5	0.000				
	C	5	0.000				
	D	4	0.000				
	E	4	0.000				
	F	4	0.000				
	G	3	0.000				
	H	4	0.000				
	I	4	0.000				
	J	7	0.000				
	K	5	0.000				
	L	5	0.000				
6.3	A	7	0.000	0.000	0.000	0.000	.
	B	3	0.000				
	C	4	0.000				
	D	5	0.000				
	E	4	0.000				
	F	6	0.000				
12.5	A	7	0.000	0.000	0.000	0.000	.
	B	7	0.000				
	C	6	0.000				
	D	4	0.000				
	E	4	0.000				
	F	6	0.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 61. Effect of 2-EHHB Exposure on Subadult Female Anal Fin Papillae Number for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	6	0.000	0.000	0.000	0.000	.
	B	8	0.000				
	C	6	0.000				
	D	6	0.000				
	E	5	0.000				
	F	3	0.000				
50	A	2	0.000	0.000	0.000	0.000	.
	B	5	0.000				
	C	6	0.000				
	D	4	0.000				
	E	5	0.000				
	F	6	0.000				
100	A	5	0.000	0.000	0.000	0.000	.
	B	7	0.000				
	C	2	0.000				
	D	1	0.000				
	E	5	0.000				
	F	6	0.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 62. Effect of 2-EHHB Exposure on Subadult Male Anal Fin Papillae Number for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	2	3.000	1.467	2.801	0.809	190.978
	B	3	0.000				
	C	3	0.000				
	D	4	0.000				
	E	4	0.000				
	F	4	0.000				
	G	5	1.600				
	H	4	0.000				
	I	4	0.000				
	J	1	0.000				
	K	3	3.667				
	L	3	9.333				
6.3	A	1	0.000	0.708	1.229	0.502	173.504
	B	5	0.000				
	C	4	3.000				
	D	3	0.000				
	E	4	1.250				
	F	2	0.000				
12.5	A	1	23.000	5.500	9.006	3.677	163.737
	B	1	0.000				
	C	2	3.000				
	D	4	0.000				
	E	4	0.000				
	F	2	7.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 62. Effect of 2-EHHB Exposure on Subadult Male Anal Fin Papillae Number for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	2	0.000	1.840	4.114	1.840	223.607
	B	0	.				
	C	2	0.000				
	D	2	0.000				
	E	3	0.000				
	F	5	9.200				
50	A	6	1.333	6.319	7.358	3.004	116.428
	B	3	17.333				
	C	2	13.000				
	D	4	6.250				
	E	3	0.000				
	F	2	0.000				
100	A	3	0.000	2.897	2.691	1.098	92.886
	B	1	0.000				
	C	6	4.167				
	D	7	1.714				
	E	3	6.000				
	F	2	5.500				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 63. Effect of 2-EHHB Exposure on Subadult External Sex Ratio for F2 Generation[1]

		Sex Ratio (M:F)					
Treatment (µg/L)	**Replicate**	**N[2]**	**Replicate Mean[3]**	**Mean**	**Std**	**Sem**	**CV (%)**
0.0	A	1	0.333	0.795	0.400	0.115	50.306
	B	1	0.600				
	C	1	0.600				
	D	1	1.000				
	E	1	1.000				
	F	1	1.000				
	G	1	1.667				
	H	1	1.000				
	I	1	1.000				
	J	1	0.143				
	K	1	0.600				
	L	1	0.600				
6.3	A	1	0.143	0.790	0.551	0.225	69.755
	B	1	1.667				
	C	1	1.000				
	D	1	0.600				
	E	1	1.000				
	F	1	0.333				
12.5	A	1	0.143	0.492	0.403	0.164	81.811
	B	1	0.143				
	C	1	0.333				
	D	1	1.000				
	E	1	1.000				
	F	1	0.333				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Treatment mean.

Table 63. Effect of 2-EHHB Exposure on Subadult External Sex Ratio for F2 Generation[1] *(continued)*

		Sex Ratio (M:F)					
Treatment (µg/L)	**Replicate**	**N[2]**	**Replicate Mean**	**Mean[3]**	**Std**	**Sem**	**CV (%)**
25	A	1	0.333	0.544	0.582	0.238	106.866
	B	1	0.000				
	C	1	0.333				
	D	1	0.333				
	E	1	0.600				
	F	1	1.667				
50	A	1	3.000	0.978	1.020	0.417	104.358
	B	1	0.600				
	C	1	0.333				
	D	1	1.000				
	E	1	0.600				
	F	1	0.333				
100	A	1	0.600	1.946	2.688	1.097	138.132
	B	1	0.143				
	C	1	3.000				
	D	1	7.000				
	E	1	0.600				
	F	1	0.333				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Treatment mean.

Table 64. Effect of 2-EHHB Exposure on Adult Reproductive Fecundity (eggs/female/d) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	19.381	19.835	1.779	0.363	8.968
	B	1	20.286				
	C	1	20.333				
	D	1	19.238				
	E	1	18.190				
	F	1	18.905				
	G	1	18.381				
	H	1	17.810				
	I	1	18.286				
	J	1	21.048				
	K	1	19.524				
	L	1	19.000				
	M	1	22.095				
	N	1	17.810				
	O	1	19.667				
	P	1	24.000				
	Q	1	20.857				
	R	1	19.048				
	S	1	21.762				
	T	1	18.667				
	U	1	18.667				
	V	1	23.190				
	W	1	22.333				
	X	1	17.571				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 64. Effect of 2-EHHB Exposure on Adult Reproductive Fecundity (eggs/female/d) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	17.381	18.119[3]	1.462	0.422	8.068
	B	1	18.810				
	C	1	17.190				
	D	1	17.000				
	E	1	18.857				
	F	1	18.619				
	G	1	18.333				
	H	1	20.048				
	I	1	16.952				
	J	1	15.000				
	K	1	19.286				
	L	1	19.952				
12.5	A	1	13.619	13.377[4]	0.340	0.098	2.542
	B	1	13.095				
	C	1	13.476				
	D	1	13.333				
	E	1	13.333				
	F	1	13.238				
	G	1	13.952				
	H	1	12.810				
	I	1	13.476				
	J	1	13.667				
	K	1	13.667				
	L	1	12.857				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0059).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 64 Effect of 2-EHHB Exposure on Adult Reproductive Fecundity (eggs/female/d) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	8.381	8.905[3]	0.622	0.180	6.984
	B	1	8.714				
	C	1	9.476				
	D	1	9.000				
	E	1	9.286				
	F	1	9.714				
	G	1	9.429				
	H	1	9.381				
	I	1	9.095				
	J	1	7.762				
	K	1	7.952				
	L	1	8.667				
50	A	1	6.667	6.837[4]	0.553	0.159	8.081
	B	1	6.476				
	C	1	7.524				
	D	1	6.381				
	E	1	6.381				
	F	1	6.810				
	G	1	7.952				
	H	1	7.048				
	I	1	6.000				
	J	1	6.571				
	K	1	7.333				
	L	1	6.905				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p<0.0001).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 64 Effect of 2-EHHB Exposure on Adult Reproductive Fecundity (eggs/female/d) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	5.048	5.389[3]	0.426	0.123	7.911
	B	1	5.429				
	C	1	5.381				
	D	1	4.619				
	E	1	6.048				
	F	1	5.857				
	G	1	5.190				
	H	1	5.286				
	I	1	5.571				
	J	1	5.667				
	K	1	5.762				
	L	1	4.810				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 65. Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	19.286	19.583	1.746	0.356	8.916
	B	1	20.238				
	C	1	20.190				
	D	1	19.048				
	E	1	17.952				
	F	1	18.714				
	G	1	18.190				
	H	1	17.571				
	I	1	18.048				
	J	1	20.857				
	K	1	19.143				
	L	1	18.857				
	M	1	21.857				
	N	1	17.667				
	O	1	19.381				
	P	1	23.619				
	Q	1	20.571				
	R	1	18.667				
	S	1	21.571				
	T	1	18.476				
	U	1	18.429				
	V	1	22.810				
	W	1	21.762				
	X	1	17.095				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 65. Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	17.095	17.778[3]	1.505	0.434	8.466
	B	1	18.381				
	C	1	16.714				
	D	1	16.619				
	E	1	18.524				
	F	1	18.190				
	G	1	17.905				
	H	1	19.952				
	I	1	16.762				
	J	1	14.571				
	K	1	19.048				
	L	1	19.571				
12.5	A	1	13.000	12.901[4]	0.446	0.129	3.454
	B	1	12.857				
	C	1	12.714				
	D	1	13.000				
	E	1	13.048				
	F	1	12.952				
	G	1	13.619				
	H	1	12.190				
	I	1	12.952				
	J	1	13.095				
	K	1	13.381				
	L	1	12.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0038).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 65 Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	7.810	8.222[3]	0.579	0.167	7.043
	B	1	7.810				
	C	1	8.762				
	D	1	8.238				
	E	1	8.476				
	F	1	9.190				
	G	1	8.857				
	H	1	8.571				
	I	1	8.095				
	J	1	7.286				
	K	1	7.429				
	L	1	8.143				
50	A	1	5.000	5.210[4]	0.625	0.180	11.995
	B	1	4.333				
	C	1	5.905				
	D	1	5.143				
	E	1	5.381				
	F	1	5.524				
	G	1	6.476				
	H	1	5.286				
	I	1	4.238				
	J	1	4.762				
	K	1	5.476				
	L	1	5.000				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p<0.0001).
[4] Significant less than control (Jonckheere-Terpstra test, p<0.0001).

Table 65. Effect of 2-EHHB Exposure on Fertile Eggs Produced (%) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	2.381	3.063[3]	0.535	0.155	17.477
	B	1	2.810				
	C	1	2.857				
	D	1	2.857				
	E	1	4.000				
	F	1	3.714				
	G	1	2.857				
	H	1	3.000				
	I	1	2.905				
	J	1	3.333				
	K	1	3.762				
	L	1	2.286				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, $p<0.0001$).

Table 66. Effect of 2-EHHB Exposure on Adult Female Body Weight (g) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	0.261	0.363	0.102	0.021	28.040
	B	1	0.270				
	C	1	0.199				
	D	1	0.224				
	E	1	0.253				
	F	1	0.275				
	G	1	0.238				
	H	1	0.286				
	I	1	0.327				
	J	1	0.469				
	K	1	0.545				
	L	1	0.439				
	M	1	0.374				
	N	1	0.366				
	O	1	0.344				
	P	1	0.357				
	Q	1	0.389				
	R	1	0.388				
	S	1	0.538				
	T	1	0.384				
	U	1	0.501				
	V	1	0.429				
	W	1	0.515				
	X	1	0.338				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 66. Effect of 2-EHHB Exposure on Adult Female Body Weight (g) for F2 Generation[1] *(continued)*

				Treatment			
Treatment (µg/L)	Replicate			Mean	Std Dev	SEM	CV (%)
	ID	N	Mean				
6.3	A	1	0.503	0.461[2]	0.079	0.023	17.228
	B	1	0.399				
	C	1	0.614				
	D	1	0.557				
	E	1	0.412				
	F	1	0.396				
	G	1	0.433				
	H	1	0.542				
	I	1	0.479				
	J	1	0.369				
	K	1	0.455				
	L	1	0.370				
12.5	A	1	0.521	0.557[3]	0.037	0.011	6.553
	B	1	0.568				
	C	1	0.496				
	D	1	0.542				
	E	1	0.538				
	F	1	0.539				
	G	1	0.572				
	H	1	0.609				
	I	1	0.615				
	J	1	0.534				
	K	1	0.552				
	L	1	0.599				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] Significant greater than control KW-ANOVA, Dunn's test, p=0.0058).
[3] Significant greater than control KW-ANOVA, Dunn's test, p<0.0001).

Table 66. Effect of 2-EHHB Exposure on Adult Female Body Weight (g) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.574	0.495[3]	0.064	0.019	12.947
	B	1	0.458				
	C	1	0.575				
	D	1	0.501				
	E	1	0.410				
	F	1	0.413				
	G	1	0.406				
	H	1	0.509				
	I	1	0.474				
	J	1	0.569				
	K	1	0.503				
	L	1	0.551				
50	A	1	0.506	0.474[4]	0.093	0.027	19.612
	B	1	0.534				
	C	1	0.523				
	D	1	0.538				
	E	1	0.554				
	F	1	0.383				
	G	1	0.589				
	H	1	0.582				
	I	1	0.354				
	J	1	0.381				
	K	1	0.388				
	L	1	0.356				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control KW-ANOVA, Dunn's test, p=0.0004).
[4] Significant greater than control KW-ANOVA, Dunn's test, p=0.0052).

Table 66. Effect of 2-EHHB Exposure on Adult Female Body Weight (g) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	0.322	0.353	0.042	0.012	11.814
	B	1	0.315				
	C	1	0.277				
	D	1	0.387				
	E	1	0.399				
	F	1	0.392				
	G	1	0.358				
	H	1	0.337				
	I	1	0.367				
	J	1	0.398				
	K	1	0.384				
	L	1	0.301				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 67. Effect of 2-EHHB Exposure on Adult Male Body Weight (g) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	0.191	0.282	0.065	0.013	22.940
	B	1	0.190				
	C	1	0.194				
	D	1	0.191				
	E	1	0.244				
	F	1	0.265				
	G	1	0.245				
	H	1	0.204				
	I	1	0.250				
	J	1	0.240				
	K	1	0.297				
	L	1	0.289				
	M	1	0.267				
	N	1	0.273				
	O	1	0.319				
	P	1	0.337				
	Q	1	0.256				
	R	1	0.313				
	S	1	0.356				
	T	1	0.372				
	U	1	0.372				
	V	1	0.354				
	W	1	0.393				
	X	1	0.358				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 67. Effect of 2-EHHB Exposure on Adult Male Body Weight (g) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	0.373	0.384[3]	0.030	0.009	7.839
	B	1	0.396				
	C	1	0.408				
	D	1	0.404				
	E	1	0.338				
	F	1	0.356				
	G	1	0.344				
	H	1	0.353				
	I	1	0.415				
	J	1	0.430				
	K	1	0.391				
	L	1	0.395				
12.5	A	1	0.379	0.415[4]	0.037	0.011	9.045
	B	1	0.391				
	C	1	0.423				
	D	1	0.358				
	E	1	0.389				
	F	1	0.380				
	G	1	0.437				
	H	1	0.462				
	I	1	0.427				
	J	1	0.416				
	K	1	0.489				
	L	1	0.423				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control KW-ANOVA, Dunn's test, p=0.0004).
[4] Significant greater than control KW-ANOVA, Dunn's test, p<0.0001).

Table 67. Effect of 2-EHHB Exposure on Adult Male Body Weight (g) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.417	0.401[3]	0.036	0.010	8.938
	B	1	0.350				
	C	1	0.419				
	D	1	0.411				
	E	1	0.393				
	F	1	0.347				
	G	1	0.381				
	H	1	0.480				
	I	1	0.390				
	J	1	0.386				
	K	1	0.407				
	L	1	0.430				
50	A	1	0.425	0.394[4]	0.104	0.030	26.491
	B	1	0.443				
	C	1	0.461				
	D	1	0.374				
	E	1	0.428				
	F	1	0.470				
	G	1	0.474				
	H	1	0.501				
	I	1	0.460				
	J	1	0.222				
	K	1	0.238				
	L	1	0.226				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control KW-ANOVA, Dunn's test, p<0.0001).
[4] Significant greater than control KW-ANOVA, Dunn's test, p<0.0001).

Table 67. Effect of 2-EHHB Exposure on Adult Male Body Weight (g) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	0.224	0.284	0.035	0.010	12.474
	B	1	0.265				
	C	1	0.332				
	D	1	0.291				
	E	1	0.319				
	F	1	0.265				
	G	1	0.297				
	H	1	0.303				
	I	1	0.267				
	J	1	0.293				
	K	1	0.227				
	L	1	0.326				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 68. Effect of 2-EHHB Exposure on Adult Female Body Length (mm) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	28.1	26.11	2.445	0.499	9.366
	B	1	27.5				
	C	1	25.1				
	D	1	20.7				
	E	1	22.9				
	F	1	21.8				
	G	1	24.3				
	H	1	25.5				
	I	1	28.9				
	J	1	26.2				
	K	1	25.2				
	L	1	28.7				
	M	1	26.7				
	N	1	27.6				
	O	1	25.1				
	P	1	27.5				
	Q	1	27.5				
	R	1	26.7				
	S	1	30.0				
	T	1	25.0				
	U	1	28.7				
	V	1	25.3				
	W	1	29.1				
	X	1	22.5				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 68. Effect of 2-EHHB Exposure on Adult Female Body Length (mm) for F2 Generation[1] (continued)

Treatment (µg/L)	Replicate			Treatment			
	ID	N	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	26.0	25.78	1.960	0.566	7.602
	B	1	23.3				
	C	1	29.1				
	D	1	27.4				
	E	1	26.2				
	F	1	24.9				
	G	1	24.6				
	H	1	27.5				
	I	1	27.2				
	J	1	23.1				
	K	1	26.9				
	L	1	23.2				
12.5	A	1	28.0	28.18[2]	1.794	0.518	6.367
	B	1	29.6				
	C	1	26.1				
	D	1	28.4				
	E	1	28.3				
	F	1	23.8				
	G	1	27.7				
	H	1	30.2				
	I	1	30.1				
	J	1	28.1				
	K	1	29.5				
	L	1	28.4				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] Significant greater than control (Jonckheere-Terpstra test, p=0.0179).

Table 68. Effect of 2-EHHB Exposure on Adult Female Body Length (mm) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	30.0	27.53[3]	1.989	0.574	7.225
	B	1	30.4				
	C	1	27.4				
	D	1	29.1				
	E	1	26.2				
	F	1	25.8				
	G	1	24.8				
	H	1	29.3				
	I	1	24.6				
	J	1	27.1				
	K	1	26.7				
	L	1	28.9				
50	A	1	23.9	27.32[4]	1.723	0.497	6.308
	B	1	25.5				
	C	1	26.6				
	D	1	27.1				
	E	1	26.7				
	F	1	28.8				
	G	1	27.0				
	H	1	27.5				
	I	1	29.3				
	J	1	30.2				
	K	1	28.6				
	L	1	26.6				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p=0.0127).
[4] Significant greater than control (Jonckheere-Terpstra test, p<0.0192).

Table 68. Effect of 2-EHHB Exposure on Adult Female Body Length (mm) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	29.3	27.12[3]	1.713	0.495	6.319
	B	1	27.3				
	C	1	25.9				
	D	1	28.3				
	E	1	28.8				
	F	1	26.2				
	G	1	27.7				
	H	1	25.7				
	I	1	27.4				
	J	1	25.6				
	K	1	29.4				
	L	1	23.8				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant greater than control (Jonckheere-Terpstra test, p<0.0354).

Table 69. Effect of 2-EHHB Exposure on Adult Male Body Length (mm) for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	26.1	25.83	1.327	0.271	5.135
	B	1	25.6				
	C	1	24.5				
	D	1	26.0				
	E	1	24.4				
	F	1	23.6				
	G	1	25.3				
	H	1	24.1				
	I	1	27.4				
	J	1	24.5				
	K	1	27.4				
	L	1	25.1				
	M	1	25.6				
	N	1	25.0				
	O	1	26.5				
	P	1	27.9				
	Q	1	24.4				
	R	1	27.6				
	S	1	27.0				
	T	1	28.2				
	U	1	26.7				
	V	1	25.2				
	W	1	27.0				
	X	1	24.9				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 69. Effect of 2-EHHB Exposure on Adult Male Body Length (mm) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	25.5	25.18	1.214	0.351	4.821
	B	1	26.4				
	C	1	25.2				
	D	1	25.6				
	E	1	23.8				
	F	1	24.8				
	G	1	25.2				
	H	1	23.2				
	I	1	27.2				
	J	1	23.4				
	K	1	25.8				
	L	1	26.1				
12.5	A	1	26.9	26.18	1.382	0.399	5.282
	B	1	25.3				
	C	1	25.7				
	D	1	24.8				
	E	1	26.6				
	F	1	28.3				
	G	1	26.5				
	H	1	24.0				
	I	1	26.0				
	J	1	25.1				
	K	1	28.8				
	L	1	26.1				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 69. Effect of 2-EHHB Exposure on Adult Male Body Length (mm) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	25.7	25.64	1.522	0.439	5.937
	B	1	22.9				
	C	1	26.3				
	D	1	27.4				
	E	1	27.3				
	F	1	23.6				
	G	1	25.7				
	H	1	28.2				
	I	1	25.1				
	J	1	25.1				
	K	1	25.2				
	L	1	25.2				
50	A	1	25.1	25.39	1.269	0.366	4.997
	B	1	27.5				
	C	1	26.1				
	D	1	23.1				
	E	1	24.0				
	F	1	25.3				
	G	1	26.5				
	H	1	25.4				
	I	1	25.4				
	J	1	25.6				
	K	1	26.8				
	L	1	23.9				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 69. Effect of 2-EHHB Exposure on Adult Male Body Length (mm) for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	24.3	26.65	1.605	0.463	6.022
	B	1	26.5				
	C	1	28.8				
	D	1	26.7				
	E	1	27.6				
	F	1	26.0				
	G	1	26.3				
	H	1	27.0				
	I	1	25.6				
	J	1	30.0				
	K	1	24.6				
	L	1	26.4				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 70. Effect of 2-EHHB Exposure on Adult Female Anal Fin Papillae Number for F2 Generation[1]

Treatment (µg/L)	Replicate			Mean	Std Dev	SEM	CV (%)
	ID	N	Mean				
0.0	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				
	M	1	0.0				
	N	1	0.0				
	O	1	0.0				
	P	1	0.0				
	Q	1	0.0				
	R	1	0.0				
	S	1	0.0				
	T	1	0.0				
	U	1	0.0				
	V	1	0.0				
	W	1	0.0				
	X	1	0.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.

Table 70. Effect of 2-EHHB Exposure on Adult Female Anal Fin Papillae Number for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				
12.5	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 70. Effect of 2-EHHB Exposure on Adult Female Anal Fin Papillae Number for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				
50	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 70. Effect of 2-EHHB Exposure on Adult Female Anal Fin Papillae Number for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	0.0	0.00	0.000	0.000	.
	B	1	0.0				
	C	1	0.0				
	D	1	0.0				
	E	1	0.0				
	F	1	0.0				
	G	1	0.0				
	H	1	0.0				
	I	1	0.0				
	J	1	0.0				
	K	1	0.0				
	L	1	0.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 71. Effect of 2-EHHB Exposure on Adult Male Anal Fin Papillae Number for F2 Generation[1]

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
0.0	A	1	61.0	57.92	10.934	2.232	18.879
	B	1	59.0				
	C	1	62.0				
	D	1	40.0				
	E	1	60.0				
	F	1	60.0				
	G	1	61.0				
	H	1	56.0				
	I	1	58.0				
	J	1	34.0				
	K	1	63.0				
	L	1	52.0				
	M	1	60.0				
	N	1	82.0				
	O	1	51.0				
	P	1	67.0				
	Q	1	46.0				
	R	1	65.0				
	S	1	70.0				
	T	1	68.0				
	U	1	59.0				
	V	1	70.0				
	W	1	43.0				
	X	1	43.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 71. Effect of 2-EHHB Exposure on Adult Male Anal Fin Papillae Number for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
6.3	A	1	71.0	64.42	9.070	2.618	14.080
	B	1	70.0				
	C	1	62.0				
	D	1	58.0				
	E	1	88.0				
	F	1	61.0				
	G	1	64.0				
	H	1	67.0				
	I	1	61.0				
	J	1	53.0				
	K	1	57.0				
	L	1	61.0				
12.5	A	1	66.0	68.08	9.959	2.875	14.627
	B	1	61.0				
	C	1	70.0				
	D	1	68.0				
	E	1	93.0				
	F	1	71.0				
	G	1	73.0				
	H	1	56.0				
	I	1	53.0				
	J	1	70.0				
	K	1	69.0				
	L	1	67.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.

Table 71. Effect of 2-EHHB Exposure on Adult Male Anal Fin Papillae Number for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N	Mean	Mean	Std Dev	SEM	CV (%)
25	A	1	71.0	65.92	10.975	3.168	16.650
	B	1	51.0				
	C	1	75.0				
	D	1	84.0				
	E	1	70.0				
	F	1	52.0				
	G	1	77.0				
	H	1	55.0				
	I	1	56.0				
	J	1	72.0				
	K	1	70.0				
	L	1	58.0				
50	A	1	32.0	46.08	15.048	4.344	32.654
	B	1	38.0				
	C	1	37.0				
	D	1	31.0				
	E	1	25.0				
	F	1	65.0				
	G	1	58.0				
	H	1	36.0				
	I	1	72.0				
	J	1	55.0				
	K	1	57.0				
	L	1	47.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.

Table 71. Effect of 2-EHHB Exposure on Adult Male Anal Fin Papillae Number for F2 Generation[1] *(continued)*

Treatment (µg/L)	Replicate			Treatment			
	ID	N[2]	Mean	Mean	Std Dev	SEM	CV (%)
100	A	1	29.0	43.83[3]	9.989	2.884	22.789
	B	1	38.0				
	C	1	66.0				
	D	1	49.0				
	E	1	46.0				
	F	1	42.0				
	G	1	47.0				
	H	1	47.0				
	I	1	41.0				
	J	1	43.0				
	K	1	50.0				
	L	1	28.0				

[1] Std dev=Standard deviation. SEM=Standard error of the mean. CV(%)=Coefficient of variation = (standard deviation / mean) × 100.
[2] N indicates observations/data points/records/entries for each replicate.
[3] Significant less than control (Jonckheere-Terpstra test, p=0.0074)

Table 72. Effect of 2-EHHB Exposure on Selected Liver Findings for F2 Adult Male and Female Medaka

Pathological Findings	Sex											
	Males						Females					
	Treatment Group (µg/L)											
	0 (Control)	6.3	12.5	25.0	50.0	100.0	0 (Control)	6.3	12.5	25.0	50.0	100.0
Number Examined[1]	**22**	**12**	**12**	**11**	**12**	**12**	**24**	**11**	**10**	**12**	**12**	**12**
Cystic Degeneration	7	6	6	5	6	9	14	7	9	12	11	8
minimal	6	6	5	3	6	7	12	5	7	6[2]	9[3]	4[4]
mild	-	-	1	1	-	2	2	-	2	6[5]	2[6]	3[7]
moderate	1	-	-	1	-	-	-	2	-	-	-	1

[1] Does not include six fish for which the sex could not be determined. Increased moderate basophilia in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0183) was observed. Reduction in mild glycogen-type hepatocellular vacuolation (RSCABS, p=0.0023) and minimal (RSCABS, P=0.0400) and mild (RSCABS, p=0.0473) granulomatous inflammation in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0183) were observed. Reduction in mild glycogen-type hepatocellular vacuolation (RSCABS,) P=0.0364 and P=0.0296,)) and moderate (RSCABS, P=0.0341 and P=0.0179) in female medaka exposed to 50 and 100 µg/L 2-EHHB were observed. Reduction in mild and moderate glycogen-type hepatocellular vacuolation were noted in male medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0364 and 0.0296 [mild] and 0.0341 and 0.0179 [moderate], respectively).

[2] Significantly greater than the control (RSCABS, p=0.0020).

[3] Significantly greater than the control (RSCABS, p=0.0013).

[4] Significantly greater than the control (RSCABS, p=0.0391).

[5] Significantly greater than the control (RSCABS, p=0.0044).

[6] Significantly greater than the control (RSCABS, p=0.0486).

[7] Significantly greater than the control (RSCABS, p=0.0319).

Table 73. Effect of 2-EHHB Exposure on Selected Testis Findings for F2 Adult Male Medaka

Pathological; Findings	Males					
	Treatment Group (µg/L)					
	0 (Control)	6.3	12.5	25.0	50.0	100.0
Number Examined[1]	**22**	**12**	**12**	**11**	**12**	**12**
Interstitial Cells, Increased	2	2	3	5	3	5
minimal	1	2	3	5[2]	1[3]	4[4]
mild	1	0	-	-	2	1
Testis Stage Scores						
Stage 1	15	4	6	6	3	7
Stage 2	3	4	2	2	5	2
Stage 3	2	3	3	1	1	3
Stage 4	1	1	-	1	3	-
Mean Score	1.5	2.1	1.7	1.7	2.3	1.7
Unable to Stage	1	-	1	1	-	-

[1] Does not include six fish for which the sex could not be determined.
[2] Significantly greater than the control (RSCABS, p=0.0105).
[3] Significantly greater than the control (RSCABS, p=0.0344).
[4] Significantly greater than the control (RSCABS, p=0.0121).

Table 74. Effect of 2-EHHB Exposure on Ovary Stage Scores for F2 Adult Female Medaka

Pathological Findings	Females					
	Treatment Group (µg/L)					
	0 (Control)	6.3	12.5	25.0	50.0	100.0
Number Examined[1]	**24**	**11**	**10**	**12**	**12**	**12**
Ovary Stage Scores						
Stage 1	2	1	-	-	-	-
Stage 2	-	2	-	-	1[2]	1[3]
Stage 3	12	5	6	9	7	6
Stage 4	6	3	4	3	4	4
Mean Score	3.1	2.9	3.4	3.3	3.3	3.3
Unable to Stage	4	-	-	-	-	1

[1] Does not include six fish for which the sex could not be determined. A reduction in minimal granulomatous inflammation in female medaka exposed to 50.0 and 100 µg/L 2-EHHB (RSCABS, p=0.0464 and 0.0301) and severe oocyte retention in female medaka exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0473) was observed.
[2] Significantly greater than the control (RSCABS, p=0.0453).
[3] Significantly greater than the control (RSCABS, p=0.0307).

Table 75. Part 1: Summary of Study BATT01-00393 Embryo-Larval, Juvenile, and Subadult Endpoint Results1

Life Stage	Generation	Endpoint	NOEC (µg 2-EHHB/L)	LOEC (µg 2-EHHB/L)	NOEC (µg 2-EHHB/L)		LOEC (µg 2-EHHB/L)	
					Female	Male	Female	Male
Embryo	F1	Hatchability (%)	50.0	100	---	---	---	---
	F2		100	>100	---	---	---	---
	F1	Hatchability (time, days)	0.0	6.25	---	---	---	---
	F2		100	>100	---	---	---	---
Juvenile	F1	Survival	100	>100	---	---	---	---
	F2		100	>100	---	---	---	---
Subadult	F1	Survival	100	>100	---	---	---	---
		Growth (weight/length)	---	---	50.0/25.0	100/50.0	100/50.0	>100/100
		Liver Weight	---	---	50.0	100	100	>100
		Vitellogenin (liver mRNA)	---	---	100	50.0	>100	100
		Anal Fin Papillae	---	---	100	25.0	>100	50.0
		Sex Ratios	100	>100	---	---	---	---
	F2	Survival	100	>100	---	---	---	---
		Growth (weight/length)	---	---	6.25/100	50.0/100	12.5/100	100/>100
		Liver Weight	---	---	0.0	0.0	6.25	6.25
		Vitellogenin (liver mRNA)	---	---	100	100	>100	50.0
		Anal Fin Papillae	---	---	100	100	>100	>100
		Sex Ratios	100	>100	---	---	---	---

[1] Nominal concentrations. Nominal concentrations are cited as the representation of the treatment.

Table 75. Part 2: Summary of Study BATT01-00393 Adult Endpoint Results[1]

Life Stage	Generation	Endpoint	NOEC (µg 2-EHHB/L)	LOEC (µg 2-EHHB/L)	NOEC (µg 2-EHHB/L)		LOEC (µg 2-EHHB/L)	
					Female	Male	Female	Male
Adult (12-14 wpf)	F0	Reproductive Fecundity, Eggs Production	0.0	6.25	---	---	---	---
		Reproductive Fecundity, Fertilization	0.0	6.25	---	---	---	---
	F1	Reproductive Fecundity, Eggs Production	0.0	6.25	---	---	---	---
		Reproductive Fecundity, Fertilization	0.0	6.25	---	---	---	---
	F2	Reproductive Fecundity, Eggs Production	0.0	6.25	---	---	---	---
		Reproductive Fecundity, Fertilization	0.0	6.25	---	---	---	---
Adult (15 wpf)	F0	Survival	100	>100	---	---	---	---
		Growth (weight/length)	---	---	50.0/6.25	0.0/100.0	100.0/12.5	6.25/>100.0
	F1	Survival	100	>100	---	---	---	---
		Growth (weight/length)	---	---	50.0/100	25.0/>100	100/100	50.0/>100
		Anal Fin Papillae	---	---	100	>100	100	>100
	F2	Survival	100	>100	---	---	---	---
		Growth (weight/length)	---	---	0.0/6.25	0.0/100	6.25/12.5	6.25/>100
		Anal Fin Papillae	---	---	100	50	>100	100

[1] Nominal concentrations. Nominal concentrations are cited as the representation of the treatment.

Table 75. Part 3: Summary of Study BATT01-00393 Histopathology Endpoint Results[1]

Life Stage	Generation	Tissue	Endpoint[2]	NOEC (µg 2-EHHB/L)		LOEC (µg 2-EHHB/L)	
				Female	Male	Female	Male
Subadult	F1	Thyroid	Follicular Hypertrophy/Hyperplasia	100	>100	100	>100
Adult	F1	Thyroid	Follicular Hypertrophy/Hyperplasia	100	>100	100	>100
		Liver	Hepatocellular glycogen-type vacuolation (male and female) and eosinophilic cytoplasmic inclusions (female)	25.0	6.25	50.0	25.0
		Kidney	Tubule cellular debris/cast (male) and tubule epithelium eosinophilia	50.0	25.0	100	50.0
		Testis	Testicular Degeneration	---	0.0	---	6.25
		Ovary	Necrosis of post-ovulatory follicles	50.0	---	100.0	---
	F2	Liver	Hepatocellular glycogen-type vacuolation (male) and cystic degeneration (females)	12.5	25.0	25.0	50.0
		Kidney	None	100	>100	100	>100
		Testis	Interstitial cells (increased)	---	12.5	---	25.0
		Ovary	Increased stage 2 ovaries and granulomatous inflammation (reduced)	25.0	---	50.0	---

[1] Nominal concentrations. Nominal concentrations are cited as the representation of the treatment.
[2] Endpoint driving NOEC/LOEC.

Table 76. General Test Performance Criteria (3)

Parameter	Criteria	Criteria Status
Test concentrations	Maintain concentrations of the test chemical in solution within ±20% of the mean measured values over the entire test period.	√[1]
Dissolved oxygen concentration	≥ 60% of air saturation value throughout the test	√
pH	pH should be maintained between 6.5-8.5. The inter-replicate/inter-treatment differentials should not exceed 0.5.	√
Mean water temperature	Between 24 and 26°C over the duration of study. Brief excursions from the mean by individual aquaria should not be more than 2°C. Replicates within a treatment should not be statistically different from each other. Treatments within the test should not be statistically different from each other.	√
Mortality in controls	≤ 20% mortality in each replicate in the controls.	√
Hatchability of eggs	≥ 80% in the controls (in each of the F1 and F2 generations).	√
Survival after hatching	Should be ≥ 80% (average) until 3 wpf in F1 controls. Should be from ≥ 90% (average) from 3 wpf through termination in F1 controls.	√
Fish weight at sub-adult sampling	F1 control XX and XY fish mean weight should be >100 mg and mean length >20 mm. Growth of substantially less than these values suggests the fish will not achieve sufficient size to spawn with acceptable fecundity.	√
Occurrence of intersex fish	XX males will be <5% and XY intersex will be <2% (determined by comparison of genotype and histological sex) in F1 controls.	√
Fecundity	Should be >20 eggs/pair/day in F0 and F1 controls.	√[2]
Fertility	Should be >80% for all eggs produced in F0 and F1 controls (*i.e.*, F1 and F2 eggs) during the assessment.	√

[1] The mean measured concentrations were consistent with protocol BATT01-8 for study BATT01-00393. The recovery values were within 80%. The coefficient of variation was >20% in the 6.25, 12.5, and 25.0 µg/L 2-EHHB treatments, however; the higher values were a function of the sole replicate sampling within each treatment and control throughout the majority of the in-life study (see Table 7). Coefficient of variation = (Standard deviation / mean). CV based on the standard deviation of mean measured concentration of each replicate and mean measured treatment concentration per facility SOP. Overall, the mean measured concentrations were an estimation of exposure concentration and the 22% treatment-level CV did not impact the interpretation of the results or conclusions drawn. However, nominal concentrations are cited as the representation of the treatment.

[2] Mean reproductive fecundity for the F0 and F1 controls was and 19.2 and 19.1 eggs/female/day, respectively. Based on the outcome of statistical analyses relating to the effect of 2-EHHB exposure on reproductive fecundity, each treatment was found to be significantly less than the control (Joncheere-Terpstra, $p<0.05$). Thus, reproduction fecundity in the control produced adequate statistical power for the present study.

Appendix A.
PROTOCOL, PROTOCOL AMENDMENTS, AND PROTOCOL DEVIATION

FEL Protocol No.:	**BATT01-8**
GLP Study Title:	**Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate**
Test Guideline:	**US EPA, OCSPP 890.2200 (July 2015)**
FEL Study No.:	**BATT01-00393**
Test System:	**Japanese Medaka *(Oryzias latipes)***
Test Article:	**2-Ethyhexyl 4-Hydroxybenzoate**
USEPA Task Order:	**TO 14**
USEPA/Battelle Contract No.:	**EP-W-11-063**
Study Sponsor:	**U.S. Environmental Protection Agency 1200 Pennsylvania Ave., NW Washington DC 20460**
Testing Facility:	**Fort Environmental Laboratories, Inc. (FEL) 515 South Duncan Street Stillwater, OK 74074**
PI Support Site: (Analytical Chemistry and Vitellogenin mRNA)	**ABC Laboratories 7200 East ABC Lane Columbia, MO 65202**
PI Support Site: (Histopathology)	**Experimental Pathology Laboratories (EPL) 45600 Terminal Drive Sterling, VA 20166**

STUDY AMENDMENTS

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SIGNATURE PAGE

Title/Name	Signature	Date
STUDY DIRECTOR: Douglas J. Fort, Ph.D.		2/1/2016
SPONSOR REPRESENTATIVE:[1] Vincent J. Brown, Ph.D.	Vincent J. Brown	1/27/2016

[1] Study Monitor.

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1. GOOD LABORATORY PRACTICE

This study will be conducted in compliance with the following GLP principles:

- United States Environmental Protection Agency, (FIFRA), Good Laboratory Practice Standards, Title 40 Code of Federal Regulations Part 160 (effective October 16, 1989) with the following exceptions:
  - Analysis of the laboratory dilution water for organics, pesticides and metals at Red River Laboratory (Oklahoma City, Oklahoma) using standard EPA methods will not be GLP-compliant,
  - The test substance will not be chemically-characterized in a GLP-compliant manner,
  - Range-finding studies conducted as a component of FEL study (BATT01-00385) used to determine test concentrations for the present study, BATT01-00393, were not performed in a GLP-compliant manner.

Since the analyses of the dilution water will be conducted following standard validated methods, this exception will not be expected to impact on the study results. Lack of GLP-compliant chemical characterization or GLP-compliant range-finding studies will not be expected to impact study results, nor change the conclusions drawn from the study. The final report will contain a statement indicating whether the study data complies with the above GLP guidelines. The statement will be signed by the Study Director.

2. QUALITY ASSURANCE

A GLP-compliant QAU is present at the test facility (FEL), each Principal Investigator (PI) support facility (ABC Labs and EPL), and the Battelle Memorial Institute (Sponsor Representative). A sponsor-approved Quality Assurance Project Plan (QAPP) (1) is in place for the study. All independent QA activities will be performed in accordance with the USEPA Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice (GLP) Standards, Final Rule, 40 CFR Part 160 (2), the facility-specific standard operating procedures (SOPs) at each organization, and the QAPP (1).

3. INTRODUCTION

FEL has been contracted by Battelle Memorial Institute to perform the Medaka Extended One Generation Reproduction Test (MEOGRT) under EPA OCSPP Harmonized Test Guideline 890.2200 (3) modified by adding a F2 generation component using 2-ethyhexyl 4-hydroxybenzoate [2-EHHB] (test substance) as directed by USEPA Task Order (TO) 14 under USEPA/Battelle Memorial Institute contract EP-W-11-063. At the sponsor's request, it is noted that the methods to be used for the F2 generation rely on a portion of the DRAFT Test Guidelines for the MEOGRT (December 17, 2014, pages 6–7 and 18–19) (15). This study will be conducted in accordance with the USEPA FIFRA, Good Laboratory Practice (GLP) Standards, Final Rule, 40 CFR Part 160 (2), and under the FEL Quality Assurance Management Plan (QAMP) (4), relevant facility standard operating procedures (SOPs), and the following Study Protocol No. BATT01-8, prepared for FEL Study No. BATT01-00393.

4. OBJECTIVE

This test is intended to measure chemical effects on reproduction and reproductive development in medaka exposed through multiple generations of their life-cycle. The test method will begin by exposing young adult fish (the P or F_0 generation) to 2-EHHB. The test will be performed using a flow-through system to expose three generations of fish (F0, F1, and F2), starting with young adults 10-15 weeks post fertilization (wpf), to 5 concentrations of 2-EHHB and a control over a 32-week period (includes F2 generation). Table 1 provides test conditions. Thus, the assay will allow evaluation of both structural and activation-based endocrine pathways within and across generations.

5. TESTING FACILITY

The in-life portion of the study, to include the pre-exposure and exposure phases of the medaka extended one-generation reproduction test (MEOGRT), will be performed at Fort Environmental Laboratories, Inc., 515 South Duncan Street, Stillwater, Oklahoma, USA, 74074. The Study Director, Dr. Douglas Fort, will serve as the study contact for this facility and may be reached at 405.624.6771 or djfort@fortlabs.com.

6. TESTING SITES

The 2-EHHB chemical analysis portion of the study will be performed at ABC Laboratories, Inc., Chemical Services Department, 7200 East ABC Lane, Columbia, Missouri, USA 65202. Dr. Tom Leak, PI of the planned analyses, will serve as study contact for ABC Laboratories and may be reached at 508.295.2550 or leakt@abclabs.com.

Vitellogenin mRNA analyses will be performed at ABC Laboratories, Inc., Biochemistry Department, 7200 East ABC Lane, Columbia, Missouri, USA 65202. Dr. Steve Hicks, PI of the planned analyses, will serve as study contact for ABC Laboratories and may be reached at 573.777.6053 or hickss@abclabs.com .

Histopathology will be performed at Experimental Pathology Laboratories, Inc. (EPL), 45600 Terminal Drive, Sterling, Virginia, USA, 20166. Dr. Jeffrey Wolf, D.V.M., DACVP, will serve as the PI and project contact for EPL. Dr. Wolf may be reached at 703.471.7060 ext. 242 or jwolf@epl-inc.com.

Table 1. Experimental Specifications for 2-EHHB MEOGRT (with F2 Generation) Study

Parameter	Conditions
Test species	Medaka (*Oryzias latipes*)
Diluent; Negative control	Dechlorinated tap water (carbon filtered)
Test chemical	2-ethyhexyl 4-hydroxybenzoate
Test chemical concentrations (µg/L)	0, 6.3, 12.5, 25.0, 50.0, and 100.0
Test chamber size	10 L glass aquarium (tank) partitioned to 4L
Test media volume	1.8 L per partition
Media flow rate	20 mL/min
Rate of media exchange	16 exchanges/tank/day
Replicates/treatment Replicates/control	6 replicates/treatment for F0; 12 replicates/treatment for F1 12 replicates/control for F0; 24 replicates/control for F1
Animals/replicate	At F0, 2 fish per rep at start (Day 0)
Feed	Brine shrimp
Photoperiod	16 h light : 8 h dark with 30 min. transition
Media temperature	25°C ± 1°C
Light intensity	100-500 lux
Dissolved oxygen (DO)	≥ 60% saturation
pH	6.5 to 8.5 ± 0.5
Hardness, alkalinity, conductivity	At test initiation and twice monthly in the control and high concentration of one replicate. Replicates will be chosen on a rotating basis.
Aeration	Eggs mandatory, only if needed for fish (i.e., if DO reaches <60%)
Apical endpoints	See Table 2
Control/dilution water	Dechlorinated tap water previously demonstrated to be suitable for medaka
Sample frequency for water	One water sample from each of the 6 replicates per treatment (and control) will be collected weekly through the duration of exposure. Replicates will be sampled on a rotational basis.
Exposure Period	32 weeks (F0 to F2)

7. ANIMAL WELFARE ACT COMPLIANCE

This study will comply with all applicable sections of the Final Rules of the Animal Welfare Act regulations (9 CFR). The Sponsor should make particular note of the following:

- The Sponsor signature on this protocol documents for the Study Director the Sponsor's assurance that the study described in this protocol does not unnecessarily duplicate previous experiments.

- Whenever possible, procedures used in this study have been designed to avoid or minimize discomfort, distress or pain to animals. All methods are described in this study protocol or in written laboratory standard operating procedures.

- By design, this study may kill and/or result in the pain and distress of test organisms. Euthanasia of test organisms before completion of the test would interfere with study objectives. Upon completion of the test all distressed animals will be painlessly euthanized in a timely manner.

- Methods of euthanasia used during this study will be in conformance with the above referenced regulation and are consistent with EPA Test Guidelines OCSPP 890.2200 (3).

8. STUDY SCHEDULE

The study is proposed to start in January 2016, after Sponsor approval of the Final Study Protocol. The actual in-life test duration will be 32 weeks. The study termination is anticipated to be within 30 days after completion of the histopathological analyses. A draft Final Report will then be submitted to the Sponsor or representative.

9. EXPERIMENTAL DESIGN

9.1 Equipment

The following equipment will be needed:

- Mini-diluter system;
- FMI delivery pumps;
- Glass aquaria (10 L) with baffles;
- Aquarium heaters (adjustable to 25°C ± 1°);
- Thermometer;
- Incubator;
- Binocular dissection microscope;
- Digital camera with at least 4 mega pixel resolution and macro function;
- Image digitizing software;
- Petri dish (100 x 15 mm) or transparent plastic chamber of comparable size;
- Analytical balance capable of measuring to 3 decimal places (mg);
- Dissolved oxygen meter;
- pH meter;
- Light intensity meter capable of measuring in lux units;
- Glassware (19-L carboy, beakers, volumetric flasks, Erlenmeyer flasks, graduated cylinders, etc.);
- Adjustable pipettes (10 to 5,000 µL) or assorted pipettes of equivalent sizes;
- PCR system;
- Electrophoresis equipment including power supply;
- Water bath;
- Laboratory rotator / agitator
- Top stirring mixer.

10. CONTROL AND DILUTION WATER

It is well-established that medaka will develop successfully over a wide range of water quality parameters. Laboratory water (Section 10.1) will be used as the culture media for the study control and as the diluent for preparing all aqueous chemical solutions used in this study. Overall, the animals will be tested using a flow-through water renewal system that maintains adequate water quality and ensures a consistent exposure of the test organisms to the test substance.

10.1 Laboratory Water Preparation

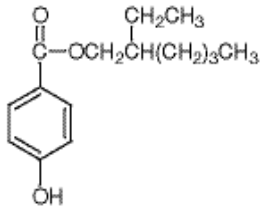
FEL will use dechlorinated (charcoal-filtered) tap water as the dilution water for this study. The dechlorinated laboratory water will be prepared by passing (1) tap water through a 4-filter system; 2) then through a multimedia filter to remove suspended solids in the feed water; 3) through a 10" pre-treatment filter (5 µm) to remove any additional solids; 4) through a 3.6 ft^3 activated virgin carbon treatment filter to remove chlorine, ammonia, and higher molecular weight organics; and, 5) finally, through a 5 µm polishing filter to remove any carbon particles from the carbon treatment phase. The dechlorinated tap water will also serve as the laboratory control water. Water quality characteristics of the laboratory water are monitored bimonthly for pH, dissolved oxygen (DO), conductivity, hardness, alkalinity, ammonia, residual oxidants; and at least annually for iodide (I), polyaromatic hydrocarbons (PAHs), pesticides, and metals. The culture water was most recently analyzed for pesticides, PAHs, and metals on January 22, 2015 and all water quality measurements cited above met the U.S. EPA criteria for aquatic toxicity test culture/dilution water. The next scheduled facility water analysis is scheduled for January, 2016. Results of these analyses will be reported in pertinent protocol amendments thereafter, and the latest results will be included in the draft and final reports for FEL study BATT01-00393. Any departures from recommended values will be promptly brought to the attention of the Study Sponsor/Monitor.

11. TEST SUBSTANCE

2-EHHB (TCI America, Portland, OR, lot number H0506, expiration and re-test date not provided, 9.3% pure [w/w] (per Certificate of Analysis produced by TCI America) was received from TCI America. Physicochemical information is provided below:

Name: 2-ethyhexyl 4-hydroxybenzoate
IUPAC Name: 2-ethyhexyl 4-hydroxybenzoate

Structure:



Phase/Color:	liquid, colorless, pale yellow
Specific Gravity:	1.04 g/mL at 25°C
Solubility (water):	6.0 mg/L at 25°C
Boiling Point:	270.0°C
Synonyms:	2-ethylhexylparaben, 4-hydroxybenzoic acid 2-ethylhexyl ester, 4-hydroxybenzoic acid octyl ester, octyl 4-hydroxybenzoate, octylparaben
CAS number:	5153-25-3
Molecular formula:	$C_{15}H_{22}O_3$
Molecular weight:	250.3 g/mole

The test substance will be stored in the chemical repository at room temperature (RT) while not in use as recommended by the Certificate of Analysis supplied by the Sigma Aldrich Company. The definitive test concentrations to be used were determined by a range-finding study designed to identify the concentration of test chemical that causes lethality and morbidity (5). The range-finding study was conducted separately (FEL Study No. BATT01-00385) and was not required to be GLP-compliant. Based on range-finding, the maximum tolerable concentration (MTC) (1) was determined to be 100 µg/L. The test concentration series will be 1x, 0.5x, 0.25x, 0.13x, and 0.06x where x is the MTC value. Therefore, the test concentrations will be 100.0, 50.0, 25.0, 12.5, and 6.3 µg/L.

12. TEST SYSTEM

The test species will be medaka (*Oryzias latipes*) (3). Medaka is a well-studied laboratory animal that exhibits ease of use in the laboratory, rapid development, and simplicity of observation during development and reproduction. It is also the test organism required in the EPA Test Guidelines OCSPP Harmonized Test Guideline 890.2200 – Medaka Extended One Generation Reproduction Test (MEOGRT) (3). Medaka is readily induced to breed in captivity and published methods exist for its culture, as well as short-term lethality, early life-stage and full life-cycle tests. All fish will be maintained on a 16-h light:8 h dark photoperiod. To maximize medaka reproduction within the MEOGRT, the test aquaria will be visually isolated from the general laboratory environment by shielded sliding glass doors on the diluter system. A record of observations and any prophylactic and therapeutic disease treatments during the culture period preceding the test will be maintained. The exposure phase will be initiated with sexually dimorphic adult fish from a laboratory supply of reproductively mature animals cultured at 25 ± 1°C. The fish will be actively spawning. For the whole group of fish used in the test, the range in individual weights by sex at the start of the test will be maintained within ± 20% of the arithmetic mean weight of the same sex. A sub-sample of fish will be weighed before the in-life test is initiated to estimate the mean weight. The fish selected will be the same age within the range of 10 to 15 weeks post fertilization (wpf) [females ≥ 300 mg; males ≥ 250 mg]. Test fish will be selected from a single laboratory stock which has been acclimated for at least two weeks prior to the test under conditions of water quality and illumination similar to those used in the test. Test fish will be obtained from an in-house culture, as shipping of adult fish is stressful and will interfere with reliable spawning. Mortalities in the culture fish will be recorded and the following criteria applied: 1) Mortalities of greater than 10% of culture population in seven days

preceding transfer to the test system: reject the entire batch; 2) Mortalities of between 5% and 10% of population: acclimation for seven additional days; if more than 5% mortality during second seven days, reject the entire batch; and, 3) Mortalities of less than 5% of population in seven days preceding transfer: accept the batch. Fish will not receive treatment for disease in the two-week acclimation period preceding the test, during pre-exposure, or during the exposure period. Moribund fish or fish with clinical signs of disease will not be used.

13. FEEDING

The fish will be fed brine shrimp (*Artemia*). Fish will be fed brine shrimp twice per day throughout the holding period and during the exposure phase. Feeding rates will be consistent with U.S. EPA MEOGRT guidance (3).

14. EXPOSURE SYSTEM

The route of exposure will be aqueous, which is the most appropriate method for aquatic organisms and readily water soluble test materials. A continuous-flow mini-diluter system with 10-L glass aquaria plumbed for 4-L, but partitioned to 1.8 L, will be used for the exposure system. Each aquarium or test chamber will contain 1.8 L of test solution, which will be automatically renewed once every 72 min. (ca. 20 mL/min with ca. 16 volume exchanges per day). This particular animal loading per water renewal rate is within recommended guidelines and, in studies conducted according to this method, has maintained acceptable water quality while not utilizing an excessive amount of test material. The test system will be set up and operated for at least 5 days before testing to demonstrate that the diluter system has come to equilibration. After initial diluter calibration, a sample of test solution from each diluter concentration will be sampled for chemical analysis during the diluter equilibration phase. A longer equilibration phase will be used in the event of technical problems associated with the calibration phase, as determined by the analytical results. This could result in additional diluter sample events for chemical analysis.

A randomized block design will be used for the MEOGRT (3). This design will randomize effects associated with the local environment (i.e., light and water) and possible trends associated with the diluter during testing. All test animals will be assigned on an impartial basis to tanks before exposure.

14.1 Exposure System Maintenance

The mini-diluter system will be checked at least twice daily to ensure proper delivery and function. Exposure tanks will be evaluated for siphoning on a daily basis and siphoned as needed to remove uneaten food and waste products. Care will be taken to minimize stress and trauma to the animals, especially during movement, cleaning of aquaria, and manipulation of the testing apparatus. Stressful conditions/activities will be avoided such as loud and/or incessant noise, tapping on aquaria, vibrations in the aquaria, excessive activity in the laboratory, and rapid changes in environmental conditions (light availability, temperature, pH, DO, water flow rates, etc.). After initial diluter calibration, a sample of test solution from each diluter concentration will be sampled for chemical analysis during the diluter equilibration phase. A longer equilibration phase will be used in the event of technical problems associated with the calibration phase, as determined by the 2-EHHB analytical results. This could result in additional diluter

sample events for chemical analysis. During the exposure phase water samples will be collected from one replicate tank of the control and each test concentration. The replicate selected for weekly sampling will rotate (week 1 – A, week 2 – B, week 3 – C, week 4 –D, week 5 – E, and week 6 - F) and repeat every 7th week of the in-life phase. Samples will be collected at test initiation, weekly thereafter, and at test termination. A laboratory blank will also be collected with the batch of samples. Water samples will be collected in amber glass vials and stored at 5°± 4°C) until shipped to ABC Laboratories. In the case of chemicals that cannot be detected at some or all of the concentrations used in the test, stock solutions will be measured and system flow rates will be recorded and used to calculate target nominal concentrations. The solubility, purity, and stability (volatility and degradation rate) of 2-EHHB will be provided by the supplier (TCI America) prior to in-life test initiation. Based on this information, FEL will determine the frequency at which fresh stock solutions will be prepared. Each new stock solution will be sampled for analysis.

15. TEST SUBSTANCE ANALYSES - ABC LABORATORIES TEST SITE

The analytical measurement method for 2-EHHB determined by ABC Laboratories in conjunction with the Study Director and Study Monitor will be performed in accordance with procedures and SOPs in place at ABC Laboratories. Following completion of the analytical method validation study (6), the protocol will be amended with specific methodological information pertaining to test substance analysis. Complete details of the analysis of test substance in stock solutions and test solutions will be included in the study records and final study report.

16. TEST METHOD

An overview of the test and relevant test specifications are provided in Table 1 above.

16.1 Overview

This test will measure the reproductive performance of medaka (3). The test will be initiated by exposing 10-15 weeks post fertilization (wpf) reproductively active fish for 4 weeks, during which time the chemical will theoretically be distributed to the gametes and tissues of the parental generation (F_0). Eggs will be collected during the week 4 to start the F_1 generation. Fish in the F_1 generation will be reared for a total of 15 wpf. For developmental endpoints, fish will be sampled at 9 wpf. F_1 generation spawning will be assessed from 11 through 15 wpf.

Table 2 summarizes the exposure and measurement endpoint timelines for the MEOGRT if extended through the F2 generation. An F2 generation is started after the third week of the reproduction assessment and reared until completion of hatching. The protocol for the complete F2 generation (if the test is extended) is the same as for the F1 generation with a minor difference at the beginning of F2 generation. The F1 generation is started with the pooled embryo output from six replicates in each treatment and 12 replicates in the control(s). Since the reproductive assessment is done on double the number of replicates, the F2 generation is started from the pooled embryo output from 12 replicates in each treatment and 24 replicates in the control(s). In all other aspects, the F2 generation protocol is identical to the F1 generation, except hatching survival is not measured. The in-life phase will conclude during study week 32.

Table 2. MEOGRT Measurement Endpoint Timelines for Complete F2 Generation (3, 15)

MEOGRT Exposure and Endpoint Timeline																				F2 Endpoints															
F0	1	2	3	4																															
F1				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15																	
F2																		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
Study Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			
Endpoints																																			
Fecundity	F_0													F_1															F_2						
Fertility	F_0													F_1															F_2						
Hatch					F1														F_2																
Survival						F1						F_1						F_1		F_2						F_2									F_2
Growth				F_0								F_1						F_1								F_2									F_2
Vitellogenin												F_1														F_2									
Secondary sex												F_1						F_1								F_2									F_2
Histopathology																		F_1																	F_2
Study Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			

Life-stage Key
Embryo
Eleutheroembryo
Juvenile
Subadult
Adult

Experimental design (F0, F1, and F2)

7 groups of replicates
- 5 for test substance treatments
- 2 for controls

Within-group design
- 12 reps for reproduction, pathology, growth, SSC (wks 10-18)
- 6 reps for hatching, survival, *vtg* (sub-adult only), growth, (wks 1-9)

Abbreviations: SSC: secondary sex characters; Wks: weeks; Vtg: vitellogenin

Thus, the proposed test will consist of continuously exposing three generations of fish to a chemical starting with young adults. Evaluation of five chemical concentrations and a dilution water control will allow determination of lowest and no effect concentrations for a series of endpoints. In accordance with Table 1 of OCSPP Harmonized Test Guideline 890.2200 – Medaka Extended One Generation Reproduction Test (MEOGRT) (3), F0 will have different replication schemes during the fecundity phase such that F0 will have 6 replicates/treatment and 12 replicates/control. In addition, F1 will have 12 replicates/treatment and 24 replicates/control during the fecundity phase. The endpoints measured will include fecundity and fertility for evaluation of possible population-level effects, liver vitellogenin (VTG) mRNA levels and sexual phenotypic markers (such as characteristic male anal fin papillae). Samples will be collected for histological evaluation of gonadal sex, and histopathology evaluation of kidney, liver and gonad. Histopathological examination will be shipped to and performed by EPL. All of these endpoints will be evaluated in the context of the genetic sex of the individual, based on the presence or absence of the medaka male-sex determining gene DMY. Non-endocrine-mediated toxicity endpoints will also be measured such as embryo hatch, growth, and survival. Throughout the bioassay, chemical concentrations will be held constant to allow endpoint sensitivity comparisons across and within generations. A daily schedule for conducting the test is provided as a Microsoft® Excel spreadsheet as a separate electronic file on the EPA EDSP website: http://www.epa.gov/endo/.

16.2 Chemical Exposure

The fish will be exposed to 2-EHHB using a flow-through mini-diluter system in order to generate five exposure concentrations and a laboratory control. There will be six replicates of each test concentration and 12 replicates of the dilution water control (no solvent will be used). The replication structure will be doubled within reproduction phase (F1) for fecundity assessment. Ten-L exposure tanks will be equipped with standpipes, which will provide an actual tank volume of 4.0 L with 1.8 L of test solution. The flow rate to each tank will be 25 ± 1 mL/min, providing a 1.8 L volume renewal of aqueous solution approximately every 72 min. The flow of the test solution will be verified weekly, and flow between the replicates should not be greater than 10% from the mean. Fluorescent lighting will be used to provide a photoperiod of 16 hr. light and 8 hr. dark at an intensity that will range from 100 to 500 lux (lumens/m^2) at the water surface with the exception of sampling periods at which time the intensity will be increased ≤1,000 lux. Water temperature in the test aquaria will be maintained at 25°C ± 1°. Dissolved oxygen (DO) will be maintained at a concentration ≥60% of the air saturation and pH maintained at 6.5 to 8.5 in each test aquarium. On day 0, the temperature, dissolved oxygen concentration and pH will be measured in every test chamber. Dissolved oxygen, pH, and temperature will be measured in at least one replicate test chamber of all treatment groups and the control(s) on a weekly basis. The alkalinity, hardness and conductivity will be measured in one replicate of the control and one concentration of the test substance at the initiation of the study and twice monthly thereafter. Cleaning will involve daily removal of solid matter including organism feces and excess food from the bottom of each aquarium.

16.3 Summary of Test Timeline

The following timeline is based on guidance from USEPA (3) with minor modification.

Parental Generation (F_0)

Test Weeks 1-3:
The F0 generation spawning fish, that have met the selection criteria detailed above, will be exposed for three weeks to allow the developing gametes and gonadal tissues to be exposed to the test substance. Each replicate aquarium will house a single XX – XY breeding pair of fish. There will be a total of 42 breeding pairs. Spawned eggs will be collected, counted, and assessed for fertility for 21 consecutive days starting at Study Day (SD) 1.

Test Week 4:
On SD 22, eggs will be collected from each female within each aquarium, pooled by treatment, and distributed to suitable incubation vessels (6 per treatment and 12 for controls). The vessels will be placed in separate incubator aquaria for each treatment. Embryos used to start F1 will be collected on the same day if possible; however, a second day of collection will be necessary if an insufficient number of viable embryos are collected on the first day. If a second day of collection (Study Day 23) is needed, all embryos from both days will be pooled and redistributed to each of the treatment replicates with 20 embryos per incubator. Mortalities will be recorded daily.

If a single treatment requires a second day of collection, all treatments, including controls, will follow this process. If after the second day of collection there are inadequate numbers of embryos within a treatment to load 20 embryos per incubator, the number of embryos loaded will be reduced within that specific treatment to 15 embryos per incubator. If there are not enough embryos to load 15 per incubator, the number of replicate incubators will be reduced until there are enough embryos for 15 per incubator.

On Test Day 24, the F0 breeding pairs will be humanely euthanized, and weight and length will be recorded. If necessary F0 breeding pairs will be maintained for an additional 1-2 days in order to restart the F1.

First Generation (F1)

Test Weeks 5-6:
One day prior to the anticipated initiation of hatching, agitation (aeration) of the incubating embryos will be reduced to expedite hatching. As embryos hatch on each day, eleutheroembryos will be pooled by treatment and then systematically distributed to each replicate aquarium within a specific treatment with no more than 12 eleutheroembryos placed into each aquarium. This will be performed by randomly selecting eleutheroembryos and placing an eleutheroembryos in successive replicates using indiscriminate draw until all replicates within the treatment have 12 eleutheroembryos. If not enough eleutheroembryos are available to fill all replicates as many replicates as possible will be filled with 12 eleutheroembryos to start the F1 phase of the test. The appropriate data are collected to calculate the hatching success of each replicate incubator. Embryos that have not hatched by twice the median control day of hatch will be considered non-viable and appropriately discarded. The number of eleutheroembryos will be recorded and hatching success will be calculated in each replicate.

Test Week 6-11:
On Study Day 44, the accumulative survival of the juvenile fish will be recorded as the number per replicate out of the initial number of eleutheroembryos, nominally 12. The exposure will continue as the juvenile fish develop into sub-adults.

Test Week 12:
On Study Day 78, a small tissue sample will be collected from the caudal fin of each fish to determine the genotypic sex of the individual by *dmy* analysis. This information will be used to establish XX – XY breeding pairs. The *dmy* genotpyic data for all the remaining sub-adult samples will ensure that all endpoint data can be related to the genetic sex of each individual fish.

On Study Days 80 and 81, after the genotypic sex of each fish has been determined, 12 breeding pairs per treatment and 24 breeding pairs for controls will be randomly established. The remaining fish (maximum 8 fish per replicate) will be humanely euthanized and will be sampled for the various sub-adult endpoints.

Test Week 13-14:
The exposure will continue as the sub-adult breeding pairs develop into adults.

Test Week 14:
The exposure will continue as the sub-adult breeding pairs develop into adults, and eggs will be removed from tanks at least twice weekly.

Test Weeks 15-17:
On Study Day 98, eggs will be removed from the aquaria and from females to guarantee an accurate enumeration of egg numbers spawned the next day. Spawned eggs will be collected daily for 21 consecutive days (Study Days 99-119) in each replicate, and assessed for fecundity and fertility.

Test Week 18:
On Study Day 120, eggs will be collected, pooled from each treatment, and systematically distributed to incubation vessels (6 per treatment and 12 for controls) with no more than 20 embryos per replicate (120 embryos for each test substance treatment and 240 embryos for the controls) allowed to incubate. If a second day of embryo collection (Study Day 121) is needed, all embryos from the first day (Study Day 120) will be pooled with the embryos from the second day and redistributed to each of the treatment replicates. After embryo collection, the F1 breeding pairs will be humanely euthanized and analyzed for the various adult endpoints.

Second Generation (F2)

Test Week 19:
One day prior to the anticipated initiation of hatching, agitation (aeration) of the incubating embryos will be reduced to expedite hatching. As embryos hatch on each day, eleutheroembryos

will be pooled by treatment and then systematically distributed to each replicate aquarium within a specific treatment with no more than 12 eleutheroembryos placed into each aquarium. This will be performed by randomly selecting eleutheroembryos and placing an eleutheroembryos in successive replicates using indiscriminate draw until all replicates within the treatment have 12 eleutheroembryos. If not enough eleutheroembryos are available to fill all replicates as many replicates as possible will be filled with 12 eleutheroembryos to start the F2 phase of the test. The appropriate data are collected to calculate the hatching success of each replicate incubator. Embryos that have not hatched by twice the median control day of hatch will be considered non-viable and appropriately discarded. The number of eleutheroembryos will be recorded and hatching success will be calculated in each replicate.

Test Weeks 20-21:
One day prior to the anticipated initiation of hatching, agitation (aeration) of the incubating embryos will be reduced to expedite hatching. As embryos hatch on each day, eleutheroembryos will be pooled by treatment and then systematically distributed to each replicate aquarium within a specific treatment with no more than 12 eleutheroembryos placed into each aquarium. This will be performed by randomly selecting eleutheroembryos and placing an eleutheroembryos in successive replicates using indiscriminate draw until all replicates within the treatment have 12 eleutheroembryos. If not enough eleutheroembryos are available to fill all replicates as many replicates as possible will be filled with 12 eleutheroembryos to start the F2 phase of the test. The appropriate data are collected to calculate the hatching success of each replicate incubator. Embryos that have not hatched by twice the median control day of hatch will be considered non-viable and appropriately discarded. The number of eleutheroembryos will be recorded and hatching success will be calculated in each replicate.

Test Week 21-26:
On Study Day 44, the accumulative survival of the juvenile fish will be recorded as the number per replicate out of the initial number of eleutheroembryos, nominally 12. The exposure will continue as the juvenile fish develop into sub-adults.

Test Week 27:
On Study Day 78, a small tissue sample will be collected from the caudal fin of each fish to determine the genotypic sex of the individual by *dmy* analysis. This information will be used to establish XX – XY breeding pairs. The *dmy* genotpyic data for all the remaining sub-adult samples will ensure that all endpoint data can be related to the genetic sex of each individual fish.

On Study Days 80 and 81, after the genotypic sex of each fish has been determined, 12 breeding pairs per treatment and 24 breeding pairs for controls will be randomly established. The remaining fish (maximum 8 fish per replicate) will be humanely euthanized and will be sampled for the various sub-adult endpoints.

Test Week 28-29:
The exposure will continue as the sub-adult breeding pairs develop into adults.

Test Week 29:
The exposure will continue as the sub-adult breeding pairs develop into adults, and eggs will be removed from tanks at least twice weekly.

Test Weeks 30-31:
On Study Day 98, eggs will be removed from the aquaria and from females to guarantee an accurate enumeration of egg numbers spawned the next day. Spawned eggs will be collected daily for 21 consecutive days (Study Days 99-119) in each replicate, and assessed for fecundity and fertility.

Test Week 32:
On Study Day 120, eggs will be collected, pooled from each treatment, and systematically distributed to incubation vessels (6 per treatment and 12 for controls) with no more than 20 embryos per replicate (120 embryos for each test substance treatment and 240 embryos for the controls) allowed to incubate. If a second day of embryo collection (Study Day 121) is needed, all embryos from the first day (Study Day 120) will be pooled with the embryos from the second day and redistributed to each of the treatment replicates. After embryo collection, the F2 breeding pairs will be humanely euthanized and analyzed for the various adult endpoints.

16.4 Test Initiation

The F_0 generation will be initiated with reproductively competent adult medaka between 10 to 15 weeks post-fertilization (wpf) old, age synchronized to within 7 days of each other. The wet weight of the female and male medaka will be ≥300 mg and ≥250 mg, respectively. For the group of medaka used to initiate the test, the range of individual weights by sex will be kept within ± 20% of the arithmetic mean of the same sex. Test fish (F0 generation) will be selected from a single laboratory stock that has been acclimated for at least two weeks prior to the test under conditions of water quality and illumination similar to those used in the test. Fish will be fed brine shrimp twice per day throughout the holding period and during the exposure phase. Each F0 breeding pair will be genetically verified to be XX – XY to avoid the possible inclusion of spontaneous XX males. Small tissue samples of the tail fin will be analyzed for *dmy* using the same procedures described during the in-life portion of the MEOGRT (3). A minimum of 42 breeding pairs will be considered necessary to initiate the MEOGRT to ensure adequate replication. In addition, each breeding pair of F0 will be verified to be XX-XY (*i.e.* normal complement of sex chromosomes in each sex) to avoid the possible inclusion of spontaneous XX males. Fin clip samples will be placed in coded/labeled 96-well plates, allowed to air dry for approximately four hours, and then sealed and properly stored until genotypic sex determination. Additional breeding pairs will be available for inclusion in the test in the event some require exclusion due to issues with spawning frequency and duration. All breeding pairs will have daily fecundity values measured 4 to 7 days prior to the start of the test. The selected 42 breeding pairs will be those in the middle of the distribution of mean fecundities. The mean daily fecundity of the selected breeding pairs will be >20 eggs/pair/day. A randomized block design will be used to ensure a balanced distribution of pairs to the treatments based on reproductive performance. The study will be initiated with 12 replicate breeding pairs in the control treatment and six replicate breeding pairs in each of the five test substance treatment levels for a total of 42 breeding pairs to

start the MEOGRT. Each breeding pair will be randomly assigned a treatment (e.g., T1-T5 and control) and a replicate (e.g., A-L in controls and A-F in treatment), and then placed in the exposure system with the appropriate flow to each replicate aquarium.

16.5 Egg Collection, Hatch, and Propagation of F1 and F2 Generations

Eggs will be collected during the first day (or first two days, if needed) of Study Week 4 for initiating the F1 generation phase and Study Week 20 for initiating the F2 generation phase. After spawning, eggs will be collected by carefully removing any attached eggs from the female and by siphoning any eggs from the bottom of each aquarium. Fertile, healthy fertilized eggs will then be randomly selected for incubation. If available, 120 embryos from each treatment and 240 from the controls will be placed in appropriate incubating devices containing 20 embryos per incubator until hatch. Embryos will be collected on a single day, if possible. However, if there are not enough embryos (120 per test substance treatment; 240 per control group), the embryos will be collected over two days. If embryos are collected over two days (Study Days 22 and 23), all embryos within the treatments that were collected on the first day will be pooled with those collected on the second day, and then randomly redistributed to each of the treatment replicates. Each replicate incubator will have 20 embryos per incubator (120 per test substance treatment; 240 per control group). If after the second day of collection there are still inadequate numbers of embryos within a treatment to load 20 embryos per incubator, the number of embryos loaded within that specific treatment will be reduced to 15 embryos per incubator. The number of replicate incubators will be reduced to place 15 per incubator. The incubators will receive an adequate flow of the test substance for the duration of the incubation period.

Incubators will be checked daily for mortalities. Mortalities will be recorded and all dead embryos are will be removed from the incubators. For each treatment and control, the hatched larvae (*e.g.,* eleutheroembryos) will be counted daily, pooled, and distributed to each of the replicate aquaria. Each replicate aquarium will receive 12 eleutheroembryos, less is the number of embryos dictates. Any additional eleutheroembryos are humanely euthanized with MS-222 (2 g/L, pH 7). Embryos that have not hatched after a prolonged incubation time (as twice the median day of hatching in controls) will be considered non-viable and not used in the study.

16.6 Set-up of Breeding Pairs and Genetic Sex Determination

Determination of genotypic sex via fin clips will be performed at 9 wpf (Test Week 12 and 26 for F1 and F2 generations, respectively). All fish within a tank will be anesthetized using 200 mg/L buffered MS-222 (pH 7) and either the dorsal or ventral tip of the caudal fin of each fish will be clipped. Once the DNA is extracted, a polymerase chain reaction (PCR) method will be used to amplify the *dmy* gene, if present (3). The presence of the *dmy* gene is a definitive indication of an XY (male) individual, regardless of phenotype. The *dmy* gene information will be used to establish XX – XY breeding pairs (in both F0 and F1 generation adults) regardless of external phenotype which may be altered by exposure to an endocrine-disrupting chemical. The fish from a replicate will be housed individually in small vessels. After the genotypic sex of each fish is determined, two XX fish and two XY fish from each replicate will be randomly selected for pooling. After the 12 total XX fish (24 for control(s)) and the 12 total XY fish (24 for control(s)) for each treatment are pooled, fish will be randomly selected to produce breeding pairs.

16.7 Sampling of Non-Breeding Fish (Sub-Adults)

After the breeding pairs have been established, the fish not selected as breeding pairs will be humanely euthanized in MS-222 for measurement of sub-adult endpoints. The replicate identity of each sampled sub-adult fish and the genotypic sex of each fish will be maintained since all endpoint data analyzed will be in the context of the genotypic sex of the specific fish. Each fish will be humanely euthanized using 2 g/L MS-222 (pH 7) and measured for a variety of endpoints including: 9 wpf survival, growth, liver vitellogenin (mRNA copy number or protein concentration), and anal fin papillae number (secondary sexual characters (SSC)). Liver vitellogenin will only be measured in the sub-adult fish (16). Liver will be dissected for quantification of vitellogenin. Vitellogenin mRNA will be quantified by extracting RNA and the copy number of the *vitellogenin I* gene per ng of total mRNA determined. The tail of the fish, including the anal fin, will be fixed in Davidson's solution and subsequently photographed so that anal fin papillae may be counted at a later date. For the purposes of calculating a simple sex ratio, medaka with more than one anal fin papillary processes will be defined as phenotypic males and those with no anal fin papillae will be defined as phenotypic females (3).

16.8 Reproductive Measurement

Fecundity and fertility will be assessed in Study Weeks 1 through 3 in the F0 generation, Study Weeks 15 through 17 in the F1 generation, and Study Weeks 29-31 in the F2 generation. F0-F2 eggs will be collected daily from each breeding pair for 21 consecutive days. Eggs will be gently removed from each female each morning. Both fecundity and fertility will be recorded daily for each replicate breeding pair. Fecundity will be defined as the number of eggs spawned, and fertility will be functionally defined as the number of fertile and viable eggs at the time of counting. Counting will be done as soon as possible after egg collection. In the F1 and F2 generations, eggs will be collected from 12 replicate breeding pairs per treatment (24 replicates in controls); whereas, in the F0 generation, there will be six replicate breeding pairs per treatment (12 replicates in controls). To assess embryo viability and hatch success, all viable embryos will be pooled and systematically distributed to six replicate incubators (12 incubators for controls) as was performed in the F0 generation. The hatch per replicate incubator will be recorded so that the percent hatch can be calculated. Embryos that have not hatched by twice the median control day of hatch will be considered non-viable and discarded appropriately.

16.9 Sampling of Adult Breeding Pairs

The adults will be humanely euthanized in 2 g/L MS-222 (pH 7) and various endpoints will be assessed at 15 wpf for the F1 and F2 generations. A fin clip sample will be taken to repeat the *dmy* analysis to verify the genetic sex of specific fish when necessary. The remainder of the tail is removed and fixed for assessing the number of anal fin papillae (3). No other tissue dissection will be performed.

The body cavity will be opened to allow perfusion with fixative prior to whole body fixation. Histopathology of the gonads, kidneys and liver tissue for each adult fish will be evaluated (3,7) (analyses performed by EPL). The gonad phenotype will be determined from this evaluation. The *dmy* analysis may be repeated to verify the genetic sex of specific fish when necessary.

16.10 Anal Fin Papillae Number

The anal fin will be removed from the fish, laid flat and bathed in Davidson's fixative for ~30 seconds to prevent curling, and subsequently photographed to assess the number of anal fin papillae. The fin will be immersed and stored in Davidson's fixative to allow for counting of the anal fin papillae at a later time.

16.11 Vitellogenin Analysis – ABC Laboratories Test Site

In both the F1 and F2 generations, liver vitellogenin will only be measured in the sub-adult fish (16). It is noted that this sub-adult only approach is contrary to the information in the Final Test Guideline for MEOGRT on page 6, Table 2; and page 16 (3). The livers of sacrificed fish will be removed and immediately placed into RNAlater at room temperature. When all samples have been collected, they will be placed in a refrigerator at 1 to 9°C overnight and then moved to the lab freezer and stored at -20 ± 10°C until analyzed. Samples will be shipped to ABC Laboratories for analyses via overnight courier.

16.12 Histopathology - EPL Test Site

The body cavity of each fish will be opened using a scalpel or dissection scissors to allow perfusion of Davidson's fixative, and the entire carcass will be immersed for 48-96 hours. After this time, each carcass will be rinsed thoroughly in dechlorinated culture water, and then placed in 10% neutral buffered formalin (NBF) for storage. EPL, under the direction of the Sponsor, will perform the tissue preparation, histology, and histopathological interpretation in accordance with appropriate facility guidance documents (SOPs) and the relevant guidance documents on histopathology for the AMA (3,7). Following the conclusion of exposure, FEL will send NBF preserved specimens to EPL via overnight courier for histopathological processing and analyses.

17. ENDPOINTS

The Tier 2 endpoint data are listed in Table 3 (3).

Table 3. Summary of Study Endpoints[2]

Life Stage	Endpoint	Generation
Embryo (2 wpf)	Hatchability (% and time to hatch)	F1, F2
Juvenile (4 wpf)	Survival (hatch to 4 wpf)	F1, F2
Subadult (9 wpf)	Survival (4 to 9 wpf), F1 Growth (length and weight), Vitellogenin, Secondary sex characteristics (anal fin papillae), External sex ratio, Time to 1st spawn	F1, F2
Adult (12-14 wpf)	Reproduction (fecundity and fertility for 21 days)	F0, F1, F2
Adult (15 wpf)	Survival (from 9 to 15 wpf), Growth (length and weight), Secondary sex characteristics (anal fin papillae), Histopathology (gonad, liver, kidney)	F1, F2

[2] Statistical evaluation will be considered for each of the endpoints.

18. DATA ANALYSIS

All data from in-life portions of the study will be tabulated in data entry spreadsheet templates (DEST) by FEL with the exception of histopathological results. Histopathological results will be tabulated in spreadsheets by EPL and provided to FEL. Data including histopathological analyses will then be summarized in the final report prepared by FEL. Statistical analyses of the data will be performed by Battelle and will be consistent with OCSPP Harmonized Test Guideline 890.2200 – Medaka Extended One Generation Reproduction Test (MEOGRT) (3), the TO 14 QAPP (1), and generally follow procedures described in the document Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application (8). Descriptive statistics will include the mean, median, standard deviation, minimum value, maximum value, first and third quartiles (Q1 and Q3), and the coefficient of variation (CV). Statistical outliers are defined as those values outside the bounds determined by Q1 – 1.5*IQD and Q3 + 1.5*IQD where IQD is the interquartile difference defined as Q3 minus Q1. Potential outliers will be identified, but none will be excluded from the statistical analyses because they could be a result of the treatment. If appropriate, separate analyses excluding the outliers will be done, but only in support of the primary analyses. For the analysis within laboratories, parametric assumptions will be tested using the residuals from a one-way Analysis of Variance (ANOVA) of the treatment means using either the raw variable or following a transformation. Deviations from normality will be tested with the Shapiro-Wilk's test ($\alpha = 0.05$) and homogeneity of within class means will be tested with Levene's test ($\alpha = 0.05$). Count data will be transformed to the square root, proportional data will be transformed to the arc sine square root, and continuous data will be transformed to the natural logarithm. If the responses are monotonic, the William's test of ordered alternatives will be used to estimate the LOEC/NOEC when the assumptions of normality and homogeneity of within class variances are met by the raw or appropriately transformed data. The Jonckheere-Terpstra nonparametric test of ordered alternatives will be used to estimate the LOEC/NOEC when the assumptions of normality and homogeneity of within class variances are not met (8).

If the responses are not monotonic, ANOVA followed by Dunnett's test will be used to estimate the LOEC/NOEC when the assumptions of normality and homogeneity of within class variances are met. Kruskal-Wallis ANOVA (KW ANOVA) test followed by a step-down pairwise Dunn's test if the KW ANOVA test is significant will be used when assumptions of monotonicity and normality and homogeneity of within class variances are not met. The step-down pair-wise comparison will minimize the number of comparisons conducted. The first comparison will be between the control and the highest treatment dose and only proceeds to a comparison between the control and the next lower dose if the comparison with the highest dose was significant. For all statistical evaluations, the replicate will be considered the experimental unit and α=0.05.

19. TEST PERFORMANCE CRITERIA

General test performance criteria associated with the performance of the MEOGRT are provided in Table 4.

Table 4. Performance Criteria (3)

Parameter	Criteria
Test concentrations	Maintain concentrations of the test chemical in solution within ±20% of the mean measured values over the entire test period.
Dissolved oxygen concentration	≥ 60% of air saturation value throughout the test
pH	pH should be maintained between 6.5-8.5. The inter-replicate/inter-treatment differentials should not exceed 0.5.
Mean water temperature	Between 24 and 26°C over the duration of study. Brief excursions from the mean by individual aquaria should not be more than 2°C. Replicates within a treatment should not be statistically different from each other. Treatments within the test should not be statistically different from each other.
Mortality in controls	≤ 20% mortality in each replicate in the controls.
Hatchability of eggs	≥ 80% in the controls (in each of the F1 and F2 generations).
Survival after hatching	Should be ≥ 80% (average) until 3 wpf in F1 controls. Should be from ≥ 90% (average) from 3 wpf through termination in F1 controls. Mortalities due to technical errors (handling) should not be included in these analyses.
Fish weight at sub-adult sampling	F1 control XX and XY fish mean weight should be >100 mg and mean length >20mm. Growth of substantially less than these values suggests the fish will not achieve sufficient size to spawn with acceptable fecundity.
Occurrence of intersex fish	XX males will be <5% and XY intersex will be <2% (determined by comparison of genotype and histological sex) in F1 controls.
Fecundity	Should be >20 eggs/pair/day in F0 and F1 controls. For adequate statistical power, 16 of 24 control pairs (in F1) should produce > 20 eggs/pair/day.
Fertility	Should be >80% for all eggs produced in F0 and F1 controls (*i.e.*, F1 and F2 eggs) during the assessment.

A study will be considered be considered acceptable/valid if:

- At least three treatment levels with three uncompromised replicates are available for analysis. Excessive mortality, which compromises a treatment, is defined as >20% mortality in 2 or more replicates that cannot be explained by technical error.
- There should be sufficient reproduction in at least the third highest group and all lower groups of the F0 to fill the hatching incubators.
- There should be adequate survival in the third highest test exposure and lower exposure groups in F1 to allow endpoint evaluation at the subadult sampling.

- Survival in the second highest exposure group of the F1 should be >20%.

- Note signs of overt toxicity. Signs of overt toxicity may include, but are not limited to, floating on the surface, lying on the bottom of the tank, inverted or irregular swimming, and being nonresponsive to stimuli.

- A NOEC and LOEC should be determined.

20. SAMPLE HANDLING AND CUSTODY

All samples received, generated during the course of testing, and submitted to ABC Laboratories (6) and EPL (7) in this study will be accompanied with an appropriately signed chain of custody and handled in accordance with facility SOPs (9,10). Samples will be entered into a sample check-in logbook and assigned a unique sample tracking number. Each sample will also be properly labeled with its assigned sample tracking number. Sets of test solution samples collected by FEL as described in section 15 and preserved as described by ABC Laboratories (6) will be shipped to ABC Laboratories by commercial carrier. Whole body tissue samples collected at the conclusion of the in-life phase will be shipped to EPL via commercial carrier. Samples, when not in use, will be properly preserved and stored, based on sample matrix.

21. REPORTING

FEL will provide progress reports to the Study Monitor throughout the actual study, as required. At study conclusion, a Final Report will be provided to the Sponsor or representative by FEL. The report will include sections on introduction, materials and methods, results, and discussion and conclusions. More specifically, the report will include the following information:

- **Test Article:**
  - Test article: Will include name and CAS number.
  - Characterization of the test article: Will include physical-chemical properties; information on stability and biodegradability.
  - Chemical observations and data: Will include method and frequency of preparation of stock solutions, nominal and measured concentrations of the test chemical, and in some cases, non-parent chemical, as appropriate.
- **Test System:**
  - Organism: Will include scientific name, age, supplier, pre-treatment (if used)
- **Test conditions:**
  - Test method: Will include range finding design and definitive test design, delivery process (flow-through), aeration, test system loading
  - Operational parameters records: These parameters will consist of observations pertaining to the functioning of the test system and the supporting environment and infrastructure. Records will include: ambient temperature, test temperature, photoperiod, status of critical components

of the exposure system (*e.g.* pumps), flow rates, water levels, stock bottle changes, and feeding records. General water quality parameters will include: pH, contaminants, DO, conductivity, total iodine, alkalinity, and hardness.

- Analytical methods: Analytical methods used will be included in the report
- Deviations from the test method: This information will include any information or narrative descriptions of deviations from the test method.

- **Results:**
  - Range-finding results
  - Biological observations and data: Information will include daily observations of mortality, food consumption, abnormal swimming behavior, lethargy, loss of equilibrium. Observations and data collected at predetermined intervals are included in Table 2.
  - Analytical results: Results of analytical testing and evaluation of analytical results in relation to the relevant test acceptance criteria will be included in the report.
  - Statistical analytical techniques and justification of techniques used: Results of the statistical analysis preferably in tabular form, methods for determining whether outliers exist, and justification for not using outliers.
  - Histological data: These include narrative descriptions, as well as graded severity and incidence scores of specific observations, as detailed in the histopathology guidance document.
  - Ad hoc observations: These observations should include narrative descriptions of the study that do not fit into the previously described categories.
- **Discussion of the results**

Appendices containing raw data, statistical reports, analytical reports, and histology reports will be included in the final report. Support laboratories will prepare draft reports summarizing the testing performed at their facilities for review by FEL and the Study Monitor. A draft of the Final Report, including draft reports from the supporting laboratories, will be sent to the Study Monitor for review. After Study Monitor review, the support laboratories will provide copies of their final reports to FEL for inclusion in the Final Report of the study. The Final Report of the study will be sent to the Sponsor after Study Monitor approval of the draft report.

22. STUDY AMENDMENTS AND DEVIATIONS

Permanent changes to the final Study Protocol will require written amendments to be prepared and submitted to the QAU Manager and Study Sponsor or representative prior to incorporation in the Study Protocol. Any amendments will be reviewed to determine the potential impact on the study. If accepted, the amendment will be attached to the Study Protocol and become an active component of the study. Any deviations from the protocol (temporary changes due to unforeseen problems) will be recorded in the study records, dated, and initialed

by the Study Director. Deviations will also be addressed in detail in an audit report and the Final Report of the study.

23. RECORD MAINTENANCE AND ARCHIVAL

Test facility-related records (personnel training, equipment calibration and maintenance, storage temperature records, etc.) (11) will be retained at the Test Facility. No records will be disposed of without the authorization of the Sponsor. The records will be organized and include an index.

Certified exact copies of the original raw data, derived data, QA reports, study guidance documents, correspondence, and draft and final reports will be electronically maintained at the In-life test facility in accordance with facility SOPs (12) until study finalization. All original raw data and the original Final Study Report will be kept in designated file cabinets located in a secured file room at the Test Facility. After final approval of all reports and conclusion of the study, all electronic files will be transferred to compact discs (CDs) and verified as exact copies of the original. Copies of the electronic disc and the Final Study Report will be sent to the Sponsor. Immediately following finalization of the final report, all original handwritten raw data, original raw data files, the original Final Study Report, protocol and protocol amendments associated with the study will be maintained in the archive at FEL until shipped to the location below archived (11,12). In addition, all EPL-generated histology data records will be shipped to the Sponsor for archiving. Original raw analytical data and original analytical reports from ABC Laboratories will be sent to the Sponsor for archiving. The archive location will be:

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201-2696
Attn: Vincent J. Brown, Ph.D.
614-424-5928
brownv@battelle.org

24. SPECIMENS ARCHIVAL

The preserved test specimens will be labeled and stored at FEL until study finalization in accordance with facility SOPs (13). Following study finalization, specimens remaining at FEL will be shipped to a location designated by the Sponsor or representative, in consultation with the USEPA Task Order Contracting Officer's Representative. Material produced during the histopathological analyses (paraffin blocks and slides) will be stored at EPL until study finalization. After study finalization, these materials will be shipped to a location designated by the sponsor or representative in consultation with the USEPA.

25. TEST SUBSTANCE WASTE DISPOSAL

Disposal of waste material generated by the study will be performed in accordance with those requirements provided in the Material Safety Data Sheets (MSDS) and facility SOPs (14). The test substance will either be returned to the Sponsor or disposed of in accordance with those requirements provided in the Material Safety Data Sheets (MSDS) and facility SOPs.

26. REFERENCES

1. QAPP, Endocrine Disruptor Screening Program (EDSP) Tier 1 and Tier 2 *In Vivo* Testing of Selected Chemicals for Potential Endocrine Effects in Non-Mammals. EPA Contract No. EP-W-11-063 Task Order 14, version 1.2, August 28, 2015.

2. U.S. Environmental Protection Agency (USEPA). Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice (GLP) Standards, Final Rule, 40 CFR Part 160. Revised 1998.

3. U.S. Environmental Protection Agency (USEPA). OCSPP 890:2200: Medaka Extended One Generation Reproduction Test (MEOGRT), EPA No. 740-C-15-002, July 2015.

4. Fort Environmental Laboratories (FEL). Quality Assurance Management Plan, Version 4. July 23, 2010.

5. SOP 8.14. Test Dose/Concentration Determination and Range-Finding, Fort Environmental Laboratories, 2015.

6. ABC Laboratories. (In Preparation). Validated Analytical Chemistry Test Method for 2-ethylhexyl 4-Hydroxybenzoate in Aquatic Assays for EPA EDSP. Under subcontract with Battelle for U.S. EPA Prime Contract No. EP-W-11-063, Task Order 14, 2015.

7. Wolf, J. (12 Aug 2015). Draft Procedures for EDSP Studies. EPL (Experimental Pathology Laboratories, Inc.) internal document.

8. Organisation of Economic Co-operation and Development (OECD). Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application. Environ Health Safety Pub, Paris, 2006.

9. SOP 6.1.2, Sample Tracking and Handling, Fort Environmental Laboratories, 2010.

10. SOP 6.4, Receipt, Storage, and Distribution of Test Substances, Fort Environmental Laboratories, 2010.

11. SOP 4.10, Study File Document Collection and Organization, Fort Environmental Laboratories, 2001.

12. SOP 4.11, Maintenance of Study Archives, Fort Environmental Laboratories, 2001.

13. SOP 12.1, Archiving of Test Specimens, Fort Environmental Laboratories, 2003.

14. SOP 6.2, Waste Collection, Storage, and Disposal, Fort Environmental Laboratories, 2001.

15. U.S. Environmental Protection Agency (USEPA). OCSPP 890:2200: Medaka Extended One Generation Reproduction Test (MEOGRT), DRAFT Test Guidelines, December 17, 2014. [Superseded by Final Test Guidelines July 2015.]

16. Matten, S. (January 14, 2016) Personal communication between U.S. EPA and V. Brown, Battelle, Contract EPW11063, Task Order 14.

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DOCUMENT AMENDMENT FORM

Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate	
Amendment Number: 01	**Document ID Number:** BATT01-8 (00393)
Submitted By: Douglas J. Fort	**Date:** 3/18/2016
Amendment Relating To: BATT01-00393 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP** **[ ] Other (describe):**	
Original Specifications: Page 12, Section 15, Test Substance Analyses - ABC Laboratories Test Site "Following completion of the analytical method validation study (6), the protocol will be amended with specific methodological information pertaining to test substance analysis."	
Changed To: Add analytical method validation studies (ABC Laboratories). See attached.	
Reason for Change: Provide method of chemical analysis.	

Approval:

Study Director: _____ Date: 4/4/2016

Sponsor Representative: _____ Date: 4-4-2016

FEL

Analytical Test Method for 2-ethylhexyl 4-hydroxybenzoate (2-EHHB) in Freshwater

Test samples will be analyzed for the concentration of 2-EHHB using liquid chromatography with a mass spectrometer detector (LC-MS/MS) in a multiple reaction monitoring mode (MRM). Analysis was accomplished based on methods developed and validated at ABC Laboratories.

At each sampling point, an appropriate volume of sample (e.g., 5 mL) will be collected and placed into a test culture tube or equivalent container. Samples will be first diluted with 5 mL of Methanol at a 1:1 ratio. Samples will be further diluted, if necessary, with 50:50 MeOH: HPLC-grade Water to produce sample concentrations that fall within the calibration curve. At least two quality control (QC) fortification spikes will be prepared in a similar manner at concentrations that bracket the expected high and low test substance treatment concentrations. The samples will be capped and shaken/vortexed to mix prior to being vialed for analysis by LC-MS/MS. The peak responses of 2-EHHB were integrated and quantitated using Analyst 1.6.2 software by AB SCIEX.

Instrument: UPLC system: Shimadzu Nexera
MS Spectrometer: AB Sciex API-5000 or instrument with similar or greater sensitivity

Column: Phenomenex Kinetex XB-C18 50mm x 2.1mm, 1.7µm

Ionization: TurboIon Spray

Mobile Phase A: 0.01% Formic Acid in Water (aq)

Mobile Phase B: 0.01% Formic Acid in Methanol

Gradient:

Time (min)	A%	B%
0.00	40	60
3.00	10	90
4.00	10	90
4.01	40	60
5.00	40	60

Flow Rate: 0.500 mL/min

Injection Volume: 1 µL

Mass Spec. Scan Mode: MRM

Polarity: Negative

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Compound	MRM transitions		
	Q1 (Da)	Q3 (Da)	Dwell Time (msec)
2-EHHB	249.0	92.0	100
2-EHHB a	249.0	136.0	200

Note: Instrument conditions may be changed to optimize chromatography.

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DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate

Amendment Number: 02 | **Document ID Number**: BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date**: 4/29/2016

Amendment Relating To: BATT01-00393

[X] Protocol **[ ] Study Plan** **[ ] QAPP** **[ ] QAMP** **[ ] SOP**

[ ] Other (describe):

Original Specifications: Page 9, Section 10.1, Laboratory Water Preparation

"Water quality characteristics of the laboratory water are monitored bimonthly for pH, dissolved oxygen (DO), conductivity, hardness, alkalinity, ammonia, residual oxidants; and at least annually for iodide (I^-), polyaromatic hydrocarbons (PAHs), pesticides, and metals. The culture water was most recently analyzed for pesticides, PAHs, and metals on January 22, 2015 and all water quality measurements cited above met the U.S. EPA criteria for aquatic toxicity test culture/dilution water. The next scheduled facility water analysis is scheduled for January, 2016. Results of these analyses will be reported in pertinent protocol amendments thereafter, and the latest results will be included in the draft and final reports for FEL study BATT01-00393."

Changed To: Results of dilution and laboratory control water analysis for pesticides, PAHs, and metals are attached. In addition, I- analyses will be performed on dilution/laboratory control water on Study Day (SD) 0, F1 D0, F1 SW9, F1 conclusion, F2 D0, F2 SW9, F2 conclusion.

Reason for Change: Provide results of annual facility water quality analysis. Provide addition I- data during the conduct of study 00393.

Approval:

Study Director: _____ Date: 5/11/2016

Sponsor Representative: Vincent J. Brown Date: 5/11/2016

FEL

FEL

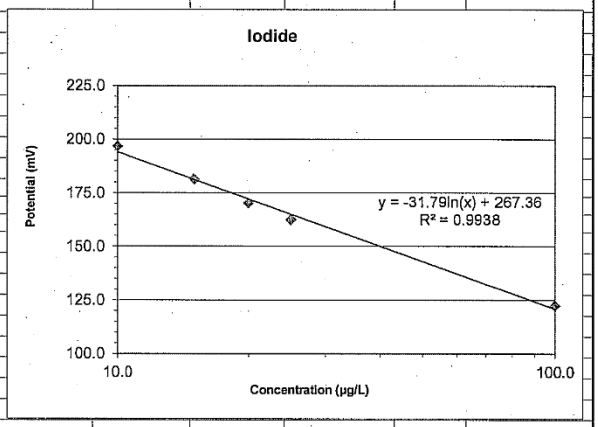
Attachment: Results of Dilution / Laboratory Control Water Analyses

FEL

FEL

FEL01-00000							
Iodide							
Test Article/Protocol:	**ISE**						
Kit:	**ISE Probe**						
Date:	**2/4/2016**						
Standard:	**100 µg/L**						
Sample Type:	**Water**						

Standards	
Concentration (µg/L)	mV Reading
0.0	0.0
10.0	196.8
15.0	181.5
20.0	170.3
25.0	162.5
100.0	122.5



FEL01-00000		**Date:**	**2/4/2016**		**MDL = 5 µg/L**		
Iodide		**Standard:**	**100 µg/L**				
Test Article/Protocol:	**ISE**	**Sample Type:**	**Water**				

Treatment	Replicate	Sample ID	df	mV Reading	Calc Conc (µg/L)		Mean (µg/L)
100 µg/L Standard	1	100	1	120.7	100.826		
	2		1	121.0	99.879		
	3		1	120.3	102.103		
	4		1	120.6	101.144		**101.0**
						SEM	**0.091**
Culture Room	1		1	197.5	9.003		
	2		1	196.4	9.320		
	3		1	199.1	8.561		
	4		1	199.3	8.507		**8.8**
						SEM	**0.129**
Exposure Room	1		1	198.5	8.724		
	2		1	199.2	8.534		
	3		1	198.9	8.615		
	4		1	198.6	8.697		**8.6**
						SEM	**0.029**
DI	1		1	644.0	0.000		
Analyst / Date:			2/4/2016				

Red River

Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: DOUG FORT
FORT ENVIRONMENTAL LABORATORIES
515 SOUTH DUNCAN STREET
STILLWATER, OK 74074

Project #:
Project Name:

Date Received: 1/19/2016
Report Date: 2/1/2016

Lab Number	Sample Identification	Date Sampled	Analysis Date	Analyzed Time	By	Parameter	Q	Results	Units	RL	SQL	Method	Batch
201600236	001 DeCl2 WATER	1/18/2016	1/20/2016	9:30	PB	TPH DRO Extraction		Start				EPA_3510	32401
		1/18/2016	2/1/2016	11:30	MY	TPH-DRO	U	BDL	mg/l	0.1	0.1	OK8000/81	32482
													32437
201600237	002 DeCl2 WATER					TPH-G-W:							32437
		1/18/2016	1/22/2016	17:56	MY	TPH-GRO	U	BDL	mg/l	0.02	0.02	EPA_624	32437
		1/18/2016	1/22/2016		MY	TFT (Surr)		119	%Rec	70	70	EPA_624	32437
		1/18/2016	1/22/2016		MY	BFB (Surr)		102	%Rec	70	70	EPA_624	32437
													32422
201600238	003 DeCl2 WATER	1/18/2016	1/25/2016	9:59	PB/S	Pesticide Extraction		Start				EPA_3510	32422
													32471
201600238	003 DeCl2 WATER					PEST-OC-608:							32471
		1/18/2016	1/28/2016	15:15	MY	Alpha-BHC	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Beta-BHC	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Gamma-BHC	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Delta-BHC	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Heptachlor	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Aldrin	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Heptachlor Epoxide	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	g-Chlordane	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	a-Chlordane	U	BDL	ug/l	0.05	0.05	EPA_608	32471

Susie Southwell

Laboratory Authorized Signature

6510 S. Western Ave., Suite 207, Oklahoma City, OK 73139
Phone: (405)-232-1966 or 1-800-USA-KNOW Fax: 405-235-8234 www.RedRiverELCC.com

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Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: DOUG FORT
FORT ENVIRONMENTAL LABORATORIES
515 SOUTH DUNCAN STREET
STILLWATER, OK 74074

Project #:
Project Name:

Date Received: 1/19/2016
Report Date: 2/1/2016

Lab Number	Sample Identification	Date Sampled	Analysis Date	Analyzed Time	By	Parameter	Q	Results	Units	RL	SQL	Method	Batch
201600238	003 DeCl2 WATER	1/18/2016	1/28/2016		MY	Dieldrin	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	4,4-DDE	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Endrin	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Endosulfan II	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	4,4-DDD	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Endrin Aldehyde	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Endosulfan Sulfate	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	4,4-DDT	U	BDL	ug/l	0.1	0.1	EPA_608	32471
		1/18/2016	1/28/2016		MY	Endrin Ketone	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Methoxyclor	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	Toxaphene	U	BDL	ug/l	0.05	0.05	EPA_608	32471
		1/18/2016	1/28/2016		MY	TCMX (Surr)		49	%Rec	30	30	EPA_608	32471
		1/18/2016	1/28/2016		MY	1,2-dcbp (Surr)		71	%Rec	65	65	EPA_608	32471
													32461
201600239	004 DeCl2 WATER	1/18/2016	1/27/2016	13:10	JL	Arsenic	U	BDL	mg/l	0.01	0.01	200.7/6010	32461
		1/18/2016	1/27/2016	13:10	JL	Cadmium	U	BDL	mg/l	0.001	0.001	200.7/6010	32463
		1/18/2016	1/27/2016	13:10	JL	Chromium	U	BDL	mg/l	0.002	0.002	200.7/6010	32459
		1/18/2016	1/27/2016	13:10	JL	Copper	U	BDL	mg/l	0.001	0.001	200.7/6010	32455
		1/18/2016	1/27/2016	13:10	JL	Iron	U	BDL	mg/l	0.009	0.009	200.7/6010	32458
		1/18/2016	1/27/2016	13:10	JL	Lead	U	BDL	mg/l	0.005	0.005	200.7/6010	32460
		1/18/2016	1/27/2016	14:37	SV	Mercury	U	BDL	mg/l	.0002	0.0002	EPA_245.2	32466
		1/18/2016	1/27/2016	13:10	JL	Nickel	U	BDL	mg/l	0.006	0.006	200.7/6010	32457

Susie Southwell

Laboratory Authorized Signature

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Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: DOUG FORT
FORT ENVIRONMENTAL LABORATORIES
515 SOUTH DUNCAN STREET
STILLWATER, OK 74074

Project #:
Project Name:

Date Received: 1/19/2016
Report Date: 2/1/2016

Lab Number	Sample Identification	Date Sampled	Analysis Date	Analyzed Time	By	Parameter	Q	Results	Units	RL	SQL	Method	Batch
201600239	004 DeCl2 WATER	1/18/2016	1/27/2016	13:10	JL	Zinc	U	BDL	mg/l	0.002	0.002	200.7/6010	32456
201600240	005 DeCl2 WATER 1 OF 2	1/18/2016	1/19/2016	15:28	PB	Semi-Volatile Extraction		Start				EPA_3510	32389
													32415
201600240	005 DeCl2 WATER 1 OF 2					PAH-625-W:							32415
		1/18/2016	1/21/2016	19:12	MY	Naphthalene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	2-Methylnaphthalene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	2-Chloronaphthalene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Acenaphthylene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Acenaphthene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Fluorene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Phenanthrene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Anthracene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Fluoranthene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Pyrene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Benzo(a)anthracene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Chrysene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Benzo(b)fluoranthene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Benzo(k)fluoranthene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Benzo(a)pyrene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Indeno(1,2,3-Cd)pyrene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	Dibenz(a,h)anthracene	U	BDL	ug/l	5	5	EPA_625	32415

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Certificate of Analysis

ODEQ ID # 9953

To: DOUG FORT
FORT ENVIRONMENTAL LABORATORIES
515 SOUTH DUNCAN STREET
STILLWATER, OK 74074

Project #:

Project Name:

Date Received: 1/19/2016

Report Date: 2/1/2016

Lab Number	Sample Identification	Date Sampled	Analysis Date	Analyzed Time	By	Parameter	Q	Results	Units	RL	SQL	Method	Batch
201600240	005 DeCl2 WATER 1 OF 2	1/18/2016	1/21/2016		MY	Benzo(g,h,i)perylene	U	BDL	ug/l	5	5	EPA_625	32415
		1/18/2016	1/21/2016		MY	NB-d5 (Surr)		69	%Rec	25	25	EPA_625	32415
		1/18/2016	1/21/2016		MY	2-FBP (Surr)		61	%Rec	12	12	EPA_625	32415
		1/18/2016	1/21/2016		MY	2,4,6-TBP (Surr)		107	%Rec	14	14	EPA_625	32415

Note:

RL = Reporting Limit. SQL* = Sample Quantitation Level.

B = Analyte was detected in both the sample and associated blank.

OL2 = Subcontracted to ODEQ Lab #7211.

M = Matrix effect present

BDL = Analyte was analyzed for but not detected above RL.

J = Analyte was detected above the RL but below the PQL.

Q = Surrogate recovery fell outside acceptance limits.

U = Analyte was analyed for but not detected above RL

* When a sample contains a high concentration of either a target or non-target compound(s) or interference, it must be diluted. SQL = Dilution factor x MDL. Samples are disposed of 20 days after the sample is reported.

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DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate

Amendment Number: 03 | **Document ID Number**: BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date**: 5/10/2016

Amendment Relating To: BATT01-00393

[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP

[ ] Other (describe):

Original Specifications: Page 1, Title Page

PI Support Site:
(Analytical Chemistry and Vitellogenin mRNA)

ABC Laboratories
7200 East ABC Lane
Columbia, MO 65202

Page 6, Section 6, Testing Sites

"Vitellogenin mRNA analyses will be performed at ABC Laboratories, Inc., Biochemistry Department, 7200 East ABC Lane, Columbia, Missouri, USA 65202. Dr. Steve Hicks, PI of the planned analyses, will serve as study contact for ABC Laboratories and may be reached at 573.777.6053 or hickss@abclabs.com ."

Page 13, Table 2

Page 14, Section 16.1, Overview

"…Samples will be collected for histological evaluation of gonadal sex, and histopathology evaluation of kidney, liver and gonad."

Page 20, Section 16.7, Sampling of Non-Breeding Fish (Sub-Adults)

" … Each fish will be humanely euthanized using 2 g/L MS-222 (pH 7) and measured for a variety of endpoints including: 9 wpf survival, growth, liver vitellogenin (mRNA copy number or protein concentration), and anal fin papillae number (secondary sexual characters (SSC))."

Page 20, Section 16.9, Sampling of Adult Breeding Pairs

"…Histopathology of the gonads, kidneys and liver tissue for each adult fish will be evaluated (3,7) (analyses performed by EPL)."

Page 21, Section 16.11Vitellogenin Analysis – ABC Laboratories Test Site

In both the F1 and F2 generations, liver vitellogenin will only be measured in the sub-adult fish (16). It is noted that this sub-adult only approach is contrary to the information in the Final Test Guideline for MEOGRT on page 6, Table 2; and page 16 (3). The livers of sacrificed fish will be removed and immediately placed into RNAlater at room temperature. When all samples have been collected, they will be placed in a

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refrigerator at 1 to 9°C overnight and then moved to the lab freezer and stored at -20 ± 10°C until analyzed. Samples will be shipped to ABC Laboratories for analyses via overnight courier.

Page 21, Section 17, Endpoints

Table 3

Changed To: Page 1, Title page

PI Support Site: (Analytical Chemistry)	ABC Laboratories 7200 East ABC Lane Columbia, MO 65202
PI Support Site: (Vitellogenin mRNA)	Wildlife International Evans Analytical Group 8598 Commerce Drive Easton, MD 21601

Page 6, Section 6, Testing Sites

"Vitellogenin mRNA analyses will be performed at Wildlife International, 8598 Commerce Drive Easton, MD 21601. Matthew Rhodes, PI of the planned analyses, will serve as study contact for Wildlife International and may be reached at 410.822.8600 or mrhodes@eag.com."

Page 13, Table 2

Add F1 under SW12 (9 wpf) column under the Histopathology endpoint.

Page 14, Section 16.1, Overview

"…Samples will be collected for histological evaluation of gonadal sex, and histopathology evaluation of kidney, liver, thyroid and gonad."

Page 20, Section 16.7, Sampling of Non-Breeding Fish (Sub-Adults)

" … fish will be humanely euthanized using 2 g/L MS-222 (pH 7) and measured for a variety of endpoints including: 9 wpf survival, growth, and anal fin papillae number (secondary sexual characters (SSC)) in each fish, thyroid histopathology (F1 only) in two fish, and liver vitellogenin (mRNA copy number or protein concentration) in the remaining fish not selected for thyroid histopathology"

Page 20, Section 16.9, Sampling of Adult Breeding Pairs

"…Histopathology of the gonads, kidneys, thyroid, and liver tissue for each adult fish will be evaluated (3,7) (analyses performed by EPL)."

Page 21, Section 16.11Vitellogenin Analysis – Wildlife International Test Site

In both the F1 and F2 generations, liver vitellogenin will only be measured in the sub-adult fish (16). It is noted that this sub-adult only approach is contrary to the information in the Final Test Guideline for MEOGRT

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on page 6, Table 2; and page 16 (3). The livers of sacrificed fish will be removed and immediately placed into RNAlater at room temperature. When all samples have been collected, they will be placed in a refrigerator at 1 to 9°C overnight and then moved to the lab freezer and stored at -20 ± 10°C until analyzed. Samples will be shipped to Wildlife International for analyses via overnight courier.

Page 21, Section 17, Endpoints

Table 3

Table 3. Summary of Study Endpoints[1]

Life Stage	Endpoint	Generation
Embryo (2 wpf)	Hatchability (% and time to hatch)	F1, F2
Juvenile (4 wpf)	Survival (hatch to 4 wpf)	F1, F2
Subadult (9 wpf)	Survival (4 to 9 wpf), F1 Growth (length and weight), Vitellogenin, Secondary sex characteristics (anal fin papillae), External sex ratio, Time to 1st spawn, and Thyroid histopathology (F1 only for thyroid histopathology)	F1, F2
Adult (12-14 wpf)	Reproduction (fecundity and fertility for 21 days)	F0, F1, F2
Adult (15 wpf)	Survival (from 9 to 15 wpf), Growth (length and weight), Secondary sex characteristics (anal fin papillae), Histopathology (gonad, liver, kidney, and thyroid [thyroid histopathology on F1 only])	F1, F2 (no thyroid histopathology on F2)

Summary of General Thyroid Histopathology Scope

The change to the scope of the study essentially includes an add-on a thyroid gland histopathology endpoint for F1 adults (15 weeks post fertilization, wpf) and for F1 subadults, 9 wpf. Follow the fixation procedures as described in the MEOGRT test guideline, OCSPP 890.2200. Evaluation of thyroid histopathology will follow a three step process: Part A - initial examination, Part B - examination of endocrine-specific effects, and Part C –examination of endocrine-specific effects in F1 adults. The MEOGRT Test Guideline specifies that eggs are collected in Study Week 4 for initiating the F1 generation. Fertile, healthy embryonated eggs are then randomly selected for incubation. Each replicate incubator should receive 20 embryos (6 replicates per treatment and 12 replicates per control) (MEOGRT test guideline, OCSPP 890.2200, p. 13). From these 20 embryos, "each (treatment and control) replicate aquarium should receive 12 eleutheroembryos" (p. 14). After the F1 breeding pairs have been selected from subadult fish (9 wpf), there will be a maximum of 10 remaining subadult fish total/replicate (assuming no mortality) to sample for other endpoints. Two (2) fish per replicate tank are to be sampled for thyroid histopathology only. The remaining subadult fish at 9 wpf up to ten (10) fish are to be sampled for liver vitellogenin and secondary sex characteristics only (p. 15).

In summary, the number of fish submitted for VTG analysis will be twelve (12) genetically sexed, minus deceased, minus two (2) for thyroid evaluation, minus viable breeders selected to produce the embryos for the F2 generation.

[1] Statistical evaluation will be considered for each of the endpoints.

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1) Sampling at F1, 9 wpf. a) There are no changes to the MEOGRT test guideline, 890.2200, for fish euthanized and necropsied for measurement of survival, growth, liver vitellogenin (mRNA copy number of protein concentration), and anal fin papillae number (secondary sexual characteristic, SSC). b) Two (2) additional animals will be randomly selected from each replicate tank ONLY for thyroid histopathology. The subadult fish should be fixed intact (the in-life laboratory does not open the body cavity to allow for perfusion of fixative, as is done for the adult fish), individually identified, and shipped to the designated histopathology laboratory. **2) Sampling of F1 Adults.** Follow the sampling, necropsy and fixation procedures described in the MEOGRT test guideline, OCSPP 890.2200 (p. 16). "The body cavity is opened to allow perfusion with appropriate fixative prior to submersing the entire body in the fixative and evaluated histologically for pathology in the gonads, kidneys, and liver tissues as described in the Histopathology Guidance (Appendix 12)." From the F1 adult samples collected, two (2) fish per replicate tank will be randomly selected to also be evaluated for thyroid gland histopathology.
Reason for Change: Provide the new PI laboratory responsible for VTG mRNA analyses. Provide process and methods for tissue collection and analysis of thyroid in F1 SW 9 sub-adult and F1 adult specimens from study 00393.
Approval:

Study Director:		Date:	5/10/2016
Sponsor Representative:	Vincent J. Brown	Date:	5/10/2016

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DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate	
Amendment Number: 04	**Document ID Number:** BATT01-8 (00393)
Submitted By: Douglas J. Fort	**Date:** 6/6/2016
Amendment Relating To: BATT01-00393 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP** **[X] Other (describe): Protocol Amendments 1-3**	
Original Specifications: Protocol Page 1, Title Page and throughout document, 2-Ethyhexyl 4-Hydroxybenzoate Amendment Page 1, Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate	
Changed To: 2-Ethylhexyl 4-Hydroxybenzoate	
Reason for Change: Corrected typographical error in compound name.	

Approval:

Study Director: _____ Date: 6/6/2016

Sponsor Representative: _____ Date: 6 JULY 2016

Page 1 of 1

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

Amendment Number: 05 | **Document ID Number**: BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date**: 7/5/2016

Amendment Relating To: BATT01-00393

[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP

[ ] Other (describe):

Original Specifications:

1. **Pages 16 and 17**

Misspelled word: genotpyic

2. **Page 17-18**

Second Generation (F2)

Test Week 19:
One day prior to the anticipated initiation of hatching, agitation (aeration) of the incubating embryos will be reduced to expedite hatching. As embryos hatch on each day, eleutheroembryos will be pooled by treatment and then systematically distributed to each replicate aquarium within a specific treatment with no more than 12 eleutheroembryos placed into each aquarium. This will be performed by randomly selecting eleutheroembryos and placing an eleutheroembryos in successive replicates using indiscriminate draw until all replicates within the treatment have 12 eleutheroembryos. If not enough eleutheroembryos are available to fill all replicates as many replicates as possible will be filled with 12 eleutheroembryos to start the F2 phase of the test. The appropriate data are collected to calculate the hatching success of each replicate incubator. Embryos that have not hatched by twice the median control day of hatch will be considered non-viable and appropriately discarded. The number of eleutheroembryos will be recorded and hatching success will be calculated in each replicate.

Test Weeks 20-21:
One day prior to the anticipated initiation of hatching, agitation (aeration) of the incubating embryos will be reduced to expedite hatching. As embryos hatch on each day, eleutheroembryos will be pooled by treatment and then systematically distributed to each replicate aquarium within a specific treatment with no more than 12 eleutheroembryos placed into each aquarium. This will be performed by randomly selecting eleutheroembryos and placing an eleutheroembryos in successive replicates using indiscriminate draw until all replicates within the treatment have 12 eleutheroembryos. If not enough eleutheroembryos are available to fill all replicates as many replicates as possible will be filled with 12 eleutheroembryos to start the F2 phase of the test. The appropriate data are collected to calculate the hatching success of each replicate incubator. Embryos that have not hatched by twice the median control day of hatch will be considered non-viable and

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appropriately discarded. The number of eleutheroembryos will be recorded and hatching success will be calculated in each replicate.

Test Week 21-26:
On Study Day 44, the accumulative survival of the juvenile fish will be recorded as the number per replicate out of the initial number of eleutheroembryos, nominally 12. The exposure will continue as the juvenile fish develop into sub-adults.

Test Week 27:
On Study Day 78, a small tissue sample will be collected from the caudal fin of each fish to determine the genotypic sex of the individual by *dmy* analysis. This information will be used to establish XX – XY breeding pairs. The *dmy* genotpyic data for all the remaining sub-adult samples will ensure that all endpoint data can be related to the genetic sex of each individual fish.

On Study Days 80 and 81, after the genotypic sex of each fish has been determined, 12 breeding pairs per treatment and 24 breeding pairs for controls will be randomly established. The remaining fish (maximum 8 fish per replicate) will be humanely euthanized and will be sampled for the various sub-adult endpoints.

Test Week 28-29:
The exposure will continue as the sub-adult breeding pairs develop into adults.

Test Week 29:
The exposure will continue as the sub-adult breeding pairs develop into adults, and eggs will be removed from tanks at least twice weekly.

Test Weeks 30-31:
On Study Day 98, eggs will be removed from the aquaria and from females to guarantee an accurate enumeration of egg numbers spawned the next day. Spawned eggs will be collected daily for 21 consecutive days (Study Days 99-119) in each replicate, and assessed for fecundity and fertility.

Test Week 32:
On Study Day 120, eggs will be collected, pooled from each treatment, and systematically distributed to incubation vessels (6 per treatment and 12 for controls) with no more than 20 embryos per replicate (120 embryos for each test substance treatment and 240 embryos for the controls) allowed to incubate. If a second day of embryo collection (Study Day 121) is needed, all embryos from the first day (Study Day 120) will be pooled with the embryos from the second day and redistributed to each of the treatment replicates. After embryo collection, the F2 breeding pairs will be humanely euthanized and analyzed for the various adult endpoints.

3. **Page 7, Table 1**

Table 1. Experimental Specifications for 2-EHHB MEOGRT (with F2 Generation) Study

Parameter	Conditions
Test species	Medaka (*Oryzias latipes*)
Diluent; Negative control	Dechlorinated tap water (carbon filtered)
Test chemical	2-ethyhexyl 4-hydroxybenzoate
Test chemical concentrations (µg/L)	0, 6.3, 12.5, 25.0, 50.0, and 100.0

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Test chamber size	10 L glass aquarium (tank) partitioned to 4L
Test media volume	1.8 L per partition
Media flow rate	20 mL/min
Rate of media exchange	16 exchanges/tank/day
Replicates/treatment Replicates/control	6 replicates/treatment for F0; 12 replicates/treatment for F1 12 replicates/control for F0; 24 replicates/control for F1
Animals/replicate	At F0, 2 fish per rep at start (Day 0)
Feed	Brine shrimp
Photoperiod	16 h light : 8 h dark with 30 min. transition
Media temperature	25°C ± 1°C
Light intensity	100-500 lux
Dissolved oxygen (DO)	≥ 60% saturation
pH	6.5 to 8.5 ± 0.5
Hardness, alkalinity, conductivity	At test initiation and twice monthly in the control and high concentration of one replicate. Replicates will be chosen on a rotating basis.
Aeration	Eggs mandatory, only if needed for fish (i.e., if DO reaches <60%)
Apical endpoints	See Table 2
Control/dilution water	Dechlorinated tap water previously demonstrated to be suitable for medaka
Sample frequency for water	One water sample from each of the 6 replicates per treatment (and control) will be collected weekly through the duration of exposure. Replicates will be sampled on a rotational basis.
Exposure Period	32 weeks (F0 to F2)

Changed To:

1. **Pages 16 and 17 -** Corrected spelling to genotypic.

2. **Page 17-18**

Second Generation (F2)

Test Weeks 19-20:
One day prior to the anticipated initiation of hatching, agitation (aeration) of the incubating embryos will be reduced to expedite hatching. As embryos hatch on each day, eleutheroembryos will be pooled by treatment and then systematically distributed to each replicate aquarium within a specific treatment with no more than 12 eleutheroembryos placed into each aquarium. This will be performed by randomly selecting eleutheroembryos and placing an eleutheroembryos in successive replicates using indiscriminate draw until all replicates within the treatment have 12 eleutheroembryos. If not enough eleutheroembryos are available to fill all replicates as many replicates as possible will be filled with 12 eleutheroembryos to start the F2 phase of the test. The appropriate data are collected to calculate the hatching success of each replicate incubator. Embryos that have not hatched by twice the median control day of hatch will be considered non-viable and

FEL

appropriately discarded. The number of eleutheroembryos will be recorded and hatching success will be calculated in each replicate.

Test Week 20-25:
On Study Day 142, the accumulative survival of the juvenile fish will be recorded as the number per replicate out of the initial number of eleutheroembryos, nominally 12. The exposure will continue as the juvenile fish develop into sub-adults.

Test Week 26:
On Study Day 176, a small tissue sample will be collected from the caudal fin of each fish to determine the genotypic sex of the individual by *dmy* analysis. This information will be used to establish XX – XY breeding pairs. The *dmy* genotypic data for all the remaining sub-adult samples will ensure that all endpoint data can be related to the genetic sex of each individual fish.

On Study Days 178 and 179, after the genotypic sex of each fish has been determined, 12 breeding pairs per treatment and 24 breeding pairs for controls will be randomly established. The remaining fish (maximum 8 fish per replicate) will be humanely euthanized and will be sampled for the various sub-adult endpoints

Test Week 27-28:
The exposure will continue as the sub-adult breeding pairs develop into adults.

Test Week 28:
The exposure will continue as the sub-adult breeding pairs develop into adults, and eggs will be removed from tanks at least twice weekly.

Test Weeks 29-32:
On Study Day 196, eggs will be removed from the aquaria and from females to guarantee an accurate enumeration of egg numbers spawned the next day. Spawned eggs will be collected daily for 21 consecutive days (Study Days 197-217) in each replicate, and assessed for fecundity and fertility. After embryo collection, the F2 breeding pairs will be humanely euthanized and analyzed for the various adult endpoints.

3. **Page 7, Table 1**

Table 1. Experimental Specifications for 2-EHHB MEOGRT (with F2 Generation) Study

Parameter	Conditions
Test species	Medaka (*Oryzias latipes*)
Diluent; Negative control	Dechlorinated tap water (carbon filtered)
Test chemical	2-ethyhexyl 4-hydroxybenzoate
Test chemical concentrations (µg/L)	0, 6.3, 12.5, 25.0, 50.0, and 100.0
Test chamber size	10 L glass aquarium (tank) partitioned to 4L
Test media volume	1.8 L per partition
Media flow rate	20 mL/min
Rate of media exchange	16 exchanges/tank/day
Replicates/treatment Replicates/control	6 replicates/treatment for F0-2 developmental phase; 12 replicates/treatment for F1 and F2 reproduction phase 12 replicates/control for F0-2 developmental phase; 24 replicates/control for F1 and F2 reproduction phase

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Animals/replicate	At F0, 2 fish per rep at start (Day 0)
Feed	Brine shrimp
Photoperiod	16 h light : 8 h dark with 30 min. transition
Media temperature	25°C ± 1°C
Light intensity	100-500 lux
Dissolved oxygen (DO)	≥ 60% saturation
pH	6.5 to 8.5 ± 0.5
Hardness, alkalinity, conductivity	At test initiation and twice monthly in the control and high concentration of one replicate. Replicates will be chosen on a rotating basis.
Aeration	Eggs mandatory, only if needed for fish (i.e., if DO reaches <60%)
Apical endpoints	See Table 2
Control/dilution water	Dechlorinated tap water previously demonstrated to be suitable for medaka
Sample frequency for water	One water sample from each of the 6 replicates per treatment (and control) will be collected weekly through the duration of exposure. Replicates will be sampled on a rotational basis.
Exposure Period	32 weeks (F0 to F2)

Reason for Change: Corrected typographical error (genotypic), corrected test weeks and study days for F2 generation phase, and added additional clarification to the number of replicates/treatment based on generation cited in Table 1.

Approval:

Study Director: _____ Date: 7/6/2016

Sponsor Representative: _____ Date: 6 JUL 2016

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate

Amendment Number: 06 | **Document ID Number**: BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date**: 1/11/2017

Amendment Relating To: BATT01-00393

[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP

[ ] Other (describe):

Original Specifications:

1. Page 5, Section 2, Good Laboratory Practice

2. Page 26, Section 24, Specimen Archival

"Following study finalization, specimens remaining at FEL will be shipped to a location designated by the Sponsor or representative, in consultation with the USEPA Task Order Contracting Officer's Representative. Material produced during the histopathological analyses (paraffin blocks and slides) will be stored at EPL until study finalization. After study finalization, these materials will be shipped to a location designated by the sponsor or representative in consultation with the USEPA."

Changed To:

1. Add the following to the GLP exception list:
   - Wet specimens and tissues imbedded in paraffin blocks remaining after study finalization will be destroyed at their respective labs rather than submitted to archiving.

2. Per Sponsor mandated exception, following study finalization, specimens remaining at FEL, and embedded tissues or specimens maintained by EPL will be disposed of in accordance with QMP, QAPP, and respective facility SOPs. All slides produced during the histopathological analyses will be stored at EPL until study finalization. After study finalization, all slides will be shipped to the sponsor at the address below.

   Sharlene R. Matten, Ph.D.
   Senior Biologist, US EPA
   Exposure Assessment Coordination and Policy Division
   Office of Science Coordination and Policy
   1200 Pennsylvania Ave., N.W., Mail Code 7203M
   Washington, D.C. 20460
   Tel: 202-564-0130

   e-mail: matten.sharlene@epa.gov

FEL

Reason for Change: Provides specific archive location for slides produced for study BATT01-00393 and disposal instructions following study finalization for specimens remaining at FEL, and embedded tissues or specimens maintained at EPL.

Approval:

Study Director: _____ Date: 1/23/2017

Sponsor Representative: Vincent J. Brown Date: 11 JAN 2017

BATT01-00393
Protocol Amendment 07

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate

Amendment Number: 07 | **Document ID Number**: BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date**: 8/9/2017

Amendment Relating To: BATT01-00393

[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP

[ ] Other (describe):

Original Specifications:

1. Page 1, Title Page

PI Support Site: (Analytical Chemistry)
ABC Laboratories
7200 East ABC Lane
Columbia, MO 65202

2. Page 6, Section 7, Testing Sites

The 2-EHHB chemical analysis portion of the study will be performed at ABC Laboratories, Inc., Chemical Services Department, 7200 East ABC Lane, Columbia, Missouri, USA 65202. Dr. Tom Leak, PI of the planned analyses, will serve as study contact for ABC Laboratories and may be reached at 573.777.6050 or leakt@abclabs.com.

3. Remainder of protocol

ABC Laboratories

Changed To:

1. Page 1, Title Page

Analytical Bio-Chemistry Laboratories, Inc.
a wholly owned subsidiary of EAG, Inc.
7200 E. ABC Lane
Columbia, Missouri 65202

2. Page 6, Section 7, Testing Sites

The 2-EHHB chemical analysis portion of the study will be performed at EAG Laboratories, Inc., Chemical Services Department, 7200 East ABC Lane, Columbia, Missouri, USA 65202. Dr. Tom Leak, PI of the planned analyses, will serve as study contact for EAG Laboratories and may be reached at 573.777.6050 or tleak@eag.com.

BATT01-00393

FEL

Protocol Amendment 07

4. Remainder of protocol EAG Laboratories
Reason for Change: Acquisition of ABC Laboratories by EAG, Inc. resulting in change in name of PI laboratory and PI email address.

Approval:

Study Director: _____ Date: 8/10/2017

Sponsor Representative: _____ Date: 10 AUG 2017

BATT01-00393
Protocol Amendment 08

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate

Amendment Number: 08 | **Document ID Number**: BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date**: 9/1/2017

Amendment Relating To: BATT01-00393

[X] Protocol **[ ] Study Plan** **[ ] QAPP** **[ ] QAMP** **[ ] SOP**

[ ] Other (describe):

Original Specifications:

1. Page 1, Title Page

Sponsor: U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington DC 20460C

2. Amendment 7 Changed To: Page 6, Section 7, Testing Sites

The 2-EHHB chemical analysis portion of the study will be performed at EAG Laboratories, Inc., Chemical Services Department, 7200 East ABC Lane, Columbia, Missouri, USA 65202. Dr. Tom Leak, PI of the planned analyses, will serve as study contact for EAG Laboratories and may be reached at 573.777.6050 or tleak@eag.com.

Changed To:

1. Page 1, Title Page

Sponsor: U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington DC 20460

2. Amendment 7 Changed To: Page 6, Section 7, Testing Sites

The 2-EHHB chemical analysis portion of the study will be performed at EAG Laboratories, Chemical Services Department, 7200 East ABC Lane, Columbia, Missouri, USA 65202. Dr. Tom Leak, PI of the planned analyses, will serve as study contact for EAG Laboratories and may be reached at 573.777.6050 or tleak@eag.com.

BATT01-00393

FEL

Protocol Amendment 08

Reason for Change:

Correct typographical errors in sponsor zip code and in EAG company name.

Approval:

Study Director: _____ Date: 11/27/2017

Sponsor Representative: _____ Date: Oct 10, 2017

BATT01-00393
Protocol Amendment 09

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate

Amendment Number: 09 | **Document ID Number**: BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date**: 9/26/2017

Amendment Relating To: BATT01-00393

[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP

[ ] Other (describe):

Original Specifications:

Protocol Amedment 3, Changed To:

Page 1, Title page

PI Support Site:
(Vitellogenin mRNA)

Wildlife International
Evans Analytical Group
8598 Commerce Drive
Easton, MD 21601

Page 6, Section 6, Testing Sites

"Vitellogenin mRNA analyses will be performed at Wildlife International, 8598 Commerce Drive Easton, MD 21601. Matthew Rhodes, PI of the planned analyses, will serve as study contact for Wildlife International and may be reached at 410.822.8600 or mrhodes@eag.com."

Changed To:

Protocol Amedment 3, Changed To:

Page 1, Title page

PI Support Site:
(Vitellogenin mRNA)

Evans Analytical Group (EAG Laboratories)
8598 Commerce Drive
Easton, MD 21601

Page 6, Section 6, Testing Sites

"Vitellogenin mRNA analyses will be performed at EAG Laboratories, 8598 Commerce Drive Easton, MD 21601. Amanda Milligan, PI of the planned analyses, will serve as study contact for EAG Laboratories and may be reached at (410) 822-8600 x221 or amilligan@eag.com."

BATT01-00393

FEL

Protocol Amendment 09

Reason for Change:

Correct company name change and assignment of PI for VTG mRNA analyses.

Approval:

Study Director: _____ Date: 11/27/2017

Sponsor Representative: _____ Date: Oct 10, 2017

FEL

BATT01-00393
Protocol Amendment 10

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate	
Amendment Number: 10	**Document ID Number:** BATT01-8 (00393)
Submitted By: Douglas J. Fort	**Date:** 2/12/2018
Amendment Relating To: BATT01-00393 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP** **[ ] Other (describe):**	

Original Specifications:

1. Page 9, Section 11. Test Substance

2-EHHB (TCI America, Portland, OR, lot number H0506, expiration date and re-test date not provided, 9.3% (w/w) pure [w/w] per Certificate of Analysis produced by TCI America) was received from TCI America.

Changed To:

1. Page 9, Section 11. Test Substance

2-EHHB (TCI America, Portland, OR, lot number 7CZZO, expiration date and re-test date not provided, 99.3% (w/w) pure [w/w] per Certificate of Analysis produced by TCI America) was received from TCI America.

Reason for Change:

Correct error in the lot number and purity of test substance.

Approval:

Study Director: _____ Date: 2/13/2018

Sponsor Representative: _____ Date: 13 FEB 2018

Page 1 of 1

BATT01-00393
Protocol Amendment 11

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate	
Amendment Number: 11	**Document ID Number:** BATT01-8 (00393)
Submitted By: Douglas J. Fort	**Date:** 5/1/2018
Amendment Relating To: BATT01-00393 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP** **[ ] Other (describe):**	
Original Specifications: 1. Deviation 03 - Original Specifications: 9.10. Data Analysis, page 22	
Changed To: 1. Original Specifications: 18. Data Analysis, page 22	
Reason for Change: Correct error in the citation of the protocol section number in Deviation 03.	

Approval:

Study Director: _____ Date: 5/2/2018

Sponsor Representative: _____ Date: 2MAY2018

Page **1** of **1**

BATT01-00393
Protocol Amendment 12

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate

Amendment Number: 12 | **Document ID Number:** BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date:** 5/17/2018

Amendment Relating To: BATT01-00393

[X] Protocol **[ ] Study Plan** **[ ] QAPP** **[ ] QAMP** **[ ] SOP**

[ ] Other (describe):

Original Specifications:

1. Deviation 02 - Reason/Impact:

Inadvertent oversight of the process. Only examination of the thyroids was to be performed. Deviation will have no impact on the study. The additional data will be reported in EPL's PI report in a separate table. EPL's PI report will be appended to FEL's study report. The additional data will not be included in the DESTs to ensure the DESTs are consistent with the amended protocol and consistent amongst the MEOGRT studies performed by the participating laboratories under TO 14. The data/results will not be discussed directly in FEL's report.

Changed To:

1. Deviation 02 - Reason/Impact:

Inadvertent oversight of the process. Only examination of the thyroids was to be performed. Deviation will have no impact on the study other than providing additional data. The additional data will be appended to EPL's PI report and pertinent discussion will be included in main body of EPL's report. EPL's PI report will be appended to FEL's study report. The additional data will be included in the DESTs. The data/results will be discussed directly in FEL's report.

Reason for Change:

Provide basis for inclusion of data and discussion in study report.

Approval:

Study Director: _____ Date: 5/18/2018

Sponsor Representative: _____ Date: 5/18/2018

Page 1 of 1

BATT01-00393
Protocol Amendment 13

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate	
Amendment Number: 13	**Document ID Number**: BATT01-8 (00393)
Submitted By: Douglas J. Fort	**Date**: 6/28/2018

Amendment Relating To: BATT01-00393

[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP

[ ] Other (describe):

Original Specifications:

Protocol Amendments 06, 07, 08, 09, 10, 11, and 12

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate

Protocol Amendment 07

Changed To:

1. Page 6, Section 7, Testing Sites

The 2-EHHB chemical analysis portion of the study will be performed at EAG Laboratories, Inc., Chemical Services Department, 7200 East ABC Lane, Columbia, Missouri, USA 65202. Dr. Tom Leak, PI of the planned analyses, will serve as study contact for EAG Laboratories and may be reached at 573.777.6050 or tleak@eag.com.

2. Remainder of protocol

EAG Laboratories

Changed To:

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

1. Page 6, Section 7, Testing Sites

The 2-EHHB chemical analysis portion of the study will be performed at EAG, Inc., Chemical Services Department, 7200 East ABC Lane, Columbia, Missouri, USA 65202. Dr. Tom Leak, PI of the planned analyses, will serve as study contact for EAG, Inc. and may be reached at 573.777.6050 or tleak@eag.com.

BATT01-00393

FEL

Protocol Amendment 13

2. Remainder of protocol EAG, Inc.
Reason for Change: Provide correct spelling of test substance in protocol amendment document or study title and official name of PI facility.

Approval:

Study Director: _____ Date: 7/2/2018

Sponsor Representative: _____ Date: 7/2/2018

FEL

DOCUMENT DEVIATION FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate	
Deviation Number: 01	**Document ID Number:** BATT01-8 (00393)
Submitted By: Douglas J. Fort	**Date:** 12/7/2016
Deviation Relating To: BATT01-00393 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QMP [ ] SOP** **[ ] Other (describe):**	
Original Specifications: Page 15, Parental Generation (F_0), Test Week 4: "On Test Day 24, the F0 breeding pairs will be humanely euthanized, and weight and length will be recorded. If necessary F0 breeding pairs will be maintained for an additional 1-2 days in order to restart the F1."	
Deviation: The cited activities occurred on Test Day 32.	
Reason/Impact: Additional days were needed to ensure proper set up and propagation of the F1 hatchlings. No impact on study results was anticipated with the additional elapsed time since the controls and treatments were handled in the same manner during the interim period with continuous exposure, and controls and treatments were processed on the same test day.	
Schedule for Completion of Corrective Action: Immediate.	

Approval:

Study Director: _____ Date: 12/13/2016

Sponsor: _____ Date: 13 DEC 2016

BATT01-00393 FEL
Amendment Deviation 02

DOCUMENT DEVIATION FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

Deviation Number: 02 | **Document ID Number**: BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date**: 2/27/2017

Deviation Relating To: BATT01-00393

[X] Protocol [ ] Study Plan [ ] QAPP [ ] QMP [ ] SOP

[ ] Other (describe):

Original Specifications:

1. Protocol Amendment 3, page 2, "Changed To:" item regarding protocol "Page 20, Section 16.7, Sampling of Non-Breeding Fish (Sub-Adults)"

"… fish will be humanely euthanized using 2 g/L MS-222 (pH 7) and measured for a variety of endpoints including: 9 wpf survival, growth, and anal fin papillae number (secondary sexual characters (SSC)) in each fish, thyroid histopathology (F1 only) in two fish, and liver vitellogenin (mRNA copy number or protein concentration) in the remaining fish not selected for thyroid histopathology"

2. Protocol Amendment 3, page 3, "Changed To:" item regarding protocol Page 21, Section 17, Endpoints

Table 3.

Table 3. Summary of Study Endpoints[1]

Life Stage	Endpoint	Generation
Embryo (2 wpf)	Hatchability (% and time to hatch)	F1, F2
Juvenile (4 wpf)	Survival (hatch to 4 wpf)	F1, F2
Subadult (9 wpf)	Survival (4 to 9 wpf), F1 Growth (length and weight), Vitellogenin, Secondary sex characteristics (anal fin papillae), External sex ratio, Time to 1st spawn, and Thyroid histopathology (F1 only for thyroid histopathology)	F1, F2
Adult (12-14 wpf)	Reproduction (fecundity and fertility for 21 days)	F0, F1, F2
Adult (15 wpf)	Survival (from 9 to 15 wpf), Growth (length and weight), Secondary sex characteristics (anal fin papillae), Histopathology (gonad, liver, kidney, and thyroid [thyroid histopathology on F1 only])	F1, F2 (no thyroid histopathology on F2)

[1] Statistical evaluation will be considered for each of the endpoints.

Page **1** of **3**

BATT01-00393 FEL
Amendment Deviation 02

3. Protocol Amendment 3, pages 3-4, "Changed To:" item regarding Summary of General Thyroid Histopathology Scope

The change to the scope of the study essentially includes an add-on a thyroid gland histopathology endpoint for F1 adults (15 weeks post fertilization, wpf) and for F1 subadults, 9 wpf. Follow the fixation procedures as described in the MEOGRT test guideline, OCSPP 890.2200. Evaluation of thyroid histopathology will follow a three step process: Part A - initial examination, Part B - examination of endocrine-specific effects, and Part C –examination of endocrine-specific effects in F1 adults. The MEOGRT Test Guideline specifies that eggs are collected in Study Week 4 for initiating the F1 generation. Fertile, healthy embryonated eggs are then randomly selected for incubation. Each replicate incubator should receive 20 embryos (6 replicates per treatment and 12 replicates per control) (MEOGRT test guideline, OCSPP 890.2200, p. 13). From these 20 embryos, "each (treatment and control) replicate aquarium should receive 12 eleutheroembryos" (p. 14). After the F1 breeding pairs have been selected from subadult fish (9 wpf), there will be a maximum of 10 remaining subadult fish total/replicate (assuming no mortality) to sample for other endpoints. Two (2) fish per replicate tank are to be sampled for thyroid histopathology only. The remaining subadult fish at 9 wpf up to ten (10) fish are to be sampled for liver vitellogenin and secondary sex characteristics only (p. 15).

In summary, the number of fish submitted for VTG analysis will be twelve (12) genetically sexed, minus deceased, minus two (2) for thyroid evaluation, minus viable breeders selected to produce the embryos for the F2 generation.

1) Sampling at F1, 9 wpf. a) There are no changes to the MEOGRT test guideline, 890.2200, for fish euthanized and necropsied for measurement of survival, growth, liver vitellogenin (mRNA copy number of protein concentration), and anal fin papillae number (secondary sexual characteristic, SSC).
b) Two (2) additional animals will be randomly selected from each replicate tank ONLY for thyroid histopathology. The subadult fish should be fixed intact (the in-life laboratory does not open the body cavity to allow for perfusion of fixative, as is done for the adult fish), individually identified, and shipped to the designated histopathology laboratory.

Deviation:

For the F1 sub-adult generation of 00393, the kidney, liver, and gonads in addition to the thyroid were evaluated by the pathologist (EPL).

BATT01-00393

FEL

Amendment Deviation 02

Reason/Impact:

1. Inadvertent oversight of the process. Only examination of the thyroids was to be performed. Deviation will have no impact on the study. The additional data will be reported in EPL's PI report in a separate table. EPL's PI report will be appended to FEL's study report. The additional data will not be included in the DESTs to ensure the DESTs are consistent with the amended protocol and consistent amongst the MEOGRT studies performed by the participating laboratories under TO 14. The data/results will not be discussed directly in FEL's report.

Schedule for Completion of Corrective Action: Immediate.

Approval:

Study Director: _____ Date: 3/10/2017

Sponsor: _____ Date: 27 FEB 2017

FEL

FEL

DOCUMENT DEVIATION FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

Deviation Number: 03 | **Document ID Number**: BATT01-8 (00393)

Submitted By: Douglas J. Fort | **Date**: 8/9/2017

Deviation Relating To: BATT01-00393

[X] Protocol **[ ] Study Plan** **[ ] QAPP** **[ ] QMP** **[ ] SOP**

[ ] Other (describe):

Original Specifications: 9.10. Data Analysis, page 22

"Kruskal-Wallis ANOVA (KW ANOVA) test followed by a step-down pairwise Dunn's test if the KW ANOVA test is significant will be used when assumptions of monotonicity and normality and homogeneity of within class variances are not met. The step-down pair-wise comparison will minimize the number of comparisons conducted. The first comparison will be between the control and the highest treatment dose and only proceeds to a comparison between the control and the next lower dose if the comparison with the highest dose was significant. For all statistical evaluations, the replicate will be considered the experimental unit and α=0.05."

Deviation:

A step-down process was not performed with Dunn's test.

Reason/Impact: For MEOGRT (OCSPP. 890.2200), Dunn's test is specified, but the 'step-down' procedure is not appropriate with that test. No impact as the correct statistical practice was applied.

Kruskal-Wallis ANOVA (KW ANOVA) test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-values if the KW ANOVA test is significant will be used when assumptions of monotonicity and normality and homogeneity of within class variances are not met. For all statistical evaluations, the replicate will be considered the experimental unit and α=0.05.

Schedule for Completion of Corrective Action: Immediate.

Approval:

Study Director: _____ Date: 8/14/2017

Sponsor: _____ Date: 10 AUG 2017

Page 1 of 1

BATT01-00393

FEL

Amendment Deviation 04

DOCUMENT DEVIATION FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate	
Deviation Number: 04	**Document ID Number**: BATT01-8 (00393)
Submitted By: Douglas J. Fort	**Date**: 5/1/2018
Deviation Relating To: BATT01-00393 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QMP [ ] SOP** **[ ] Other (describe):**	
Original Specifications: Section 18. Data Analysis, page 22 "If the responses are monotonic, the William's test of ordered alternatives will be used to estimate the LOEC/NOEC when the assumptions of normality and homogeneity of within class variances are met by the raw or appropriately transformed data. The Jonckheere-Terpstra nonparametric test of ordered alternatives will be used to estimate the LOEC/NOEC when the assumptions of normality and homogeneity of within class variances are not met (8)."	
Deviation: "If the responses are monotonic, the Jonckheere-Terpstra nonparametric test of ordered alternatives will be used to estimate the LOEC/NOEC (8)."	
Reason/Impact: In OCSPP 890.2200, the MEOGRT test guideline, the Jonckheere-Terpstra trend test is recommended (page 26). It is also shown in the Figure 2 flow chart (page 27). In OECD 2006 "Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application" (Protocol Reference #8), both William's test and Jonckheere-Terpstra test are listed as step-down trend procedures (page 57). There are extensive discussions on William's test and Jonckheere-Terpstra test (pages 57-59). Item 218 on page 59 states "The Jonckheere-Terpstra test has many appealing properties. Among them is the requirement of monotonicity rather than linearity in the dose response." Another is that the Jonckheere-Terpstra test is readily available in SAS, whereas William's test may need extensive programming. Supported by the above guidelines, the Jonckheere-Terpstra test was used rather than William's test. There was no impact on the conduct of the study conduct, analysis of the results, or conclusion drawn.	
Schedule for Completion of Corrective Action: Immediate.	

FEL

BATT01-00393
Amendment Deviation 04

FEL

Approval:

Study Director: _____ Date: 5/2/2018

Sponsor: _____ Date: 2 MAY 2018

Appendix B.
CERTIFICATE OF ANALYSIS

Certificate of Analysis

Oct 16, 2015 (JST)

TOKYO CHEMICAL INDUSTRY CO., LTD.
4-10-1 Nihonbashi-Honcho, Chuo-ku, Tokyo 103-0023 Japan

Chemical Name: 2-Ethylhexyl 4-Hydroxybenzoate		
Product Number: H0506 CAS: 5153-25-3	Lot: 7CZZO	

Tests	Results	Specifications
Purity(HPLC)	99.3 area%	min. 98.0 area%
Purity(Neutralization titration)	99.8 %	min. 98.0 %
Specific gravity (20/20)	1.0382	1.0360 to 1.0390
Refractive index n20/D	1.5210	1.5190 to 1.5220

TCI Lot numbers are 4-5 characters in length.
Characters listed after the first 4-5 characters are control numbers for internal purpose only.

Customer service:

TCI AMERICA
Tel: +1-800-423-8616 / +1-503-283-1681
Fax: +1-888-520-1075 / +1-503-283-1987
E-mail: Sales-US@TCIchemicals.com

Appendix C. ANALYTICAL LABORATORY DATA REPORTS

ANALYTICAL DATA REPORT
FINAL

Study Title

Medaka Extended One-Generation Reproduction Test (MEOGRT) of
2-Ethylhexyl 4-Hydroxybenzoate

EAG Study Number: 83249
FEL Protocol Number: BATT01-8
FEL Study Number: BATT01-00393

Regulations

USEPA, FIFRA
Good Laboratory Practice (GLP) Standards, Final Rule (40 CFR Part 160, 1989)
and USEPA OPPTS 890.2200, Amphibian Metamorphosis Assay

In-Life Testing Facility

Fort Environmental Laboratories, Inc.
515 South Duncan Street
Stillwater, Oklahoma 74074

Analytical Testing Facility

EAG LABORATORIES™

ABC Laboratories, Inc.
a wholly owned subsidiary of EAG, Inc.
7200 E. ABC Lane
Columbia, Missouri 65202

Sponsor

U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington DC 20460

FEL Protocol Number: BATT01-8 FEL Study Number: BATT01-00393

STATEMENT OF GLP COMPLIANCE

Compound: 2-Ethylhexyl 4-Hydroxybenzoate

Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

The study described in this report, with the following exceptions, was conducted in compliance with the following Good Laboratory Practice Standards:

EPA, FIFRA, Good Laboratory Practice (GLP) Regulations as set forth in Title 40, Part 160 of the Code of Federal Regulations of the United States of America

1) The test substance was not characterized in accordance with the stated Good Laboratory Practices.

This was the only exception to the stated GLP principles and did not adversely affect the study integrity or the interpretation of the results generated from this study.

The study plan, study-specific original paper raw data, and appropriate representations of electronic raw data were provided to Battelle Memorial Institute with the final report. Copies of all data in support of this report were retained at EAG, along with facility records and a copy of the final report and the study plan.

03July18

Tom Leak, Ph.D. Date
Principal Investigator
Analytical Bio-Chemistry Laboratories, Inc.

for 03Jul18

John Kufderheide Date
Senior Director; Aquatic, Plant and Invertebrate Toxicology
Analytical Bio-Chemistry Laboratories, Inc.

QUALITY ASSURANCE STATEMENT

ABC Laboratories' Quality Assurance Unit (QAU) reviewed Study No. 83249 entitled, "Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate", for U.S. Environmental Protection Agency/Battelle Memorial Institute. The following inspections/audits were conducted on this study:

Date of Study Based Inspection	Phase Inspected	Date Reported to the Principal Investigator / Study Director	Date Reported to Principal Investigator Management / Study Director Management
03 May 2016	In-Progress: Sample Dilutions	03 May 2016 / 08 March 2017	04 May 2016 / 08 March 2017
27 – 30 December 2016	Raw Data and Draft Report	30 December 2016 / 08 March 2017	03 March 2017 / 08 March 2017
27 June 2018	Final Analytical Report	27 June 2018 / 03 July 2018	03 July 2018 / 03 July 2018

These audits indicate that the report is an accurate reflection of the study as it was conducted by EAG.

Chris Hughes 03 July 2018

Chris Hughes
Director, GLP Quality
Analytical Bio-Chemistry Laboratories, Inc.

Date

APPROVAL

The following is to be signed by appropriate personnel:

Principal Investigator:

Name (signed): Tom Leak Date: 03 July 18
Name (typed): Tom Leak, Ph.D.
Principal Scientist
Analytical Bio-Chemistry Laboratories, Inc.

Management:

Name (signed): Hugh Mitchell for Date: 03 Jul 18
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1.0 INTRODUCTION

All medaka extended one-generation reproduction test (MEOGRT) diluter and stock solution samples obtained from Fort Environmental Labs, Stillwater, Oklahoma (FEL) during this study (FEL Protocol No. BATT01-8, study number BATT01-00393) were analyzed for concentrations of 2-ethylhexyl 4-hydroxybenzoate at EAG. Samples were analyzed using a validated LC-MS/MS method covering the concentration range of 0.104 to 52.0 ng/mL.

A summary of the analytical evaluation and method used for 2-ethylhexyl 4-hydroxybenzoate is provided in this report. The precision and accuracy of the method are described, based on the method validation data as well as the data for the quality control samples analyzed with the study samples. The concentration of 2-ethylhexyl 4-hydroxybenzoate from each sample is also summarized.

2.0 MATERIALS AND METHOD

2.1 Test Substance

The test substance, 2-Ethylhexyl 4-Hydroxybenzoate, was received from FEL on 29 October 2015 and given Reference No. MM-13551-00001. A copy of the chain-of-custody form accompanied the test substance. The certificate of analysis is shown in Appendix 1. The certificate of analysis is summarized below:

Name:	2-Ethylhexyl 4-Hydroxybenzoate
Lot No.:	7CZZO
Purity (%):	99.3
Storage:	Stored at Room Temperature
CAS No.:	5153-25-3
Do Not Use Beyond Date:	29 October 2016

2.2 Analytical Method

Samples were diluted with 50:50 methanol:water at FEL and further dilutions were made, if necessary, at EAG using 50:50 methanol:water. Sample analysis was performed using a liquid chromatography system with tandem mass spectrometry (LC-MS/MS).

2.3 Study Samples

2.3.1 Sample Sources, Storage, and Receipt Dates

A total of 321 study samples were received from Fort Environmental Labs from 24 February 2016 to 04 October 2016. Samples were prepared for analysis from 24 February 2016 to 04 October 2016. The samples were stored at room temperature. Samples were typically analyzed within 24 hours of processing.

2.3.2 Sample Preparation and Analysis

All diluter and stock solution samples were processed and analyzed following the methods described in Section 2.2 and below.

The following instrument and instrument parameters were used in the analyses of the medaka extended one-generation reproductive test water samples:

Instrument:	ABSciex API-6500 Q-Trap
Column:	Phenomenex Kinetex XB-C18 50mm × 2.1mm, 1.7µm
Mobile Phase A:	0.01% Formic Acid (aq)
Mobile Phase B:	0.01% Formic Acid in Methanol
Gradient:	

Time (min)	%A	%B
0.00	40	60
3.00	10	90
4.00	10	90
4.01	40	60
5.00	40	60

Flow Rate:	0.500 mL/minute
Injection Volume:	1 – 5 µL (within any given analytical set, the injection volume was constant)
Column Temp:	40 °C
Mass Spec. Scan Type:	MRM
Polarity:	Negative

	Ions		
Compound	Q1 Mass (Da)	Q3 Mass (Da)	Dwell Time (msec)
2-Ethylhexyl 4-Hydroxybenzoate	249.00	92.00	100
2-Ethylhexyl 4-Hydroxybenzoate a	249.00	136.00	100

2.4 Calculations

Calculation of 2-ethylhexyl 4-hydroxybenzoate concentrations in test samples was performed by the external standard analysis function of Analyst 1.6.2 software. The concentration 2-ethylhexyl 4-hydroxybenzoate from each sample was determined directly from the standard curve by the equation (note, by definition, ng/mL = µg/L, corrected for purity):

$$\frac{\left(\begin{array}{c}\text{ng/mL from}\\ \text{standard curve}\end{array}\right)\left(\begin{array}{c}\text{analysis volume}\\ \text{in mL}\end{array}\right)}{\text{sample volume in mL}} = \text{ng/mL}$$

Example calculation for low spike at week 2 (#11, EAG ID 83249-11):

The standard curve equation is of the form: $y = mx + b$

where:

y = peak area units
m = slope
x = ng/mL 2-ethylhexyl 4-hydroxybenzoate
b = y-intercept of the standard curve

Standard Curve: y = 105,807.6x + 876.3843
Sample Peak Area: = 114,483

Substituting the Sample CPS in the following equation and solving for x gave the concentration of 2-ethylhexyl 4-hydroxybenzoate:

x = (114,483 – 876.3843) / (150,807.6)
x = 1.07371 ng/mL

The concentration value (x), determined from a standard curve using the linear regression function of an Excel spreadsheet, was then multiplied by the analysis volume (10 mL) and then divided by the sample volume (5 mL), resulting in a measured concentration of 2.15 ng/mL, equivalent to 2.15 µg/L.

Recovery of low spike sample at week 2:

$$\frac{2.15\ \mu g/L}{2.00\ \mu g/L} \times 100 = 108\%$$

The minimum quantifiable limit (MQL) for 2-ethylhexyl 4-hydroxybenzoate was calculated as follows:

Lowest standard concentration: 0.104 ng/mL
Volume for analysis: 10 mL
Volume of sample: 5 mL

therefore:

$$\text{MQL} = \frac{(0.104\ \text{ng/mL}) \times (10\ \text{mL})}{5\ \text{mL}} = 0.208\ \text{ng/mL}$$

3.0 RESULTS AND DISCUSSIONS

Analytical sets were typically run with six calibration standards interspersed throughout the run. The acceptance criterion for a reportable analytical set was a correlation coefficient of greater than or equal to 0.995. Each set also included QC fortifications at each of two nominal concentrations, which bracketed the nominal treatment concentrations from the protocol. Blank water and methanol injections (provided along with medaka extended one-generation reproductive test water samples) were analyzed to assess matrix interference. No significant interference peaks were observed in the blank samples. A summary of the data runs is included in Table 1.

3.1 Calibration Curves

The calibration standards for sample analysis were prepared on 17 December 2015, 02 March 2016, 10 March 2016, 13 June 2016, and 06 September 2016. The concentration range for 2-ethylhexyl 4-hydroxybenzoate was 0.104 to 52.0 ng/mL in 50:50 methanol:water.

A representative calibration curve is provided in Figure 1.

3.2 Method Validation

The method of analysis for 2-ethylhexyl 4-hydroxybenzoate was validated in EAG Study No. 83231 (1).

3.3 Accuracy and Precision

The QC samples were prepared with each set from a 2-ethylhexyl 4-hydroxybenzoate spiking solution prepared on 03 December 2015 and 14 September 2016. The QC sample concentrations ranged from 2.00 to 100 ng/mL.

The results from the analysis of the QC fortifications are presented in Table 2.

3.4 Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Concentrations

The calculated concentrations of 2-ethylhexyl 4-hydroxybenzoate in Medaka extended one-generation reproductive test water samples are provided in Table 3 and Table 4.

4.0 CONCLUSIONS

The percent of nominal concentration recovered from the 2.00 and 100 ng/mL 2-ethylhexyl 4-hydroxybenzoate QC spikes in reagent water ranged from 92 to 124%, respectively.

These results indicate the method is acceptable for the recovery of 2-ethylhexyl 4-hydroxybenzoate in medaka extended one-generation reproductive test water samples.

5.0 ARCHIVING

At the Sponsor's discretion, study samples will be disposed upon finalization of the report.

Electronic raw data, e.g., data acquired from automated data collection systems are maintained at EAG. Upon completion of the study, study-specific original paper raw data and appropriate representations of electronic raw data will be submitted along with the final report to the Sponsor for archiving. The archive location will be:

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201-2696
Attn: Vincent J. Brown, Ph.D.
614-424-5928
brownv@battelle.org

A copy of the final report, copies of raw data from the study, and all original electronic raw data and facility records (for example, equipment, logbooks, and temperature records) will be kept on file in EAG archives.

6.0 PROTOCOL DEVIATIONS

None.

7.0 REFERENCES

1. Leak, T. 2018. Analytical Data Report for 21-d Amphibian Metamorphosis Assay (AMA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*. EAG Study Number 83231.

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
CI5038 83249 02242016A	Blank (001) 0.0 µg/L (002) 6.3 µg/L (003) 12.5 µg/L (004) 25 µg/L (005) 50 µg/L (006) 100 µg/L (007) 2-EHHB Stock (008)	23 February 2016	24 February 2016	24 February 2016	NA	Accepted
CI5038 83249 03022016A	Blank (101) 0.0 µg/L Rep A (102) 6.3 µg/L Rep A (103) 12.5 µg/L Rep A (104) 25 µg/L Rep A (105) 50 µg/L Rep A (106) 100 µg/L Rep A (107) 2-EHHB Stock (108)	29 February 2016	01 March 2016	02 March 2016	NA	Accepted
CI5038 83249 03032016E	0.0 µg/L Rep A DUPLICATE (102) 6.3 µg/L Rep A DUPLICATE (103) 12.5 µg/L Rep A DUPLICATE (104) 25 µg/L Rep A DUPLICATE (105) 50 µg/L Rep A DUPLICATE (106) 100 µg/L Rep A DUPLICATE (107) 2-EHHB Stock DUPLICATE (108)	29 February 2016	03 March 2016	03 March 2016	NA	Accepted
	2-EHHB Stock (109)	02 March 2016				

Table 1 **Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)**

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
CI5038 83249 03092016A & X 83249 03112016Brev1	Blank (113) 0.0 µg/L Rep B (114) 6.3 µg/L Rep B (115) 12.5 µg/L Rep B (116) 25 µg/L Rep B (117) 50 µg/L Rep B (118) 100 µg/L Rep B (119) 2-EHHB Stock (120)	07 March 2016	08 March 2016	09 March 2016 11 March 2016	NA	Accepted
CI5038 83249 03182016B	0.0 µg/L Rep B DUPLICATE (114) 6.3 µg/L Rep B DUPLICATE (115) 12.5 µg/L Rep B DUPLICATE (116) 25 µg/L Rep B DUPLICATE (117) 50 µg/L Rep B DUPLICATE (118) 100 µg/L Rep B DUPLICATE (119)	07 March 2016	17 March 2016	18 March 2016	NA	Accepted
	2-EHHB Stock (132)	16 March 2016				
X 83249 03112016A	2-EHHB Stock (121)	09 March 2016	11 March 2016	11 March 2016	NA	Accepted

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
X 83249 03152016A	2-EHHB Stock (122) Blank (123) 0.0 µg/L Rep C (124) 6.3 µg/L Rep C (125) 12.5 µg/L Rep C (126) 25 µg/L Rep C (127) 50 µg/L Rep C (128) 100 µg/L Rep C (129)	14 March 2016	15 March 2016	15 March 2016	NA	Accepted
CI5038 83249 03182016C	0.0 µg/L Rep C DUPLICATE (124) 6.3 µg/L Rep C DUPLICATE (125) 12.5 µg/L Rep C DUPLICATE (126) 25 µg/L Rep C DUPLICATE (127) 50 µg/L Rep C DUPLICATE (128) 100 µg/L Rep C DUPLICATE (129)	14 March 2016	18 March 2016	18 March 2016	NA	Accepted
CI5038 83249 03222016A	2-EHHB Stock (133) Blank (134) 0.0 µg/L Rep D (135) 6.3 µg/L Rep D (136) 12.5 µg/L Rep D (137) 25 µg/L Rep D (138) 50 µg/L Rep D (139) 100 µg/L Rep D (140)	21 March 2016	22 March 2016	22 March 2016	NA	Accepted
CI5038 83249 03252016A	2-EHHB Stock (143)	23 March 2016	24 March 2016	25 March 2016	NA	Accepted

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
CI5038 83249 03302016C	0.0 µg/L Rep E (144) 6.3 µg/L Rep E (145) 12.5 µg/L Rep E (146) 25 µg/L Rep E (147) 50 µg/L Rep E (148) 100 µg/L Rep E (149) 2-EHHB Stock (150) Blank (151)	28 March 2016	29 March 2016	30 March 2016	NA	Accepted
CI5038 83249 03312016C	2-EHHB Stock (154)	30 March 2016	31 March 2016	31 March 2016	NA	Accepted
CI5038 83249 04052016B	0.0 µg/L Rep E DUPLICATE (144) 6.3 µg/L Rep E DUPLICATE (145) 12.5 µg/L Rep E DUPLICATE (146) 25 µg/L Rep E DUPLICATE (147) 50 µg/L Rep E DUPLICATE (148) 100 µg/L Rep E DUPLICATE (149)	28 March 2016	05 April 2016	05 April 2016	NA	Accepted
CI5038 83249 04052016C	0.0 µg/L Rep F (155) 6.3 µg/L Rep F (156) 12.5 µg/L Rep F (157) 25 µg/L Rep F (158) 50 µg/L Rep F (159) 100 µg/L Rep F (160) 2-EHHB Stock (161) Blank (162)	04 April 2016	05 April 2016	05 April 2016	NA	Accepted

Table 1 **Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)**

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
CI5038 83249 04072016A	2-EHHB Stock (165)	06 April 2016	07 April 2016	07 April 2016	NA	Accepted
CI5038 83249 04152016A	0.0 µg/L Rep F DUPLICATE (155)	04 April 2016	13 April 2016	15 April 2016	NA	Accepted
	0.0 µg/L Rep G (166) 6.3 µg/L Rep A (167) 12.5 µg/L Rep A (168) 25 µg/L Rep A (169) 50 µg/L Rep A (170) 100 µg/L Rep A (171) 2-EHHB Stock (174) Blank (175)	11 April 2016				
CI5038 83249 04152016C	2-EHHB Stock (176)	13 April 2016	14 April 2016	15 April 2016	NA	Accepted
X 83249 04202016A	0.0 µg/L Rep H (179) 6.3 µg/L Rep B (180) 12.5 µg/L Rep B (181) 25 µg/L Rep B (182) 50 µg/L Rep B (183) 100 µg/L Rep B (184) 2-EHHB Stock (177) Blank (178)	18 April 2016	19 April 2016	20 April 2016	NA	Accepted
X 83249 04212016B	2-EHHB Stock (187)	20 April 2016	21 April 2016	21 April 2016	NA	Accepted

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
X 83249 04262016B	Blank (188)	25 April 2016	26 April 2016	26 April 2016	NA	Accepted
	2-EHHB Stock (189)					
X 83249 04282016Erev1	0.0 µg/L Rep I (190)			28 April 2016		
X 83249 04262016B	6.3 µg/L Rep C (191)			26 April 2016		
	12.5 µg/L Rep C (192)					
	25 µg/L Rep C (193)					
	50 µg/L Rep C (194)					
	100 µg/L Rep C (195)					
X 83249 04282016Erev1	0.0 µg/L Rep I DUPLICATE (190)	25 April 2016	28 April 2016	28 April 2016	NA	Accepted
	2-EHHB Stock (198)	27 April 2016				
X83249 05042016Arev1 & X 83249 05062016C	Blank (199)	02 May 2016	03 May 2016	05 and 06 May 2016	NA	Accepted
	2-EHHB Stock (200)					
	0.0 µg/L Rep J (201)					
	6.3 µg/L Rep D (202)					
	12.5 µg/L Rep D (203)					
	25 µg/L Rep D (204)					
	50 µg/L Rep D (205)					
	100 µg/L Rep D (206)					
	2-EHHB Stock (209)	04 May 2016	05 May 2016			

Table 1 **Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)**

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
X 83249 05132016C	Blank (210) 2-EHHB Stock (219) 0.0 µg/L Rep K (211) 6.3 µg/L Rep E (212) 12.5 µg/L Rep E (213) 25 µg/L Rep E (214) 50 µg/L Rep E (215) 100 µg/L Rep E (216)	09 May 2016	10 May 2016	13 May 2016	NA	Accepted
X 83249 05132016D	2-EHHB Stock (728)	11 May 2016	12 May 2016	13 May 2016	NA	Accepted
X83249 05222016A	0.0 µg/L Rep J DUPLICATE (201)	02 May 2016	17 May 2016	22 May 2016	NA	Accepted
	Blank (739) 0.0 µg/L Rep L (729) 6.3 µg/L Rep F (730) 12.5 µg/L Rep F (731) 25 µg/L Rep F (732) 50 µg/L Rep F (733) 100 µg/L Rep F (734) 2-EHHB Stock (735)	16 May 2016				
X 83249 05222016C	6.3 µg/L Rep D (202) 12.5 µg/L Rep D (203)	02 May 2016	19 May 2016	22 May 2016	NA	Accepted
	2-EHHB Stock (738)	18 May 2016				

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
X 83249 05252016A	Blank (1337) 0.0 µg/L Rep M (740) 6.3 µg/L Rep G (741) 12.5 µg/L Rep G (742) 25 µg/L Rep G (743) 50 µg/L Rep G (744) 100 µg/L Rep G (745) 2-EHHB Stock (746)	23 May 2016	24 May 2016	25 May 2016	NA	Accepted
X 83249 05272016A	2-EHHB Stock (1338)	25 May 2016	26 May 2016	27 May 2016	NA	Accepted
X 83249 06062016B	Blank (1339) 0.0 µg/L Rep N (1340) 6.3 µg/L Rep H (1341) 12.5 µg/L Rep H (1342) 25 µg/L Rep H (1343) 50 µg/L Rep H (1344) 100 µg/L Rep H (1345) 2-EHHB Stock (1346)	01 June 2016	05 June 2016	06 June 2016	NA	Accepted
X 83249 06082016B	Blank (1349) 0.0 µg/L Rep O (1350) 6.3 µg/L Rep I (1351) 12.5 µg/L Rep I (1352) 25 µg/L Rep I (1353) 50 µg/L Rep I (1354) 100 µg/L Rep I (1355) 2-EHHB Stock (1356)	06 June 2016	08 June 2016	08 June 2016	NA	Accepted

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
X 83249 06132016B	2-EHHB Stock (1359)	08 June 2016	13 June 2016	13 June 2016	NA	Accepted
X 83249 06162016A	Blank (1360) 0.0 µg/L Rep P (1361) 6.3 µg/L Rep J (1362) 12.5 µg/L Rep J (1363) 25 µg/L Rep J (1364) 50 µg/L Rep J (1365) 100 µg/L Rep J (1366) 2-EHHB Stock (1367)	13 June 2016	14 June 2016	16 June 2016	NA	Accepted
X 83249 06172016B	2-EHHB Stock (1370)	15 June 2016	16 June 2016	17 June 2016	NA	Accepted
X 83249 06222016B	Blank (1371) 0.0 µg/L Rep Q (1372) 6.3 µg/L Rep K (1373) 12.5 µg/L Rep K (1374) 25 µg/L Rep K (1375) 50 µg/L Rep K (1376) 100 µg/L Rep K (1377) 2-EHHB Stock (1378)	20 June 2016	21 June 2016	22 June 2016	NA	Accepted
X 83249 06242016Z	2-EHHB Stock (1381)	22 June 2016	24 June 2016	24 June 2016	NA	Accepted

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
X 83249 06292016A	Blank (1382) 0.0 µg/L Rep R (1383) 6.3 µg/L Rep L (1384) 12.5 µg/L Rep L (1385) 25 µg/L Rep L (1386) 50 µg/L Rep L (1387) 100 µg/L Rep L (1388) 2-EHHB Stock (1389)	27 June 2016	28 June 2016	29 June 2016	NA	Accepted
X 83249 06302016B	2-EHHB Stock (1392)	29 June 2016	30 June 2016	30 June 2016	NA	Accepted
CI5038 83249 07112016B	Blank (1651) 0.0 µg/L Rep S (1562) 6.3 µg/L Rep A (1563) 12.5 µg/L Rep A (1564) 25 µg/L Rep A (1565) 50 µg/L Rep A (1566) 100 µg/L Rep A (1567) 2-EHHB Stock (1568)	05 July 2016	08 July 2016	11 July 2016	NA	Accepted
	2-EHHB Stock (1571)	06 July 2016				
X 83249 07142016A	Blank (1572) 0.0 µg/L Rep T (1573) 6.3 µg/L Rep B (1574) 12.5 µg/L Rep B (1575) 25 µg/L Rep B (1576) 50 µg/L Rep B (1577) 100 µg/L Rep B (1578) 2-EHHB Stock (1579)	11 July 2016	13 July 2016	14 July 2016	NA	Accepted

Table 1 **Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)**

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
X 83249 07202016A	Blank (1583) 0.0 µg/L Rep I (1584) 6.3 µg/L Rep C (1585) 12.5 µg/L Rep C (1586) 25 µg/L Rep C (1587) 50 µg/L Rep C (1588) 100 µg/L Rep C (1589) 2-EHHB Stock (1590)	18 July 2016	20 July 2016	20 July 2016	NA	Accepted
	2-EHHB Stock (1582)	13 July 2016				
X 83249 07262016A	Blank (1594) 0.0 µg/L Rep J (1596) 6.3 µg/L Rep D (1597) 12.5 µg/L Rep D (1598) 25 µg/L Rep D (1599) 50 µg/L Rep D (1600) 100 µg/L Rep D (1601) 2-EHHB Stock (1602)	25 July 2016	26 July 2016	26 July 2016	NA	Accepted
	2-EHHB Stock (1593)	20 July 2016				
X 83249 08052016A	Blank (1606) 0.0 µg/L Rep K (1607) 6.3 µg/L Rep E (1608) 12.5 µg/L Rep E (1609) 25 µg/L Rep E (1610) 50 µg/L Rep E (1611) 100 µg/L Rep E (1612) 2-EHHB Stock (1613)	01 August 2016	04 August 2016	05 August 2016	NA	Accepted
	2-EHHB Stock (1605)	27 July 2016				

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
X 83249 08092016A	Blank (1617) 0.0 µg/L Rep L (1618) 6.3 µg/L Rep F (1619) 12.5 µg/L Rep F (1620) 25 µg/L Rep F (1621) 50 µg/L Rep F (1622) 100 µg/L Rep F (1623) 2-EHHB Stock (1624)	08 August 2016	09 August 2016	09 August 2016	NA	Accepted
	2-EHHB Stock (1616)	03 August 2016				
X 83249 08162016A	Blank (1628) 0.0 µg/L Rep A (1629) 6.3 µg/L Rep A (1630) 12.5 µg/L Rep A (1631) 25 µg/L Rep A (1632) 50 µg/L Rep A (1633) 100 µg/L Rep A (1634) 2-EHHB Stock (1635)	15 August 2016	16 August 2016	16 August 2016	NA	Accepted
	2-EHHB Stock (1627)	10 August 2016				
CI5038 83249 08282016A	Blank (1639) 0.0 µg/L Rep B (1640) 6.3 µg/L Rep B (1641) 12.5 µg/L Rep B (1642) 25 µg/L Rep B (1643) 50 µg/L Rep B (1644) 100 µg/L Rep B (1645) 2-EHHB Stock (1646)	22 August 2016	24 August 2016	28 August 2016	NA	Accepted
	2-EHHB Stock (1638)	16 August 2016				
	2-EHHB Stock (1649)	23 August 2016				

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
CI5038 83249 08312016A	Blank (2490) 0.0 µg/L Rep C (2491) 6.3 µg/L Rep C (2492) 12.5 µg/L Rep C (2493) 25 µg/L Rep C (2494) 50 µg/L Rep C (2495) 100 µg/L Rep C (2496) 2-EHHB Stock (2497)	29 August 2016	30 August 2016	31 August 2016	NA	Accepted
CI5038 83249 09092016A	Blank (2501) 0.0 µg/L Rep D (2502) 6.3 µg/L Rep D (2503) 12.5 µg/L Rep D (2504) 25 µg/L Rep D (2505) 50 µg/L Rep D (2506) 100 µg/L Rep D (2507) 2-EHHB Stock (2508)	07 September 2016	09 September 2016	09 September 2016	NA	Accepted
	2-EHHB Stock (2500)	30 August 2016				
	2-EHHB Stock (2511)	06 September 2016				
CI5038 83249 09132016A	Blank (2512) 0.0 µg/L Rep E (2513) 6.3 µg/L Rep E (2514) 12.5 µg/L Rep E (2515) 25 µg/L Rep E (2516) 50 µg/L Rep E (2517) 100 µg/L Rep E (2518) 2-EHHB Stock (2519)	12 September 2016	14 September 2016	14 September 2016	NA	Accepted

Table 1 Data Summary of Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Sample Analysis (continued)

LC-MS/MS File Name	Sample Identification	Sample Collection Date	Sample Processing Date	LC-MS/MS Analysis Date	Deviation from Method	Run Accepted or Rejected
CI5038 83249 09202016A	Blank (2522) 0.0 µg/L Rep F (2523) 6.3 µg/L Rep F (2524) 12.5 µg/L Rep F (2525) 25 µg/L Rep F (2526) 50 µg/L Rep F (2527) 100 µg/L Rep F (2528) 2-EHHB Stock (2529)	19 September 2016	20 September 2016	20 September 2016	NA	Accepted
CI5038 83249 09302016B	Blank (2532) 0.0 µg/L Rep G (2533) 6.3 µg/L Rep G (2534) 12.5 µg/L Rep G (2535) 25 µg/L Rep G (2536) 50 µg/L Rep G (2537) 100 µg/L Rep G (2538) 2-EHHB Stock (2539)	26 September 2016	29 September 2016	30 September 2016	NA	Accepted
CI5038 83249 10042016B	Blank (2542) 0.0 µg/L Rep H (2543) 6.3 µg/L Rep H (2544) 12.5 µg/L Rep H (2545) 25 µg/L Rep H (2546) 50 µg/L Rep H (2547) 100 µg/L Rep H (2548) 2-EHHB Stock (2549)	03 October 2016	04 October 2016	04 October 2016	NA	Accepted

Table 2. QC Data of 2-Ethylhexyl 4-Hydroxybenzoate Measured in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Samples

	Nominal Concentration			
	Low Spike		High Spike	
	2.00 ng/mL		100 ng/mL	
LC-MS/MS Filename:	Measured Concentration (ng/mL)	% Recovery	Measured Concentration (ng/mL)	% Recovery
CI5038 83249 02242016A	2.48	124	112	112
CI5038 83249 03022016A	2.17	109	113	113
CI5038 83249 03032016E	2.14	107	118	118
CI5038 83249 03092016A & X 83249 03112016Brev1	2.12	106 [a]	105	105 [a]
CI5038 83249 03182016B	2.03	102	97.9	98
X 83249 03112016A	2.04	102	99.3	99
X 83249 03152016A	2.15	108	102	102
CI5038 83249 03182016C	2.01	101	104	104
CI5038 83249 03222016A	2.04	102	99.4	99
CI5038 83249 03252016A	1.99	100	96.8	97
CI5038 83249 03302016C	2.00	100	98.8	99
CI5038 83249 03312016C	2.04	102	98.8	99
CI5038 83249 04052016B	1.88	94	95.2	95
CI5038 83249 04052016C	2.02	101	96.0	96
CI5038 83249 04072016A	2.00	100	97.7	98
CI5038 83249 04152016A	1.87	94	94.1	94
CI5038 83249 04152016C	1.89	95	93.9	94
X 83249 04202016A	2.08	104	100	100
X 83249 04212016B	2.05	103	99.6	100
X 83249 04262016B	2.04	102	102	102
X 83249 04282016Erev1	2.08	104	98.1	98
X83249 05042016Arev1 & X 83249 05062016C	1.98	99	94.9	95
	2.01	101	102	102
X 83249 05132016C	2.04	102	103	103
X 83249 05132016D	1.95	98	101	101
X83249 05222016A	2.10	105	104	104
X 83249 05222016C	2.02	101	97.4	97

[a] Sample re-diluted in duplicate and re-analyzed. Average of original and duplicate re-analyses reported.

Table 2. QC Data of 2-Ethylhexyl 4-hydroxybenzoate Measured in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Water Samples (continued)

	Nominal Concentration			
	Low Spike		High Spike	
	2.00 ng/mL		100 ng/mL	
LC-MS/MS Filename:	Measured Concentration (ng/mL)	% Recovery	Measured Concentration (ng/mL)	% Recovery
X 83249 05252016A	2.12	106	95.9	96
X 83249 05272016A	2.09	105	95.5	96
X 83249 06062016B	1.99	100	96.0	96
X 83249 06082016B	1.99	100	98.4	98
X 83249 06132016B	2.28	114	110	110
X 83249 06162016A	2.28	114	107	107
X 83249 06172016B	1.88	94	100	100
X 83249 06222016B	2.17	109	107	107
X 83249 06242016Z	2.22	111	107	107
X 83249 06292016A	2.27	114	106	106
X 83249 06302016B	2.22	111	113	113
CI5038 83249 07112016B	2.13	107	105	105
X 83249 07142016A	2.27	114	111	111
X 83249 07202016A	2.17	109	104	104
X 83249 07262016A	2.24	112	104	104
X 83249 08052016A	2.23	112	104	104
X 83249 08092016A	2.11	106	104	104
X 83249 08162016A	2.13	107	109	109
CI5038 83249 08282016A	2.19	110	95.7	96
CI5038 83249 08312016A	2.19	110	109	109
CI5038 82349 09092016A	2.08	104	110	110
CI5038 83249 09132016A	1.95	98	92.1	92
CI5038 83249 09202016A	1.97	99	96.3	96
CI5038 83249 09302016B	2.13	107	102	102
CI5038 83249 10042016B	2.08	104	114	114

[a] Sample re-diluted in duplicate and re-analyzed. Average of original and duplicate re-analyses reported.

Table 3 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Pre-Exposure Samples

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
001	Blank	NA	0.395
002	0.0 µg/L	0.00	<MQL [b]
003	6.3 µg/L	6.30	2.14
004	12.5 µg/L	12.5	1.61
005	25 µg/L	25.0	5.82
006	50 µg/L	50.0	13.0
008	100 µg/L	100	35.5
009	2-EHHB Stock	20.0 mg/L	7.02 mg/L [c]

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L

[c] Measured Conc. (mg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL) / 1000

NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 0 (Initiation)			
101	Blank	NA	<MQL [b]
102	0.0 µg/L Rep A	0.00	<MQL [b]
103	6.3 µg/L Rep A	6.30	0.714
104	12.5 µg/L Rep A	12.5	2.40
105	25 µg/L Rep A	25.0	5.43
106	50 µg/L Rep A	50.0	12.4
107	100 µg/L Rep A	100	32.4
108	2-EHHB Stock	20.0 mg/L	81.3 mg/L [c]
Study Day 0 (Initiation) (Duplicate)			
102	0.0 µg/L Rep A DUPLICATE	0.00	<MQL [b]
103	6.3 µg/L Rep A DUPLICATE	6.30	3.55
104	12.5 µg/L Rep A DUPLICATE	12.5	8.81
105	25 µg/L Rep A DUPLICATE	25.0	19.0
106	50 µg/L Rep A DUPLICATE	50.0	43.3
107	100 µg/L Rep A DUPLICATE	100	109
108	2-EHHB Stock DUPLICATE	20.0 mg/L	93.7 mg/L [c]
Study Day 2			
109	2-EHHB Stock	6.00 mg/L	10.4 mg/L [c]
Study Day 7			
113	Blank	NA	<MQL [b]
114	0.0 µg/L Rep B	0.00	<MQL [b]
115	6.3 µg/L Rep B	6.30	85.3 [d]
116	12.5 µg/L Rep B	12.5	52.8 [d]
117	25 µg/L Rep B	25.0	52.4 [d]
118	50 µg/L Rep B	50.0	60.9 [d]
119	100 µg/L Rep B	100	135 [d]
120	2-EHHB Stock	20.0 mg/L	18.6 mg/L [c, d]

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
[c] Measured Conc. (mg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL) / 1000
[d] Sample re-diluted in duplicate and re-analyzed. Average of original and duplicate re-analyses reported.
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 7 (Duplicate)			
114	0.0 µg/L Rep B DUPLICATE	0.00	<MQL [b]
115	6.3 µg/L Rep B DUPLICATE	6.30	1.57
116	12.5 µg/L Rep B DUPLICATE	12.5	3.81
117	25 µg/L Rep B DUPLICATE	25.0	14.0
118	50 µg/L Rep B DUPLICATE	50.0	37.7
119	100 µg/L Rep B DUPLICATE	100	75.4
Study Day 9			
121	2-EHHB Stock	20.0 mg/L	6.14 mg/L [c]
Study Day 14			
122	2-EHHB Stock	20.0 mg/L	6.00 mg/L [c]
123	Blank	NA	<MQL [b]
124	0.0 µg/L Rep C	0.00	0.443
125	6.3 µg/L Rep C	6.30	1.66
126	12.5 µg/L Rep C	12.5	4.12
127	25 µg/L Rep C	25.0	13.4
128	50 µg/L Rep C	50.0	37.0
129	100 µg/L Rep C	100	80.4
Study Day 14 (Duplicate)			
124	0.0 µg/L Rep C DUPLICATE	0.00	2.97
125	6.3 µg/L Rep C DUPLICATE	6.30	<MQL [b, d]
126	12.5 µg/L Rep C DUPLICATE	12.5	<MQL [b, d]
127	25 µg/L Rep C DUPLICATE	25.0	<MQL [b, d]
128	50 µg/L Rep C DUPLICATE	50.0	<MQL [b, d]
129	100 µg/L Rep C DUPLICATE	100	<MQL [b, d]
Study Day 16			
132	2-EHHB Stock	6.00 mg/L	6.16 mg/L [c]

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
[c] Measured Conc. (mg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL) / 1000
[d] It was determined that these samples were not test system samples, but inadvertently prepared blanks.
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 21			
133	2-EHHB Stock	20,000	5,560
134	Blank	NA	<MQL [b]
135	0.0 µg/L Rep D	0.00	<MQL [b]
136	6.3 µg/L Rep D	6.30	1.58
137	12.5 µg/L Rep D	12.5	5.60
138	25 µg/L Rep D	25.0	15.7
139	50 µg/L Rep D	50.0	30.1
140	100 µg/L Rep D	100	62.0
Study Day 23			
143	2-EHHB Stock	6,000	6,470
Study Day 28			
144	0.0 µg/L Rep E	0.00	0.602
145	6.3 µg/L Rep E	6.30	0.457
146	12.5 µg/L Rep E	12.5	2.38
147	25 µg/L Rep E	25.0	10.8
148	50 µg/L Rep E	50.0	33.3
149	100 µg/L Rep E	100	84.0
150	2-EHHB Stock	20,000	4,830
151	Blank	NA	<MQL [b]
Study Day 28 (Duplicate)			
144	0.0 µg/L Rep E DUPLICATE	0.00	0.499
145	6.3 µg/L Rep E DUPLICATE	6.30	0.967
146	12.5 µg/L Rep E DUPLICATE	12.5	3.99
147	25 µg/L Rep E DUPLICATE	25.0	11.0
148	50 µg/L Rep E DUPLICATE	50.0	40.5
149	100 µg/L Rep E DUPLICATE	100	95.4
Study Day 30			
154	2-EHHB Stock	6,000	10,300

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 35			
155	0.0 µg/L Rep F	0.00	0.226
156	6.3 µg/L Rep F	6.30	0.796
157	12.5 µg/L Rep F	12.5	3.28
158	25 µg/L Rep F	25.0	13.0
159	50 µg/L Rep F	50.0	46.3
160	100 µg/L Rep F	100	118
161	2-EHHB Stock	20,000	4,500
162	Blank	NA	<MQL [b]
Study Day 35 (Duplicate)			
155	0.0 µg/L Rep F DUPLICATE	0.00	<MQL [b]
Study Day 37			
165	2-EHHB Stock	6,000	7,900
Study Day 42			
166	0.0 µg/L Rep G	0.00	<MQL [b]
167	6.3 µg/L Rep A	6.30	0.919
168	12.5 µg/L Rep A	12.5	2.93
169	25 µg/L Rep A	25.0	10.6
170	50 µg/L Rep A	50.0	47.1
171	100 µg/L Rep A	100	124
174	2-EHHB Stock	20,000	8,620
175	Blank	NA	<MQL [b]
Study Day 44			
176	2-EHHB Stock	6,000	4,500

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 49			
179	0.0 µg/L Rep H	0.00	<MQL [b]
180	6.3 µg/L Rep B	6.30	4.43
181	12.5 µg/L Rep B	12.5	6.56
182	25 µg/L Rep B	25.0	13.8
183	50 µg/L Rep B	50.0	40.8
184	100 µg/L Rep B	100	127
177	2-EHHB Stock	20,000	9,300
178	Blank	0.00	<MQL [b]
Study Day 51			
187	2-EHHB Stock	6,000	9,240
Study Day 56			
188	Blank	NA	<MQL [b]
189	2-EHHB Stock	6,000	5,210
190	0.0 µg/L Rep I	0.00	302 [c]
191	6.3 µg/L Rep C	6.30	2.47
192	12.5 µg/L Rep C	12.5	3.35
193	25 µg/L Rep C	25.0	13.6
194	50 µg/L Rep C	50.0	37.1
195	100 µg/L Rep C	100	118
Study Day 56 (Duplicate)			
190	0.0 µg/L Rep I DUPLICATE	0.00	0.256
Study Day 58			
198	2-EHHB Stock	6,000	5,150

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
[c] Sample further diluted and re-analyzed.
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 63			
199	Blank	NA	<MQL [b]
200	2-EHHB Stock	6,000	4,420
201	0.0 µg/L Rep J	0.00	6.56 [c]
202	6.3 µg/L Rep D	6.30	6.02
203	12.5 µg/L Rep D	12.5	3.03
204	25 µg/L Rep D	25.0	14.6
205	50 µg/L Rep D	50.0	50.0
206	100 µg/L Rep D	100	113
Study Day 63 (Duplicates)			
201	0.0 µg/L Rep J DUPLICATE	0.00	6.12
202	6.3 µg/L Rep D DUPLICATE	6.30	0.342
203	12.5 µg/L Rep D DUPLICATE	12.5	1.53
Study Day 65			
209	2-EHHB Stock	6,000	16,400
Study Day 70			
210	Blank	NA	<MQL [b]
219	2-EHHB Stock	6,000	4,640
211	0.0 µg/L Rep K	0.00	<MQL [b]
212	6.3 µg/L Rep E	6.30	4.19
213	12.5 µg/L Rep E	12.5	9.62
214	25 µg/L Rep E	25.0	24.5
215	50 µg/L Rep E	50.0	51.8
216	100 µg/L Rep E	100	125
Study Day 72			
728	2-EHHB Stock	6,000	15,900

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
[c] Sample re-diluted in duplicate and re-analyzed. Average of original and duplicate re-analyses reported.
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 77			
739	Blank	NA	<MQL [b]
729	0.0 µg/L Rep L	0.00	<MQL [b]
730	6.3 µg/L Rep F	6.30	1.07
731	12.5 µg/L Rep F	12.5	2.82
732	25 µg/L Rep F	25.0	11.8
733	50 µg/L Rep F	50.0	40.4
734	100 µg/L Rep F	100	117
735	2-EHHB Stock	6,000	4,840
Study Day 79			
738	2-EHHB Stock	6,000	5,630
Study Day 84			
1337	Blank	NA	<MQL [b]
740	0.0 µg/L Rep M	0.00	<MQL [b]
741	6.3 µg/L Rep G	6.30	2.44
742	12.5 µg/L Rep G	12.5	8.11
743	25 µg/L Rep G	25.0	18.9
744	50 µg/L Rep G	50.0	42.9
745	100 µg/L Rep G	100	92.6
746	2-EHHB Stock	6,000	4,400
Study Day 86			
1338	2-EHHB Stock	6,000	4,280
Study Day 93			
1339	Blank	NA	<MQL [b]
1340	0.0 µg/L Rep N	0.00	<MQL [b]
1341	6.3 µg/L Rep H	6.30	3.14
1342	12.5 µg/L Rep H	12.5	7.23
1343	25 µg/L Rep H	25.0	18.9
1344	50 µg/L Rep H	50.0	40.3
1345	100 µg/L Rep H	100	93.2
1346	2-EHHB Stock	6,000	6,440

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 98			
1349	Blank	NA	<MQL [b]
1350	0.0 µg/L Rep O	0.00	0.228
1351	6.3 µg/L Rep I	6.30	5.01
1352	12.5 µg/L Rep I	12.5	10.6
1353	25 µg/L Rep I	25.0	23.0
1354	50 µg/L Rep I	50.0	46.3
1355	100 µg/L Rep I	100	94.4
1356	2-EHHB Stock	6,000	5,590
Study Day 100			
1359	2-EHHB Stock	6,000	5,770
Study Day 105			
1360	Blank	NA	<MQL [b]
1361	0.0 µg/L Rep P	0.00	<MQL [b]
1362	6.3 µg/L Rep J	6.30	2.63
1363	12.5 µg/L Rep J	12.5	11.0
1364	25 µg/L Rep J	25.0	28.4
1365	50 µg/L Rep J	50.0	67.0
1366	100 µg/L Rep J	100	119
1367	2-EHHB Stock	6,000	5,590
Study Day 107			
1370	2-EHHB Stock	6,000	5,880
Study Day 112			
1371	Blank	NA	<MQL [b]
1372	0.0 µg/L Rep Q	0.00	<MQL [b]
1373	6.3 µg/L Rep K	6.30	7.18
1374	12.5 µg/L Rep K	12.5	17.5
1375	25 µg/L Rep K	25.0	34.1
1376	50 µg/L Rep K	50.0	61.9
1377	100 µg/L Rep K	100	115
1378	2-EHHB Stock	6,000	7,720

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 114			
1381	2-EHHB Stock	6,000	7,310
Study Day 119			
1382	Blank	NA	<MQL [b]
1383	0.0 µg/L Rep R	0.00	<MQL [b]
1384	6.3 µg/L Rep L	6.30	12.6
1385	12.5 µg/L Rep L	12.5	22.6
1386	25 µg/L Rep L	25.0	43.8
1387	50 µg/L Rep L	50.0	58.8
1388	100 µg/L Rep L	100	114
1389	2-EHHB Stock	6,000	6,340
Study Day 121			
1392	2-EHHB Stock	6,000	6,240
Study Day 127			
1561	Blank	NA	<MQL [b]
1562	0.0 µg/L Rep S	0.00	<MQL [b]
1563	6.3 µg/L Rep A	6.30	12.5
1564	12.5 µg/L Rep A	12.5	21.0
1565	25 µg/L Rep A	25.0	34.5
1566	50 µg/L Rep A	50.0	58.3
1567	100 µg/L Rep A	100	106
1568	2-EHHB Stock	6,000	5,730
Study Day 128			
1571	2-EHHB Stock	6,000	5,680

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 133			
1572	Blank	NA	<MQL [b]
1573	0.0 µg/L Rep T	0.00	<MQL [b]
1574	6.3 µg/L Rep B	6.30	10.2
1575	12.5 µg/L Rep B	12.5	16.7
1576	25 µg/L Rep B	25.0	34.7
1577	50 µg/L Rep B	50.0	56.4
1578	100 µg/L Rep B	100	101
1579	2-EHHB Stock	6,000	6,030
Study Day 135			
1582	2-EHHB Stock	6,000	5,840
Study Day 140			
1583	Blank	NA	<MQL [b]
1584	0.0 µg/L Rep I	0.00	<MQL [b]
1585	6.3 µg/L Rep C	6.30	10.6
1586	12.5 µg/L Rep C	12.5	18.0
1587	25 µg/L Rep C	25.0	27.1
1588	50 µg/L Rep C	50.0	51.1
1589	100 µg/L Rep C	100	92.8
1590	2-EHHB Stock	6,000	5,360
Study Day 142			
1593	2-EHHB Stock	6,000	6,010
Study Day 147			
1594	Blank	NA	<MQL [b]
1596	0.0 µg/L Rep J	0.00	<MQL [b]
1597	6.3 µg/L Rep D	6.30	6.50
1598	12.5 µg/L Rep D	12.5	12.8
1599	25 µg/L Rep D	25.0	22.9
1600	50 µg/L Rep D	50.0	48.2
1601	100 µg/L Rep D	100	103
1602	2-EHHB Stock	6,000	5,730

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 149			
1605	2-EHHB Stock	6,000	5,680
Study Day 154			
1606	Blank	NA	<MQL [b]
1607	0.0 µg/L Rep K	0.00	<MQL [b]
1608	6.3 µg/L Rep E	6.30	8.36
1609	12.5 µg/L Rep E	12.5	15.3
1610	25 µg/L Rep E	25.0	26.6
1611	50 µg/L Rep E	50.0	52.1
1612	100 µg/L Rep E	100	94.8
1613	2-EHHB Stock	6,000	6,420
Study Day 156			
1616	2-EHHB Stock	6,000	7,000
Study Day 161			
1617	Blank	NA	<MQL [b]
1618	0.0 µg/L Rep L	0.00	<MQL [b]
1619	6.3 µg/L Rep F	6.30	7.51
1620	12.5 µg/L Rep F	12.5	15.5
1621	25 µg/L Rep F	25.0	30.4
1622	50 µg/L Rep F	50.0	53.6
1623	100 µg/L Rep F	100	102
1624	2-EHHB Stock	6,000	6,450
Study Day 163			
1627	2-EHHB Stock	6,000	5,830

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 168			
1628	Blank	NA	<MQL [b]
1629	0.0 µg/L Rep A	0.00	<MQL [b]
1630	6.3 µg/L Rep A	6.30	6.49
1631	12.5 µg/L Rep A	12.5	12.9
1632	25 µg/L Rep A	25.0	25.0
1633	50 µg/L Rep A	50.0	47.5
1634	100 µg/L Rep A	100	102
1635	2-EHHB Stock	6,000	5,510
Study Day 169			
1638	2-EHHB Stock	6,000	6,070
Study Day 175			
1639	Blank	NA	<MQL [b]
1640	0.0 µg/L Rep B	0.00	<MQL [b]
1641	6.3 µg/L Rep B	6.30	7.80
1642	12.5 µg/L Rep B	12.5	15.4
1643	25 µg/L Rep B	25.0	28.1
1644	50 µg/L Rep B	50.0	43.6
1645	100 µg/L Rep B	100	98.6
1646	2-EHHB Stock	6,000	6,190
Study Day 176			
1649	2-EHHB Stock	6,000	5,040
Study Day 182			
2490	Blank	NA	<MQL [b]
2491	0.0 µg/L Rep C	0.00	<MQL [b]
2492	6.3 µg/L Rep C	6.30	4.78
2493	12.5 µg/L Rep C	12.5	10.3
2494	25 µg/L Rep C	25.0	20.8
2495	50 µg/L Rep C	50.0	52.2
2496	100 µg/L Rep C	100	96.8
2497	2-EHHB Stock	6,000	5,800

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 183			
2500	2-EHHB Stock	6,000	7,800
Study Day 190			
2511	2-EHHB Stock	6,000	5,010
Study Day 191			
2501	Blank	NA	<MQL [b]
2502	0.0 µg/L Rep D	0.00	<MQL [b]
2503	6.3 µg/L Rep D	6.30	3.63
2504	12.5 µg/L Rep D	12.5	9.33
2505	25 µg/L Rep D	25.0	20.9
2506	50 µg/L Rep D	50.0	40.8
2507	100 µg/L Rep D	100	86.2
2508	2-EHHB Stock	6,000	5,540
Study Day 196			
2512	Blank	NA	<MQL [b]
2513	0.0 µg/L Rep E	0.00	<MQL [b]
2514	6.3 µg/L Rep E	6.30	7.13
2515	12.5 µg/L Rep E	12.5	14.1
2516	25 µg/L Rep E	25.0	23.9
2517	50 µg/L Rep E	50.0	47.0
2518	100 µg/L Rep E	100	84.3
2519	2-EHHB Stock	6,000	4,900
Study Day 203			
2522	Blank	NA	<MQL [b]
2523	0.0 µg/L Rep F	0.00	<MQL [b]
2524	6.3 µg/L Rep F	6.30	3.61
2525	12.5 µg/L Rep F	12.5	8.71
2526	25 µg/L Rep F	25.0	19.0
2527	50 µg/L Rep F	50.0	34.9
2528	100 µg/L Rep F	100	77.8
2529	2-EHHB Stock	6,000	4,800

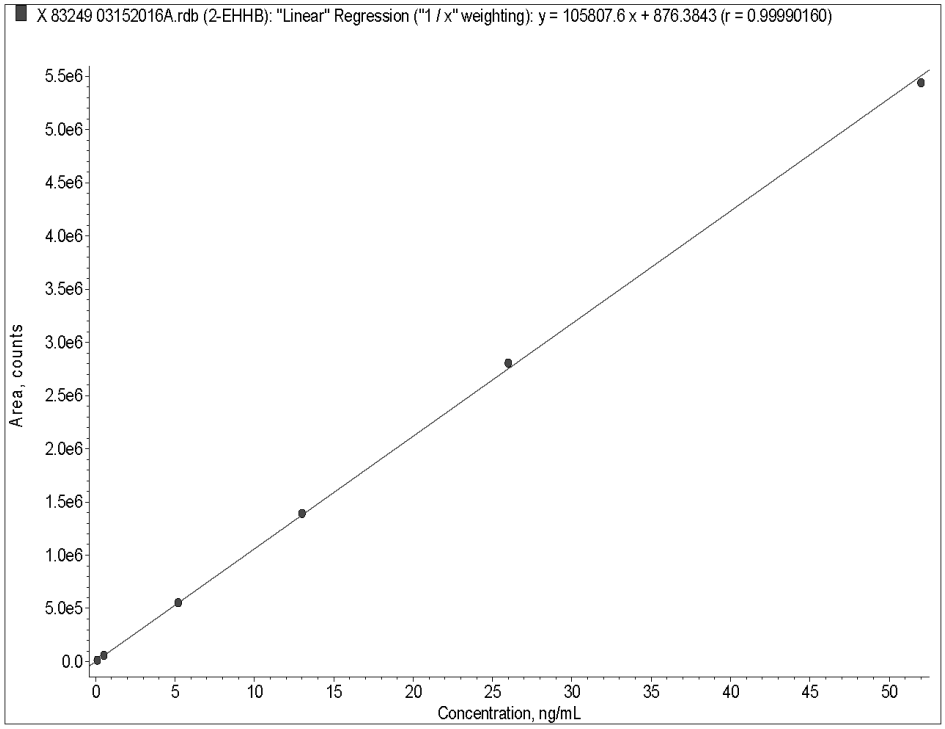
[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Table 4 Concentrations of 2-Ethylhexyl 4-Hydroxybenzoate in Medaka Extended One-Generation Reproduction Test (MEOGRT) Study Exposure Samples (continued)

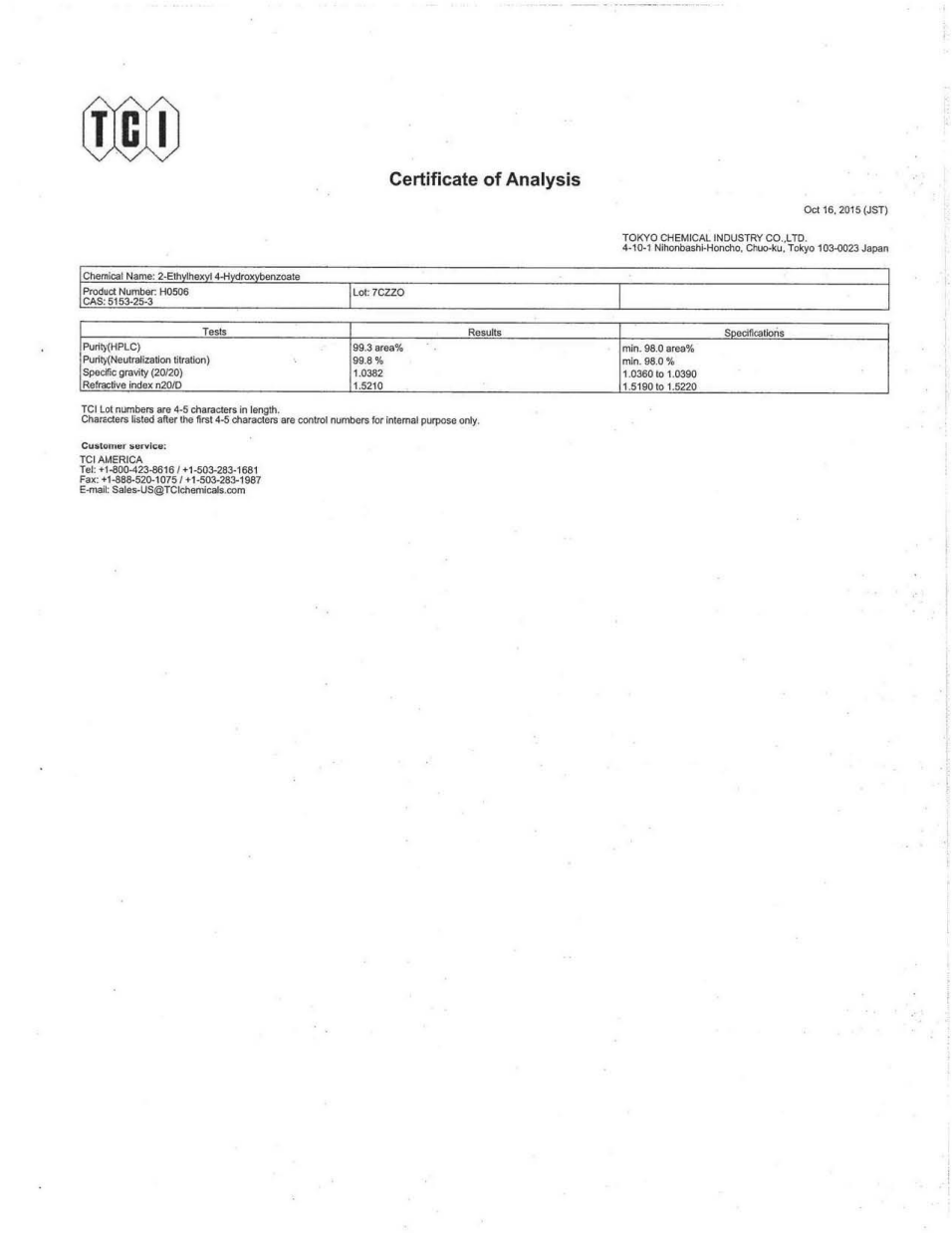
Sample Number	Sample ID	Nominal Conc. (µg/L)	Measured Conc. (µg/L) [a]
Study Day 210			
2532	Blank	NA	<MQL [b]
2533	0.0 µg/L Rep G	0.00	<MQL [b]
2534	6.3 µg/L Rep G	6.30	4.02
2535	12.5 µg/L Rep G	12.5	8.76
2536	25 µg/L Rep G	25.0	18.1
2537	50 µg/L Rep G	50.0	37.8
2538	100 µg/L Rep G	100	65.9
2539	2-EHHB Stock	6,000	7,290
Study Day 217			
2542	Blank	NA	<MQL [b]
2543	0.0 µg/L Rep H	0.00	<MQL [b]
2544	6.3 µg/L Rep H	6.30	6.40
2545	12.5 µg/L Rep H	12.5	11.3
2546	25 µg/L Rep H	25.0	19.8
2547	50 µg/L Rep H	50.0	34.8
2548	100 µg/L Rep H	100	69.1
2549	2-EHHB Stock	6,000	4,300

[a] Measured Conc. (µg/L) = Measured Conc. from Curve (ng/mL) × Analysis Volume (mL) / Sample Volume (mL)
[b] MQL = 0.208 µg/L
NA = Not applicable

Figure 1 Typical Calibration Curve for 2-Ethylhexyl 4-Hydroxybenzoate from the Medaka Extended One-Generation Reproductive Test Water Sample Analysis



APPENDIX 1 CERTIFICATE OF ANALYSIS



Certificate of Analysis

Oct 16, 2015 (JST)

TOKYO CHEMICAL INDUSTRY CO.,LTD.
4-10-1 Nihonbashi-Honcho, Chuo-ku, Tokyo 103-0023 Japan

Chemical Name: 2-Ethylhexyl 4-Hydroxybenzoate		
Product Number: H0506 CAS: 5153-25-3	Lot: 7CZZO	

Tests	Results	Specifications
Purity(HPLC)	99.3 area%	min. 98.0 area%
Purity(Neutralization titration)	99.8 %	min. 98.0 %
Specific gravity (20/20)	1.0382	1.0360 to 1.0390
Refractive index n20/D	1.5210	1.5190 to 1.5220

TCI Lot numbers are 4-5 characters in length.
Characters listed after the first 4-5 characters are control numbers for internal purpose only.

Customer service:

TCI AMERICA
Tel: +1-800-423-8616 / +1-503-283-1681
Fax: +1-888-520-1075 / +1-503-283-1987
E-mail: Sales-US@TCIchemicals.com

APPENDIX 2 RAW DATA SHEETS

Note: It is acknowledged that the analytical chemistry principal investigator (Tom Leak) signed raw data from the chemistry phase as study director; this is the result of an internal process error at EAG and all of Tom Leak's signatures should be taken as those of the analytical chemistry principal investigator, not study director.

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Test Samples_24Feb16
Data file name: CI5038 83249 02242016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-001	Blank	0.00	0.19736	5	10	0.395	NA	
83249-002	0.0 µg/L	0.00	< low std	5	10	< MQL [a]	NA	
83249-003	6.3 µg/L	6.30	1.07234	5	10	2.14	34%	
83249-004	12.5 µg/L	12.5	0.40266	5	20	1.61	13%	
83249-005	25 µg/L	25.0	0.58221	5	50	5.82	23%	
83249-006	50 µg/L	50.0	0.64941	5	100	13.0	26%	
83249-007	100 µg/L	100	0.88770	5	200	35.5	36%	
83249-008	2-EHHB Stock	20.0 mg/L	0.87699	5	40000	7.02	35%	②
83249-1	Low Spike	2.00	1.23970	5	10	2.48	124%	
83249-2	High Spike	100	2.80177	5	200	112	112%	

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② Measured Concentration (mg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL) / 1000

Prepared by: Dinah R. O'Connor Date: 04Mar16
Reviewed by: Alexa T. Bermudez Date: 14Mar16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Updates.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Initiation_01Mar16 (Re-Run)
Data file name: CI5038 83249 03022016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-101	Blank	0.00	No Peak	5	10	< MQL [a]	NA	
83249-102	0.0 µg/L Rep A	0.00	No Peak	5	10	< MQL [a]	NA	
83249-103	6.3 µg/L Rep A	6.30	0.35699	5	10	0.714	11%	
83249-104	12.5 µg/L Rep A	12.5	0.60103	5	20	2.40	19%	
83249-105	25 µg/L Rep A	25.0	0.54337	5	50	5.43	22%	
83249-106	50 µg/L Rep A	50.0	0.61890	5	100	12.4	25%	
83249-107	100 µg/L Rep A	100	0.80970	5	200	32.4	32%	
83249-108	2-EHHB Stock	20.0 mg/L	25.40128	5	16000	81.3	407%	②
83249-3	Low Spike	2.00	1.08528	5	10	2.17	109%	
83249-4	High Spike	100	2.83005	5	200	113	113%	

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② Measured Concentration (mg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL) / 1000

Prepared by: Date: 03Nov16
Reviewed by: Date: 14Nov16
Study Director: Date: Jan 3, 17

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Updates.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Initiation DUPLICATE
Data file name: CI5038 83249 03032016E

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-102	0.0 µg/L Rep A DUPLICATE	0.00	No Peak	5	10	< MQL [a]	NA	
83249-103	6.3 µg/L Rep A DUPLICATE	6.30	1.77569	5	10	3.55	56%	
83249-104	12.5 µg/L Rep A DUPLICATE	12.5	2.20147	5	20	8.81	70%	
83249-105	25 µg/L Rep A DUPLICATE	25.0	1.89948	5	50	19.0	76%	
83249-106	50 µg/L Rep A DUPLICATE	50.0	2.16538	5	100	43.3	87%	
83249-107	100 µg/L Rep A DUPLICATE	100	2.73243	5	200	109	109%	
83249-108	2-EHHB Stock DUPLICATE	20.0 mg/L	29.29004	5	16000	93.7	469%	②
83249-109	2-EHHB Stock	6.00 mg/L	12.98484	5	4000	10.4	173%	②
83249-5	Low Spike	2.00	1.06981	5	10	2.14	107%	
83249-6	High Spike	100	2.94391	5	200	118	118%	

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② Measured Concentration (mg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL) / 1000

Prepared by: Deborah L. O'Connor Date: 04 Nov 16
Reviewed by: Alexis T. Bermudez Date: 15 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Updates.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 1 Re-dilutions
Data file name: CI5038 83249 03092016A and X 83249 03112016Brev1

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Analysis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-113	Blank	0.00	No Peak	5	10	< MQL [4]	NA	③
83249-114	0.0 µg/L Rep B	0.00	No Peak	5	10	< MQL [4]	NA	③
83249-115	6.3 µg/L Rep B	6.30	33.31015	5	10	66.6	1057%	③
83249-115	6.3 µg/L Rep B R-1	6.30	46.70727	5	10	93.4	1483%	
83249-115	6.3 µg/L Rep B R-2	6.30	47.91457	5	10	95.8	1521%	
					mean =	85.3	1354%	④
83249-116	12.5 µg/L Rep B	12.5	11.27473	5	20	45.1	361%	③
83249-116	12.5 µg/L Rep B R-1	12.5	14.29076	5	20	56.8	454%	
83249-116	12.5 µg/L Rep B R-2	12.5	14.08903	5	20	56.4	451%	
					mean =	52.8	422%	④
83249-117	25 µg/L Rep B	25.0	4.76079	5	50	47.6	190%	③
83249-117	25 µg/L Rep B R-1	25.0	5.45534	5	50	54.6	218%	
83249-117	25 µg/L Rep B R-2	25.0	5.49995	5	50	55.0	220%	
					mean =	52.4	210%	④
83249-118	50 µg/L Rep B	50.0	2.82982	5	100	56.6	113%	③
83249-118	50 µg/L Rep B R-1	50.0	3.16986	5	100	63.3	127%	
83249-118	50 µg/L Rep B R-2	50.0	3.14261	5	100	62.9	126%	
					mean =	60.9	122%	④
83249-119	100 µg/L Rep B	100	3.29573	5	200	132	132%	③
83249-119	100 µg/L Rep B R-1	100	3.37816	5	200	135	135%	
83249-119	100 µg/L Rep B R-2	100	3.42072	5	200	137	137%	
					mean =	135	135%	④
83249-120	2-EHHB Stock	20.0 mg/L	6.07602	5	16000	19.4	97%	②③
83249-120	2-EHHB Stock R-1	20.0 mg/L	5.69054	5	16000	18.1	91%	②
83249-120	2-EHHB Stock R-2	20.0 mg/L	5.67839	5	16000	18.2	91%	②
					mean =	18.6	93%	④
83249-7	Low Spike	2.00	1.13951	5	10	2.28	114%	③
83249-7	Low Spike R-1	2.00	1.01880	5	10	2.04	102%	
83249-7	Low Spike R-2	2.00	1.01417	5	10	2.03	102%	
					mean =	2.12	106%	④
83249-8	High Spike	100	2.99362	5	200	120	120%	③
83249-8	High Spike R-1	100	2.42189	5	200	96.9	97%	
83249-8	High Spike R-2	100	2.47045	5	200	98.8	99%	
					mean =	105	105%	④

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104\ \text{ng/mL} \times 10\ \text{mL}}{5\ \text{mL}} = 0.208\ \text{ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② Measured Concentration (mg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL) / 1000
③ Original results from data set CI5038 83249 03092016A.
④ Results are the average of original and re-dilution data and will be reported.

Prepared by: _____ Date: _____
Reviewed by: Alison J Bermudez Date: 15 Nov 16
Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

① Data corrected 15 Nov 16 ATB

BATT01-00393
FEL
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ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 1 DUPLICATE
Data file name: CI5038 83249 03182016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-114	0.0 µg/L Rep B DUPLICATE	0.00	< low std	5	10	< MQL [a]	NA	
83249-115	6.3 µg/L Rep B DUPLICATE	6.30	0.78361	5	10	1.57	25%	
83249-116	12.5 µg/L Rep B DUPLICATE	12.5	0.95144	5	20	3.81	30%	
83249-117	25 µg/L Rep B DUPLICATE	25.0	1.39806	5	50	14.0	56%	
83249-118	50 µg/L Rep B DUPLICATE	50.0	1.88641	5	100	37.7	75%	
83249-119	100 µg/L Rep B DUPLICATE	100	1.88514	5	200	75.4	75%	
83249-132	2-EHHB Stock	6.00 mg/L	1.92636	5	16000	6.16	103%	②
83249-13	Low Spike	2.00	1.01442	5	10	2.03	102%	
83249-14	High Spike	100	2.44692	5	200	97.9	98%	

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② Measured Concentration (mg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL) / 1000

Prepared by: Jennah R. O'Connor Date: 21 March

Reviewed by: Alexa T. Bermudez Date: 15 March

Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 1 Comparisons
Data file name: CI5038 83249 12092016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Analysis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-115	6.3 µg/L Rep B R-3	6.30	54.43888	5	10	109	1730% (1)
83249-115	6.3 µg/L Rep B R-4	6.30	51.83859	5	10	104	1651% (1)
83249-116	12.5 µg/L Rep B R-3	12.5	15.02077	5	20	60.1	481%
83249-116	12.5 µg/L Rep B R-4	12.5	14.90405	5	20	59.6	477%
83249-117	25 µg/L Rep B R-3	25.0	6.08495	5	50	60.8	243%
83249-117	25 µg/L Rep B R-4	25.0	6.05685	5	50	60.6	242%
83249-118	50 µg/L Rep B R-3	50.0	3.32434	5	100	66.5	133%
83249-118	50 µg/L Rep B R-4	50.0	3.28394	5	100	65.7	131%
83249-119	100 µg/L Rep B R-3	100	3.77128	5	200	151	151%
83249-119	100 µg/L Rep B R-4	100	3.72865	5	200	149	149%
83249-115	6.3 µg/L Rep B DUPLICATE R-1	6.30	0.78580	5	10	1.57	25%
83249-115	6.3 µg/L Rep B DUPLICATE R-2	6.30	0.75354	5	10	1.51	24%
83249-116	12.5 µg/L Rep B DUPLICATE R-1	12.5	0.93398	5	20	3.74	30%
83249-116	12.5 µg/L Rep B DUPLICATE R-2	12.5	0.89219	5	20	3.57	29%
83249-117	25 µg/L Rep B DUPLICATE R-1	25.0	1.43801	5	50	14.4	58%
83249-117	25 µg/L Rep B DUPLICATE R-2	25.0	1.43370	5	50	14.3	57%
83249-118	50 µg/L Rep B DUPLICATE R-1	50.0	1.91465	5	100	38.3	77%
83249-118	50 µg/L Rep B DUPLICATE R-2	50.0	1.94606	5	100	38.9	78%
83249-119	100 µg/L Rep B DUPLICATE R-1	100	1.95891	5	200	78.4	78%
83249-119	100 µg/L Rep B DUPLICATE R-2	100	1.87440	5	200	75.0	75%

* MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.106\ \text{ng/mL} \times 10\ \text{mL}}{5\ \text{mL}} = 0.212\ \text{ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

① Results not reported since standard curve did not comply with criteria established in SOP.

Prepared by: Date: 12 Dec 16
Reviewed by: Date: 12-Dec-16
Study Director: Date: Jan 3, 17

File Location: X:\Shared\Client\Batelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 03112016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-121	2-EHHB Stock	20.0 mg/L	1.91802	5	16000	6.14	31%	②
83249-9	Low Spike	2.00	1.02055	5	10	2.04	102%	
83249-10	High Spike	100	2.48367	5	200	99.3	99%	

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② Measured Concentration (mg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL) / 1000

Prepared by: Sarah R. O'Connor Date: 15 Nov 16
Reviewed by: Alexa T. Bermudez Date: 15 Nov 16
Study Director: [illegible] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 2
Data file name: X 83249 03152016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-122	2-EHHB Stock	20.0 mg/L	1.87527	5	16000	6.00	30%	②
83249-123	Blank	0.00	No Peak	5	10	< MQL [a]	NA	
83249-124	0.0 µg/L Rep C	0.00	0.22133	5	10	0.443	NA	
83249-125	6.3 µg/L Rep C	6.30	0.83068	5	10	1.66	26%	
83249-126	12.5 µg/L Rep C	12.5	1.03008	5	20	4.12	33%	
83249-127	25 µg/L Rep C	25.0	1.33956	5	50	13.4	54%	
83249-128	50 µg/L Rep C	50.0	1.84766	5	100	37.0	74%	
83249-129	100 µg/L Rep C	100	2.01059	5	200	80.4	80%	
83249-11	Low Spike	2.00	1.07371	5	10	2.15	108%	
83249-12	High Spike	100	2.56234	5	200	102	102%	

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② Measured Concentration (mg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL) / 1000

Prepared by: Donald R O'Connor Date: 16 Nov 16
Reviewed by: Alissa T. Bermudez Date: 15 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 2 DUPLICATE
Data file name: CI5038 83249 03182016C

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-124	0.0 µg/L Rep C DUPLICATE	0.00	1.48379	5	10	2.97	NA
83249-125	6.3 µg/L Rep C DUPLICATE	6.30	< low std	5	10	< MQL [a]	NA
83249-126	12.5 µg/L Rep C DUPLICATE	12.5	< low std	5	20	< MQL [a]	NA
83249-127	25 µg/L Rep C DUPLICATE	25.0	< low std	5	50	< MQL [a]	NA
83249-128	50 µg/L Rep C DUPLICATE	50.0	< low std	5	100	< MQL [a]	NA
83249-129	100 µg/L Rep C DUPLICATE	100	< low std	5	200	< MQL [a]	NA
83249-15	Low Spike	2.00	1.00272	5	10	2.01	101%
83249-16	High Spike	100	2.61083	5	200	104	104%

* MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Date: 21Nov16
Reviewed by: Date: 15Nov16
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 3
Data file name: CI5038 83249 03222016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Analysis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-133	2-EHHB Stock	20000	1.73828	5	16000	5560	28%
83249-134	Blank	0.00	< low std	5	10	< MQL [a]	NA
83249-135	0.0 µg/L Rep D	0.00	< low std	5	10	< MQL [a]	NA
83249-136	6.3 µg/L Rep D	6.30	0.79202	5	10	1.58	25%
83249-137	12.5 µg/L Rep D	12.5	1.39896	5	20	5.60	45%
83249-138	25 µg/L Rep D	25.0	1.56511	5	50	15.7	63%
83249-139	50 µg/L Rep D	50.0	1.50413	5	100	30.1	60%
83249-140	100 µg/L Rep D	100	1.55115	5	200	62.0	62%
83249-17	Low Spike	2.00	1.02071	5	10	2.04	102%
83249-18	High Spike	100	2.48541	5	200	99.4	99%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Date: 23 Mar. 16
Reviewed by: Date: 15 Nov 16
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: CI5038 83249 03252016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-143	2-EHHB Stock	6000	2.02057	5	16000	6470	108%
83249-19	Low Spike	2.00	0.99648	5	10	1.99	100%
83249-20	High Spike	100	2.42116	5	200	96.8	97%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Date: 28Nov16
Reviewed by: Date: 15Nov16
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 4
Data file name: CI5038 83249 03302016C

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-144	0.0 µg/L Rep E	0.00	0.30106	5	10	0.602	NA
83249-145	6.3 µg/L Rep E	6.30	0.22869	5	10	0.457	7%
83249-146	12.5 µg/L Rep E	12.5	0.59523	5	20	2.38	19%
83249-147	25 µg/L Rep E	25.0	1.08201	5	50	10.8	43%
83249-148	50 µg/L Rep E	50.0	1.66479	5	100	33.3	67%
83249-149	100 µg/L Rep E	100	2.10064	5	200	84.0	84%
83249-150	2-EHHB Stock	20000	1.50980	5	16000	4830	24%
83249-151	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-21	Low Spike	2.00	0.99911	5	10	2.00	100%
83249-22	High Spike	100	2.47000	5	200	98.8	99%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Date: 31 Nov 16
Reviewed by: Date: 15 Nov 16
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: CI5038 83249 03312016C

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-154	2-EHHB Stock	6000	3.23311	5	16000	10300	172%
83249-23	Low Spike	2.00	1.02036	5	10	2.04	102%
83249-24	High Spike	100	2.46958	5	200	98.8	99%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Derek R. O'Connor Date: 01/31/16
Reviewed by: Alexa T. Bermudez Date: 15 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 4 DUPLICATE
Data file name: CI5038 83249 04052016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-144	0.0 µg/L Rep E DUPLICATE	0.00	0.24930	5	10	0.499	NA
83249-145	6.3 µg/L Rep E DUPLICATE	6.30	0.48355	5	10	0.967	15%
83249-146	12.5 µg/L Rep E DUPLICATE	12.5	0.99638	5	20	3.99	32%
83249-147	25 µg/L Rep E DUPLICATE	25.0	1.09592	5	50	11.0	44%
83249-148	50 µg/L Rep E DUPLICATE	50.0	2.02310	5	100	40.5	81%
83249-149	100 µg/L Rep E DUPLICATE	100	2.38532	5	200	95.4	95%
83249-25	Low Spike	2.00	0.93841	5	10	1.88	94%
83249-26	High Spike	100	2.37875	5	200	95.2	95%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Date:
Reviewed by: Alexa T. Bermudez Date: 15Nov16
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 5
Data file name: CI5038 83249 04052016C

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-155	0.0 µg/L Rep F	0.00	0.11285	5	10	0.226	NA
83249-156	6.3 µg/L Rep F	6.30	0.39782	5	10	0.796	13%
83249-157	12.5 µg/L Rep F	12.5	0.82004	5	20	3.28	26%
83249-158	25 µg/L Rep F	25.0	1.30152	5	50	13.0	52%
83249-159	50 µg/L Rep F	50.0	2.31534	5	100	46.3	93%
83249-160	100 µg/L Rep F	100	2.94919	5	200	118	118%
83249-161	2-EHHB Stock	20000	1.40690	5	16000	4500	23%
83249-162	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-27	Low Spike	2.00	1.01122	5	10	2.02	101%
83249-28	High Spike	100	2.40055	5	200	96.0	96%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Deborah R C Date: 07 Apr 16
Reviewed by: Alexis T. Bermudez Date: 15 Nov 16
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: CI5038 83249 04072016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-165	2-EHHB Stock	6000	2.45386	5	16000	7900	132%
83249-29	Low Spike	2.00	0.99967	5	10	2.00	100%
83249-30	High Spike	100	2.44155	5	200	97.7	98%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 05APR16

Reviewed by: _____ Date: 15Nov16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 6
Data file name: CI5038 83249 04152016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-155	0.0 µg/L Rep F DUPLICATE	0.00	< low std	5	10	< MQL [a]	NA
83249-166	0.0 µg/L Rep G	0.00	No Peak	5	10	< MQL [a]	NA
83249-167	6.3 µg/L Rep A	6.30	0.45937	5	10	0.919	15%
83249-168	12.5 µg/L Rep A	12.5	0.73168	5	20	2.93	23%
83249-169	25 µg/L Rep A	25.0	1.06430	5	50	10.6	42%
83249-170	50 µg/L Rep A	50.0	2.35308	5	100	47.1	94%
83249-171	100 µg/L Rep A	100	3.11233	5	200	124	124%
83249-174	2-EHHB Stock	20000	2.69250	5	16000	8620	43%
83249-175	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-33	Low Spike	2.00	0.93255	5	10	1.87	94%
83249-34	High Spike	100	2.35155	5	200	94.1	94%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 27 May 16
Reviewed by: Alexa T Bermudez Date: 15 Nov 16
Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: CI5038 83249 04152016C

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-176	2-EHHB Stock	6000	1.41971	5	16000	4500	75%
83249-35	Low Spike	2.00	0.94724	5	10	1.89	95%
83249-36	High Spike	100	2.34738	5	200	93.9	94%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: _____

Reviewed by: Alexa T. Bermudez Date: 15 Nov 16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 7
Data file name: X 83249 04202016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-179	0.0 µg/L Rep H	0.00	No Peak	5	10	< MQL [a]	NA
83249-180	6.3 µg/L Rep B	6.30	2.21613	5	10	4.43	70%
83249-181	12.5 µg/L Rep B	12.5	1.63880	5	20	6.56	52%
83249-182	25 µg/L Rep B	25.0	1.38220	5	50	13.8	55%
83249-183	50 µg/L Rep B	50.0	2.03842	5	100	40.8	82%
83249-184	100 µg/L Rep B	100	3.16275	5	200	127	127%
83249-177	2-EHHB Stock	20000	2.90597	5	16000	9300	47%
83249-178	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-37	Low Spike	2.00	1.04205	5	10	2.08	104%
83249-38	High Spike	100	2.51001	5	200	100	100%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Derrick P. O'Connor Date: 02 Nov 16
Reviewed by: Alyssa T. Bermudez Date: 16 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 04212016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-187	2-EHHB Stock	6000	2.88665	5	16000	9240	154%
83249-39	Low Spike	2.00	1.02431	5	10	2.05	103%
83249-40	High Spike	100	2.49018	5	200	99.6	100%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Sarah R. O'C Date: 25 April 16
Reviewed by: Alexa T. Bermudez Date: 16 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 8
Data file name: X 83249 04262016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-188	Blank	0.00	No Peak	5	10	< MQL [a]	NA	
83249-189	2-EHHB Stock	6000	1.62707	5	16000	5210	87%	
83249-190	0.0 µg/L Rep I	0.00	~~136.67136~~	5	~~10~~	~~273~~	NA	②
83249-191	6.3 µg/L Rep C	6.30	1.23301	5	10	2.47	39%	
83249-192	12.5 µg/L Rep C	12.5	0.83792	5	20	3.35	27%	
83249-193	25 µg/L Rep C	25.0	1.36243	5	50	13.6	54%	
83249-194	50 µg/L Rep C	50.0	1.85598	5	100	37.1	74%	
83249-195	100 µg/L Rep C	100	2.95299	5	200	118	118%	
83249-41	Low Spike	2.00	1.02113	5	10	2.04	102%	
83249-42	High Spike	100	2.55968	5	200	102	102%	

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② DNU. Result is outside standard curve. Sample was further diluted and analyzed in data set X 83249 04282016Erev1.

Prepared by: Daniel P. O'C Date: 07 Nov 16
Reviewed by: Alyssa T. Bermudez Date: 16 Nov 16
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 04282016Erev1

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-190	0.0 µg/L Rep I	0.00	15.09161	5	100	302	NA	②
83249-190	0.0 µg/L Rep I DUPLICATE	0.00	0.12813	5	10	0.256	NA	
83249-198	2-EHHB Stock	6000	1.61012	5	16000	5150	86%	
83249-43	Low Spike	2.00	1.04196	5	10	2.08	104%	
83249-44	High Spike	100	2.45193	5	200	98.1	98%	

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② Result of further dilution will be reported to Week 8 data set filename X 83249 04262016B.

Prepared by: _____ Date: 6 Nov 16
Reviewed by: Alexa T. Bermudez Date: 16 Nov 16
Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 9
Data file name: X 83249 05042016Arev1 and X 83249 05062016C.

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Analysis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal	
83249-199	Blank	0.00	< low std	5	10	< MQL *	NA	
83249-200	2-EHHB Stock	6000	1.38054	5	16000	4420	74%	
83249-201	0.0 µg/L Rep J	0.00	3.50827	5	10	7.02	NA	②
83249-201	0.0 µg/L Rep J R-1	0.00	3.22230	5	10	6.44	NA	
83249-201	0.0 µg/L Rep J R-2	0.00	3.10949	5	10	6.22	NA	
					mean =	6.56	NA	
83249-202	6.3 µg/L Rep D	6.30	3.00791	5	10	6.02	96%	
83249-203	12.5 µg/L Rep D	12.5	0.75798	5	20	3.03	24%	
83249-204	25 µg/L Rep D	25.0	1.45890	5	50	14.6	58%	
83249-205	50 µg/L Rep D	50.0	2.50094	5	100	50.0	100%	
83249-206	100 µg/L Rep D	100	2.82998	5	200	113	113%	
83249-45	Low Spike	2.00	0.99176	5	10	1.98	99%	
83249-46	High Spike	100	2.37283	5	200	94.9	95%	
83249-209	2-EHHB Stock	6000	5.13821	5	16000	16400	273%	
83249-47	Low Spike	2.00	1.00585	5	10	2.01	101%	
83249-48	High Spike	100	2.54179	5	200	102	102%	

* MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)
② Sample was re-vialed in duplicate and anaylzed in X 83249 05062016C. Average of the three injections was reported.

Prepared by: Daniel R. O'Connor Date: 10 Nov 16
Reviewed by: Alexa T. Bermudez Date: 16 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 10
Data file name: X 83249 05132016C

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ⓘ (ng/mL)	% of Nominal
83249-210	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-219	2-EHHB Stock	6000	1.44863	5	16000	4640	77%
83249-211	0.0 µg/L Rep K	0.00	< low std	5	10	< MQL [a]	NA
83249-212	6.3 µg/L Rep E	6.30	2.09549	5	10	4.19	67%
83249-213	12.5 µg/L Rep E	12.5	2.40461	5	20	9.62	77%
83249-214	25 µg/L Rep E	25.0	2.45377	5	50	24.5	98%
83249-215	50 µg/L Rep E	50.0	2.58955	5	100	51.8	104%
83249-216	100 µg/L Rep E	100	3.13236	5	200	125	125%
83249-49	Low Spike	2.00	1.02048	5	10	2.04	102%
83249-50	High Spike	100	2.57822	5	200	103	103%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

ⓘ Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Daniel R. O'Connor Date: 07 NOV 16
Reviewed by: Alexa T. Bermudez Date: 14 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 05132016D

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-728	2-EHHB Stock	6000	4.95968	5	16000	15900	265%
83249-51	Low Spike	2.00	0.97725	5	10	1.95	98%
83249-52	High Spike	100	2.51702	5	200	101	101%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Daniel R. O'Connor Date: 16 Nov 16
Reviewed by: Alexa T. Bermudez Date: 16 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 11
Data file name: X 83249 05222016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-201	0.0 µg/L Rep J DUPLICATE	0.00	3.06158	5	10	6.12	NA
83249-739	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-729	0.0 µg/L Rep L	0.00	< low std	5	10	< MQL [a]	NA
83249-730	6.3 µg/L Rep F	6.30	0.53352	5	10	1.07	17%
83249-731	12.5 µg/L Rep F	12.5	0.70555	5	20	2.82	23%
83249-732	25 µg/L Rep F	25.0	1.17538	5	50	11.8	47%
83249-733	50 µg/L Rep F	50.0	2.01832	5	100	40.4	81%
83249-734	100 µg/L Rep F	100	2.93551	5	200	117	117%
83249-735	2-EHHB Stock	6000	1.51155	5	16000	4840	81%
83249-53	Low Spike	2.00	1.04936	5	10	2.10	105%
83249-54	High Spike	100	2.59716	5	200	104	104%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Date:
Reviewed by: Date:
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 05222016C

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-202	6.3 µg/L Rep D DUPLICATE	6.30	0.17101	5	10	0.342	5%
83249-203	12.5 µg/L Rep D DUPLICATE	12.5	0.38277	5	20	1.53	12%
83249-738	2-EHHB Stock	6000	1.75887	5	16000	5630	94%
83249-55	Low Spike	2.00	1.00859	5	10	2.02	101%
83249-56	High Spike	100	2.43588	5	200	97.4	97%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Derrick P. O'Connor Date: 23 Nov 16
Reviewed by: Alexa T. Bermudez Date: 16 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 12
Data file name: X 83249 05252016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1337	Blank	0.00	< low std	5	10	< MQL [a]	NA
83249-740	0.0 µg/L Rep M	0.00	No Peak	5	10	< MQL [a]	NA
83249-741	6.3 µg/L Rep G	6.30	1.22108	5	10	2.44	39%
83249-742	12.5 µg/L Rep G	12.5	2.02626	5	20	8.11	65%
83249-743	25 µg/L Rep G	25.0	1.88770	5	50	18.9	76%
83249-744	50 µg/L Rep G	50.0	2.14411	5	100	42.9	86%
83249-745	100 µg/L Rep G	100	2.31540	5	200	92.6	93%
83249-746	2-EHHB Stock	6000	1.37567	5	16000	4400	73%
83249-57	Low Spike	2.00	1.05875	5	10	2.12	106%
83249-58	High Spike	100	2.39797	5	200	95.9	96%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Derek R C Co Date: 17 Nov 16
Reviewed by: Alexa F. Bermudez Date: 16 Nov 16
Study Director: [illegible] Date: Nov 16, 16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 05272016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1338	2-EHHB Stock	6000	1.33704	5	16000	4280	71%
83249-59	Low Spike	2.00	1.04572	5	10	2.09	105%
83249-60	High Spike	100	2.38676	5	200	95.5	96%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 31 Nov 16
Reviewed by: Alexa T. Bermudez Date: 16 Nov 16
Study Director: _____ Date: 16 Nov 16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 13
Data file name: X 83249 06062016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1339	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1340	0.0 µg/L Rep N	0.00	< low std	5	10	< MQL [a]	NA
83249-1341	6.3 µg/L Rep H	6.30	1.56948	5	10	3.14	50%
83249-1342	12.5 µg/L Rep H	12.5	1.80684	5	20	7.23	58%
83249-1343	25 µg/L Rep H	25.0	1.89443	5	50	18.9	76%
83249-1344	50 µg/L Rep H	50.0	2.01522	5	100	40.3	81%
83249-1345	100 µg/L Rep H	100	2.32983	5	200	93.2	93%
83249-1346	2-EHHB Stock	6000	2.01192	5	16000	6440	107%
83249-61	Low Spike	2.00	0.99647	5	10	1.99	100%
83249-62	High Spike	100	2.39973	5	200	96.0	96%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104\ \text{ng/mL} \times 10\ \text{mL}}{5\ \text{mL}} = 0.208\ \text{ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Daniel R. O'Connell Date: 07 Nov 16
Reviewed by: Alicia T. Bermudez Date: 16 Nov 16
Study Director: [illegible] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 14
Data file name: X 83249 06082016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1349	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1350	0.0 µg/L Rep O	0.00	0.11377	5	10	0.228	NA
83249-1351	6.3 µg/L Rep I	6.30	2.50496	5	10	5.01	80%
83249-1352	12.5 µg/L Rep I	12.5	2.66016	5	20	10.6	85%
83249-1353	25 µg/L Rep I	25.0	2.29974	5	50	23.0	92%
83249-1354	50 µg/L Rep I	50.0	2.31475	5	100	46.3	93%
83249-1355	100 µg/L Rep I	100	2.35948	5	200	94.4	94%
83249-1356	2-EHHB Stock	6000	1.74602	5	16000	5590	93%
83249-63	Low Spike	2.00	0.99288	5	10	1.99	100%
83249-64	High Spike	100	2.45905	5	200	98.4	98%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Derek R. O'C Date: 16 Jun 16
Reviewed by: Alexa T. Bermudez Date: 17 Nov 16
Study Director: [illegible] Date: [illegible]/16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 06132016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1359	2-EHHB Stock	6000	1.80182	5	16000	5770	96%
83249-65	Low Spike	2.00	1.14152	5	10	2.28	114%
83249-66	High Spike	100	2.74609	5	200	110	110%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Date: 14-Nov-16
Reviewed by: Date: 17Nov16
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 15
Data file name: X 83249 06162016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1360	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1361	0.0 µg/L Rep P	0.00	< low std	5	10	< MQL [a]	NA
83249-1362	6.3 µg/L Rep J	6.30	1.31345	5	10	2.63	42%
83249-1363	12.5 µg/L Rep J	12.5	2.75533	5	20	11.0	88%
83249-1364	25 µg/l. Rep J	25.0	2.84152	5	50	28.4	114%
83249-1365	50 µg/L Rep J	50.0	3.34967	5	100	67.0	134%
83249-1366	100 µg/L Rep J	100	2.96599	5	200	119	119%
83249-1367	2-EHHB Stock	6000	1.74741	5	16000	5590	93%
83249-67	Low Spike	2.00	1.13959	5	10	2.28	114%
83249-68	High Spike	100	2.66644	5	200	107	107%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Date:
Reviewed by: Alexa T. Bermudez Date: 17 Nov 16
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 06172016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1370	2-EHHB Stock	6000	1.83851	5	16000	5880	98%
83249-69	Low Spike	2.00	0.93885	5	10	1.88	94%
83249-70	High Spike	100	2.49592	5	200	100	100%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Daniel R. O'Connor Date: 21 Nov 16
Reviewed by: Alexa D Bermudez Date: 17 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 16
Data file name: X 83249 06222016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Analysis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1371	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1372	0.0 µg/L Rep Q	0.00	No Peak	5	10	< MQL [a]	NA
83249-1373	6.3 µg/L Rep K	6.30	3.59112	5	10	7.18	114%
83249-1374	12.5 µg/L Rep K	12.5	4.36743	5	20	17.5	140%
83249-1375	25 µg/L Rep K	25.0	3.41073	5	50	34.1	136%
83249-1376	50 µg/L Rep K	50.0	3.09383	5	100	61.9	124%
83249-1377	100 µg/L Rep K	100	2.87313	5	200	115	115%
83249-1378	2-EHHB Stock	6000	2.41399	5	16000	7720	129%
83249-71	Low Spike	2.00	1.08685	5	10	2.17	109%
83249-72	High Spike	100	2.68083	5	200	107	107%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 15 Nov 16

Reviewed by: Alexa T. Bermudez Date: 17 Nov 16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 17
Data file name: X 83249 06292016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1382	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1383	0.0 µg/L Rep R	0.00	No Peak	5	10	< MQL [a]	NA
83249-1384	6.3 µg/L Rep L	6.30	6.27588	5	10	12.6	200%
83249-1385	12.5 µg/L Rep L	12.5	5.66164	5	20	22.6	181%
83249-1386	25 µg/L Rep L	25.0	4.37874	5	50	43.8	175%
83249-1387	50 µg/L Rep L	50.0	2.93891	5	100	58.8	118%
83249-1388	100 µg/L Rep L	100	2.86172	5	200	114	114%
83249-1389	2-EHHB Stock	6000	1.98203	5	16000	6340	106%
83249-75	Low Spike	2.00	1.13330	5	10	2.27	114%
83249-76	High Spike	100	2.64169	5	200	106	106%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Derek P. O'C Date: 8 Nov 16
Reviewed by: Alexis T. Bermudez Date: 17 Nov 16
Study Director: [signature] Date: 17 Nov 16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 06242016Z

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1381	2-EHHB Stock	6000	2.28551	5	16000	7310	122%
83249-73	Low Spike	2.00	1.10878	5	10	2.22	111%
83249-74	High Spike	100	2.66523	5	200	107	107%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: [signature] Date: 17 Nov 16
Reviewed by: Alexa T. Bermudez Date: 17 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Stock
Data file name: X 83249 06302016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1392	2-EHHB Stock	6000	1.95127	5	16000	6240	104%
83249-77	Low Spike	2.00	1.10892	5	10	2.22	111%
83249-78	High Spike	100	2.82302	5	200	113	113%

MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 01Nov16
Reviewed by: Alexa F. Bermudez Date: 17Nov16
Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 18
Data file name: CI5038 83249 07112016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1561	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1562	0.0 µg/L Rep S	0.00	No Peak	5	10	< MQL [a]	NA
83249-1563	6.3 µg/L Rep A	6.30	6.24411	5	10	12.5	198%
83249-1564	12.5 µg/L Rep A	12.5	5.25511	5	20	21.0	168%
83249-1565	25 µg/L Rep A	25.0	3.45065	5	50	34.5	138%
83249-1566	50 µg/L Rep A	50.0	2.91389	5	100	58.3	117%
83249-1567	100 µg/L Rep A	100	2.64316	5	200	106	106%
83249-~~1368~~ 1369	2-EHHB Stock	6000	1.79116	5	16000	5730	96%
83249-~~1371~~ 1370	2-EHHB Stock	6000	1.77439	5	16000	5680	95%
83249-79	Low Spike	2.00	1.06341	5	10	2.13	107%
83249-80	High Spike	100	2.62592	5	200	105	105%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Corrected Sample IDs per Study Director

Prepared by: Derek R. Cline Date: 17 Nov 16
Reviewed by: Alexa T. Bermudez Date: 17Nov16
Study Director: [illegible] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 19
Data file name: X 83249 07142016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1572	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1573	0.0 µg/L Rep T	0.00	< low std	5	10	< MQL [a]	NA
83249-1574	6.3 µg/L Rep B	6.30	5.10875	5	10	10.2	162%
83249-1575	12.5 µg/L Rep B	12.5	4.18520	5	20	16.7	134%
83249-1576	25 µg/L Rep B	25.0	3.46536	5	50	34.7	139%
83249-1577	50 µg/L Rep B	50.0	2.82055	5	100	56.4	113%
83249-1578	100 µg/L Rep B	100	2.52574	5	200	101	101%
83249-1579	2-EHHB Stock	6000	1.88308	5	16000	6030	101%
83249-81	Low Spike	2.00	1.13699	5	10	2.27	114%
83249-82	High Spike	100	2.78618	5	200	111	111%

Repeated ~~study~~ QC sample # A12-Rep B16
Burned over from Rep B16

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Sarah R O'Connor Date: 18 July 18
Reviewed by: Alexa T. Bermudez Date: 17 Nov 16
Study Director: [illegible] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 20
Data file name: X 83249 07202016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1583	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1584	0.0 µg/L Rep I	0.00	No Peak	5	10	< MQL [a]	NA
83249-1585	6.3 µg/L Rep C	6.30	5.3146	5	10	10.6	168%
83249-1586	12.5 µg/L Rep C	12.5	4.49906	5	20	18.0	144%
83249-1587	25 µg/L Rep C	25.0	2.70805	5	50	27.1	108%
83249-1588	50 µg/L Rep C	50.0	2.55658	5	100	51.1	102%
83249-1589	100 µg/L Rep C	100	2.31948	5	200	92.8	93%
83249-1390	2-EHHB Stock	6000	1.67360	5	16000	5360	89%
83249-1382	2-EHHB Stock	6000	1.82420	5	16000	5840	97%
83249-83	Low Spike	2.00	1.08320	5	10	2.17	109%
83249-84	High Spike	100	2.60873	5	200	104	104%

Corrected Sample # 492 Dec 13, 16

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104\ \text{ng/mL} \times 10\ \text{mL}}{5\ \text{mL}} = 0.208\ \text{ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Daniel R. O... Date: 21 July 16
Reviewed by: Alexa T. Bermudez Date: 17 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 21
Data file name: X 83249 07262016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Analysis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1594	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1596	0.0 µg/L Rep J	0.00	< low std	5	10	< MQL [a]	NA
83249-1597	6.3 µg/L Rep D	6.30	3.25009	5	10	6.50	103%
83249-1598	12.5 µg/L Rep D	12.5	3.21089	5	20	12.8	102%
83249-1599	25 µg/L Rep D	25.0	2.29033	5	50	22.9	92%
83249-1600	50 µg/L Rep D	50.0	2.40766	5	100	48.2	96%
83249-1601	100 µg/L Rep D	100	2.56319	5	200	103	103%
83249-1602	2-EHHB Stock	6000	1.79153	5	16000	5730	96%
83249-1593	2-EHHB Stock	6000	1.87823	5	16000	6010	100%
83249-85	Low Spike	2.00	1.12182	5	10	2.24	112%
83249-86	High Spike	100	2.60739	5	200	104	104%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 29 Nov 16

Reviewed by: Alexa T Bermudez Date: 19 Nov 16

Study Director: _____ Date: 29 Nov 16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 22
Data file name: X 83249 08052016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1606	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1607	0.0 µg/L Rep K	0.00	No Peak	5	10	< MQL [a]	NA
83249-1608	6.3 µg/L Rep E	6.30	4.18233	5	10	8.36	133%
83249-1609	12.5 µg/L Rep E	12.5	3.81553	5	20	15.3	122%
83249-1610	25 µg/L Rep E	25.0	2.65665	5	50	26.6	106%
83249-1611	50 µg/L Rep E	50.0	2.60290	5	100	52.1	104%
83249-1612	100 µg/L Rep E	100	2.37109	5	200	94.8	95%
83249-1613	2-EHHB Stock	6000	2.00499	5	16000	6420	107%
83249-1605	2-EHHB Stock	6000	1.77398	5	16000	5680	95%
83249-87	Low Spike	2.00	1.11401	5	10	2.23	112%
83249-88	High Spike	100	2.61241	5	200	104	104%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: _____

Reviewed by: Alexa T. Bermudez Date: 18 Nov 16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 23
Data file name: X 83249 08092016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Analysis Volume (mL)	Measured Concentration ⓘ (ng/mL)	% of Nominal
83249-1617	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1618	0.0 µg/L Rep L	0.00	< low std	5	10	< MQL [a]	NA
83249-1619	6.3 µg/L Rep F	6.30	3.75412	5	10	7.51	119%
83249-1620	12.5 µg/L Rep F	12.5	3.88649	5	20	15.5	124%
83249-1621	25 µg/L Rep F	25.0	3.04306	5	50	30.4	122%
83249-1622	50 µg/L Rep F	50.0	2.67811	5	100	53.6	107%
83249-1623	100 µg/L Rep F	100	2.54200	5	200	102	102%
83249-1624	2-EHHB Stock	6000	2.01484	5	16000	6450	108%
83249-1616	2-EHHB Stock	6000	2.18725	5	16000	7000	117%
83249-89	Low Spike	2.00	1.05455	5	10	2.11	106%
83249-90	High Spike	100	2.59604	5	200	104	104%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

ⓘ Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: _____

Reviewed by: Alicia T. Bezanilla Date: 18 Nov 16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 24
Data file name: X 83249 08162016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1628	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1629	0.0 µg/L Rep A	0.00	No Peak	5	10	< MQL [a]	NA
83249-1630	6.3 µg/L Rep A	6.30	3.24441	5	10	6.49	103%
83249-1631	12.5 µg/L Rep A	12.5	3.22177	5	20	12.9	103%
83249-1632	25 µg/L Rep A	25.0	2.50454	5	50	25.0	100%
83249-1633	50 µg/L Rep A	50.0	2.37523	5	100	47.5	95%
83249-1634	100 µg/L Rep A	100	2.55382	5	200	102	102%
83249-1635	2-EHHB Stock	6000	1.72190	5	16000	5510	92%
83249-1627	2-EHHB Stock	6000	1.82216	5	16000	5830	97%
83249-91	Low Spike	2.00	1.06687	5	10	2.13	107%
83249-92	High Spike	100	2.72361	5	200	109	109%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Derrick R. O[illegible] Date: 17 [illegible]
Reviewed by: Aleza T. Bermudez Date: 13Nov16
Study Director: [illegible] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 25
Data file name: CI5038 83249 08282016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-1639	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-1640	0.0 µg/L Rep B	0.00	< low std	5	10	< MQL [a]	NA
83249-1641	6.3 µg/L Rep B	6.30	3.90063	5	10	7.80	124%
83249-1642	12.5 µg/L Rep B	12.5	3.83834	5	20	15.4	123%
83249-1643	25 µg/L Rep B	25.0	2.80790	5	50	28.1	112%
83249-1644	50 µg/L Rep B	50.0	2.17759	5	100	43.6	87%
83249-1645	100 µg/L Rep B	100	2.46520	5	200	98.6	99%
83249-1646	2-EHHB Stock	6000	1.93434	5	16000	6190	103%
83249-1638	2-EHHB Stock	6000	1.89750	5	16000	6070	101%
83249-1649	2-EHHB Stock	6000	1.57525	5	16000	5040	84%
83249-93	Low Spike	2.00	1.09637	5	10	2.19	110%
83249-94	High Spike	100	2.39276	5	200	95.7	96%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Sarah P. O'Connor Date: 07Nov16
Reviewed by: Alexa T. Bermudez Date: 13Nov16
Study Director: [signature] Date: 13Nov16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 26
Data file name: CI5038 83249 08312016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-2490	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-2491	0.0 µg/L Rep C	0.00	< low std	5	10	< MQL [a]	NA
83249-2492	6.3 µg/L Rep C	6.30	2.38750	5	10	4.78	76%
83249-2493	12.5 µg/L Rep C	12.5	2.57267	5	20	10.3	82%
83249-2494	25 µg/L Rep C	25.0	2.07897	5	50	20.8	83%
83249-2495	50 µg/L Rep C	50.0	2.60998	5	100	52.2	104%
83249-2496	100 µg/L Rep C	100	2.41997	5	200	96.8	97%
83249-2497	2-EHHB Stock	6000	1.81393	5	16000	5800	97%
83249-95	Low Spike	2.00	1.09332	5	10	2.19	110%
83249-96	High Spike	100	2.71793	5	200	109	109%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 21 Sept 16
Reviewed by: Alexa T Bermudez Date: 18 Nov 16
Study Director: _____ Date: 11/18/16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 27
Data file name: CI5038 83249 09092016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-2501	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-2502	0.0 µg/L Rep D	0.00	< low std	5	10	< MQL [a]	NA
83249-2503	6.3 µg/L Rep D	6.30	1.81332	5	10	3.63	58%
83249-2504	12.5 µg/L Rep D	12.5	2.33363	5	20	9.33	75%
83249-2505	25 µg/L Rep D	25.0	2.08507	5	50	20.9	84%
83249-2506	50 µg/L Rep D	50.0	2.04190	5	100	40.8	82%
83249-2507	100 µg/L Rep D	100	2.15486	5	200	86.2	86%
83249-2508	2-EHHB Stock	6000	1.73014	5	16000	5540	92%
83249-2509	2-EHHB Stock	6000	2.43648	5	16000	7800	130%
83249-2511	2-EHHB Stock	6000	1.56490	5	16000	5010	84%
83249-97	Low Spike	2.00	1.03795	5	10	2.08	104%
83249-98	High Spike	100	2.73998	5	200	110	110%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: Dinah R. O'Clair Date: 13 Sept 16
Reviewed by: Alexa T. Bermudez Date: 19 Nov 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 28
Data file name: CI5038 83249 09132016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-2512	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-2513	0.0 µg/L Rep E	0.00	No Peak	5	10	< MQL [a]	NA
83249-2514	6.3 µg/L Rep E	6.30	3.56449	5	10	7.13	113%
83249-2515	12.5 µg/L Rep E	12.5	3.52829	5	20	14.1	113%
83249-2516	25 µg/L Rep E	25.0	2.38831	5	50	23.9	96%
83249-2517	50 µg/L Rep E	50.0	2.35070	5	100	47.0	94%
83249-2518	100 µg/L Rep E	100	2.10867	5	200	84.3	84%
83249-2519	2-EHHB Stock	6000	1.53131	5	16000	4900	82%
83249-99	Low Spike	2.00	0.97430	5	10	1.95	98%
83249-100	High Spike	100	2.30211	5	200	92.1	92%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: [signature] Date: 15 Sept 16
Reviewed by: Alexa T Bermudez Date: 13 Nov 16
Study Director: [signature] Date: 10 NOV 16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 29
Data file name: CI5038 83249 09202016A

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ⓘ (ng/mL)	% of Nominal
83249-2522	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-2523	0.0 µg/L Rep F	0.00	< low std	5	10	< MQL [a]	NA
83249-2524	6.3 µg/L Rep F	6.30	1.80698	5	10	3.61	57%
83249-2525	12.5 µg/L Rep F	12.5	2.17705	5	20	8.71	70%
83249-2526	25 µg/L Rep F	25.0	1.89523	5	50	19.0	76%
83249-2527	50 µg/L Rep F	50.0	1.74332	5	100	34.9	70%
83249-2528	100 µg/L Rep F	100	1.94539	5	200	77.8	78%
83249-2529	2-EHHB Stock	6000	1.49921	5	16000	4800	80%
83249-SPK101	Low Spike	2.00	0.98573	5	10	1.97	99%
83249-SPK102	High Spike	100	2.40793	5	200	96.3	96%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

ⓘ Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 22Sep16
Reviewed by: Alicia T. Bermudez Date: 19Nov16
Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 30
Data file name: CI5038 83249 09302016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ① (ng/mL)	% of Nominal
83249-2532	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83249-2533	0.0 µg/L Rep G	0.00	< low std	5	10	< MQL [a]	NA
83249-2534	6.3 µg/L Rep G	6.30	2.01182	5	10	4.02	64%
83249-2535	12.5 µg/L Rep G	12.5	2.18980	5	20	8.76	70%
83249-2536	25 µg/L Rep G	25.0	1.80736	5	50	18.1	72%
83249-2537	50 µg/L Rep G	50.0	1.89051	5	100	37.8	76%
83249-2538	100 µg/L Rep G	100	1.64751	5	200	65.9	66%
83249-2539	2-EHHB Stock	6000	2.27899	5	16000	7290	122%
83249-SPK103	Low Spike	2.00	1.06720	5	10	2.13	107%
83249-SPK104	High Spike	100	2.54538	5	200	102	102%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

① Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 11/16/16

Reviewed by: Alexis T. Bermudez Date: 22 Nov 16

Study Director: _____ Date: 11/23/16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

ABC Study Number: 83249
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 31
Data file name: CI5038 83249 10042016B

Sample Number	Sample Identification	Nominal Concentration (ng/mL)	Measured Conc. from Curve (ng/mL)	Sample Volume (mL)	Anaylsis Volume (mL)	Measured Concentration ⓘ (ng/mL)	% of Nominal
83249-2542	Blank	0.00	< low std	5	10	< MQL [a]	NA
83249-2543	0.0 µg/L Rep H	0.00	< low std	5	10	< MQL [a]	NA
83249-2544	6.3 µg/L Rep H	6.30	3.19907	5	10	6.40	102%
83249-2545	12.5 µg/L Rep H	12.5	2.82579	5	20	11.3	90%
83249-2546	25 µg/L Rep H	25.0	1.98134	5	50	19.8	79%
83249-2547	50 µg/L Rep H	50.0	1.73861	5	100	34.8	70%
83249-2548	100 µg/L Rep H	100	1.72789	5	200	69.1	69%
83249-2549	2-EHHB Stock	6000	1.34289	5	16000	4300	72%
83249-SPK105	Low Spike	2.00	1.03946	5	10	2.08	104%
83249-SPK106	High Spike	100	2.83905	5	200	114	114%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

ⓘ Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 11 Oct 16
Reviewed by: Alexa T. Bermudez Date: 22 Nov 16
Study Director: _____ Date: 22 Nov 16

File Location: X:\Shared\Client\Battelle\Study Folders\83249_2-EHHB\Data\Analytical\83249_Results.xls

Appendix D. HISTOPATHOLOGY DATA REPORT

Experimental Pathology Laboratories, Inc.

FORT ENVIRONMENTAL LABORATORIES, INC.
STUDY NUMBER BATT01-00393
EPL PROJECT NUMBER 237-077

MEDAKA EXTENDED ONE-GENERATION REPRODUCTION TEST (MEOGRT) OF 2-ETHYLHEXL 4-HYDROXYBENZOATE

PATHOLOGY REPORT

Submitted by:

Experimental Pathology Laboratories, Inc.

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Original submitted to:

Test Facility
Fort Environmental Laboratories, Inc.
Stillwater, OK 74074

Copy submitted to:

Sponsor Representative
Battelle Memorial Institute
Columbus, OH 43201

July 3, 2018

FINAL REPORT

Experimental Pathology Laboratories, Inc.

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FEL

PATHOLOGY NARRATIVE

Experimental Pathology Laboratories, Inc.

BATTELLE MEMORIAL INSTITUTE
STUDY NUMBER BATT01-00393
EPL PROJECT NUMBER 237-077

MEDAKA EXTENDED ONE-GENERATION REPRODUCTION TEST
(MEOGRT) OF 2-ETHYLHEXL 4-HYDROXYBENZOATE

PATHOLOGY NARRATIVE

INTRODUCTION

The objective of this study was to measure chemical effects on reproductive development in medaka exposed through multiple generations of their life-cycle. The test method began by exposing young adult fish (the P or F_0 generation) to 2-EHHB. The test was performed using a flow-through system to expose three generations of fish (F_0, F_1, and F_2), starting with young adults 10-15 weeks post fertilization (wpf), to 5 concentrations of 2-EHHB and a control over a 32-week period (includes F_2 generation). Thus, the assay allowed evaluation of both structural and activation-based endocrine pathways within and across generations.

The experimental design is presented in Table 1.

Table 1. Number of Male and Female Medaka Examined Per Exposure Group

2-EHHB Treatment Group (µg/L)	F_1 Sub-Adult		F_1 Adult			F_2 Adult		
	Males	Females	Males	Females	Sex Unknown	Males	Females	Sex Unknown
0 (Control)	23	1	22	24	2	22	24	2
6.3	10	2	12	10	2	12	11	1
12.5	10	2	12	12	0	12	10	2
25.0	11	1	12	12	0	11	12	1
50.0	8	4	12	12	0	12	12	0
100.0	6	6	12	12	0	12	12	0
Totals	68	16	82	82	4	81	81	6

METHODS

Whole body specimens from 420 Japanese medaka were received by Experimental Pathology Laboratories, Inc. (EPL®), Sterling, Virginia, for histopathologic processing and evaluation. Unless otherwise indicated, histopathological procedures were performed according to the USEPA protocol "OCSPP 890.2200: Medaka Extended

One Generation Reproduction Test (MEOGRT)", dated July, 2015. Briefly, each whole fish specimen minus the tail was processed in an automated tissue processor and infiltrated with paraffin according to routine methods. Chemical decalcification was not required. Each fish was embedded left side down in the paraffin block. Approximately 20 parasagittal sections were microtomed from each fish, three to four sections at each of five different levels, using prescribed anatomical landmarks to identify each level. The serial sections (each section 4-5 microns thick) obtained at each level were placed on a single glass slide, stained with hematoxylin and eosin, and mounted beneath a glass cover slip as per routine.

The pathologist evaluated the slides by brightfield microscopy for changes that included, but were not limited to, the types of findings that are listed in the aforementioned guidance documents. Evaluation of the thyroid glands was to follow a tiered approach: only the control and high concentration groups were to be evaluated, with the remaining concentration groups to be assessed if positive results were observed in the high-dose vs. controls. Thyroid was not evaluated for fish of the F_2 sacrifice. Severity grading of findings was performed according to the following scale: X = not remarkable, Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, Grade 4 = severe. Gonad phenotype scores were recorded as follows: Grade 1 = testicular tissue entirely; Grade 2 = testicular tissue predominates; Grade 3 = comparable amounts of testicular and ovarian tissue; Grade 4 = ovarian tissue predominates; Grade 5 = ovarian tissue entirely. Findings were recorded into EPL's electronic Pathology Data Reporting System, and tabulated in the accompanying Histopathology Incidence Tables (HIT) and summarized in the Summary Incidence Tables (SIT).

Statistical analysis using the RSCABS approach was performed by Battelle. Statistical comparisons were made between treated groups and corresponding vehicle control groups.

RESULTS AND DISCUSSION

F_1 SUB-ADULTS

THYROID GLANDS

There were no treatment-related thyroid gland findings in F_1 sub-adult control males or females, nor in F_1 sub-adult males or females exposed to 100 µg/L 2-EHHB

(evaluation of the other dose groups was not required by protocol). For both sexes, the thyroid glands consisted of relatively low numbers of small scattered colloid-filled follicles that were lined by flattened epithelium; such glands were recorded as not remarkable.

F_1 ADULTS

THYROID GLANDS

There were no thyroid gland findings (Table 2) in 2-EHHB-treated male or female F_1 adult fish that were substantially different from those of F_1 adult controls.

As is typical for adult medaka, there were distinct sex-related morphologic differences between the thyroid glands of male and female fish. The thyroid glands of females generally consisted of a few small scattered colloid-filled follicles that were lined by flattened epithelium; such glands were recorded as not remarkable. Occasional females exhibited minimal follicular cell hypertrophy/hyperplasia. Conversely, the thyroid glands of males were typically larger and more contiguous, with numerous variably-sized follicles lined by cuboidal or low columnar epithelium.

Table 2. Selected Thyroid Findings for F_1 Adult Male and Female Medaka [a]

Sex	Male		Female	
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	100.0 [101]	0.0 [0.321]	100.0 [101]
Number Examined	22	12	24	12
Follicular Cells, Hypertrophy/Hyperplasia # affected	21	11	0	1
minimal	18	9	-	1
mild	3	2	-	-

- = no occurrences at this severity grade

[a] Table does not include one control fish for which the sex could not be determined.

- =

LIVER

An exposure-related finding in male and female F_1 adults exposed to 2-EHHB (Table 3) was a relative decrease in the amount of hepatocellular glycogen-type vacuolation (minimal to moderate) in the liver (Figs. 4-7). This finding, which was represented by diminished severity grades, was most apparent in males of the 25.0, 50.0, and 100.0 µg/L dose groups, and in females of the 50.0 and 100.0 µg/L dose groups.

F_1 adult female medaka exposed to 2-EHHB generally had a slightly higher prevalence of cytoplasmic eosinophilic inclusions (minimal to mild) among fish of the 50.0 and 100.0 µg/L dose groups as compared to F_1 adult control females (Fig. 8). This particular finding was not evident in male fish.

There was a slight statistically significant decrease in the prevalence of foci of cellular alteration in males of the 50.0 and 100.0 µg/L dose groups (minimal and/or mild) as compared to F_1 adult control males; however, such foci are known to occur spontaneously in medaka, and a reduction in the generally low frequency of that particular benign proliferative lesion was not considered to be toxicologically relevant.

A benign hepatocellular adenoma was diagnosed in the liver of a single 12.5 µg/L dose group female, Animal No. 1478-G2 (Fig. 9). This was the only neoplasm observed in F_1 adult medaka, and there was no additional evidence to suggest that it was exposure-related.

Table 3. Selected Liver Findings for F_1 Adult Male and Female Medaka [a]

Sex		Males						Females					
Treatment Group (µg/L) [Mean Measured Concentration]		0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined		22	12	12	12	12	12	24	10	12	12	12	12
Hepatocellular Vacuolation, Glycogen-Type	# affected	22	12	12	12	12	11	24	10	12	12	12	11
	minimal	-	-	-	3	3	10	-	4	-	2	5	9
	mild	8	7	8	9**	9**	1**	19	4	10	9	7**	2**
	moderate	14	5	4**	-**	-**	-**	5	2	2	1	-**	-**
Cytoplasmic Inclusions, Eosinophilic	# affected	0	0	0	0	0	0	1	0	0	0	3	2
	minimal	-	-	-	-	-	-	1	-	-	-	3*	1*
	mild	-	-	-	-	-	-	-	-	-	-	-	1
Focus of Cellular Alteration	# affected	3	0	2	0	0	0	2	1	0	1	1	0
	minimal	1	-	2	-	-	-**	1	1	-	1	-	-
	mild	1	-	-	-	-**	-**	1	-	-	-	1	-
	moderate	1	-	-	-	-	-	-	-	-	-	-	-

- = no occurrences at this severity grade

[a] Table does not include four fish for which the sex could not be determined.

*Statistically significant positive trend at the 0.05 level.

**Statistically significant negative trend at the 0.05 level.

KIDNEY

A kidney finding (Table 4) in which the severity was increased slightly in F_1 adult females of the 100.0 µg/L dose group (and even less in the 50.0 µg/L dose group) as compared to F_1 adult control females was tubular epithelial eosinophilia (graded as minimal to mild in females) (Figs. 10-12).

There were statistically significant decreases in tubular cellular debris / casts (minimal) and tubular dilation (minimal to moderate) in the 100.0 µg/L dose group males relative to control males; however, decreases in those particular background-type findings were not considered toxicologically significant, and similar decreases did not occur in females.

Table 4. Selected Kidney Findings for F_1 Adult Male and Female Medaka [a]

Sex		Males						Females					
Treatment Group (µg/L) [Mean Measured Concentration]		0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined		22	12	12	12	12	12	24	10	12	12	12	12
Tubules, Epithelium, Eosinophilia													
	# affected	22	12	12	12	12	12	24	10	12	12	12	12
	minimal	-	-	-	-	-	-	24	10	12	12	11	9
	mild	-	-	-	-	-	-	-	-	-	-	1	3*
	moderate	22	12	12	12	12	12	-	-	-	-	-	-
Tubules, Cellular Debris / Casts													
	# affected	15	9	8	9	8	3	11	5	5	5	4	4
	minimal	11	8	6	5	7	3**	10	5	5	5	4	3
	mild	4	1	2	4	1	-	1	-	-	-	-	1
Tubules, Dilation	# affected	18	11	10	11	10	5	14	8	8	12	7	7
	minimal	3	6	2	4	5	4**	6	3	2	6	3	2
	mild	9	5	6	5	4	1**	3	4	5	5	3	4
	moderate	6	-	2	2	1	-**	5	1	1	1	1	1

- = no occurrences at this severity grade

[a] Table does not include four fish for which the sex could not be determined.

*Statistically significant positive trend at the 0.05 level.

**Statistically significant negative trend at the 0.05 level.

TESTES

A finding in the **testes** of adult F_1 male medaka (Table 5) in which the prevalence tended to be slightly greater in 2-EHHB-exposed males relative to F_1 adult control males was testicular degeneration (minimal to mild). Testicular degeneration (Figs. 13-14) was characterized by the presence of apoptotic cells, often in clusters, and/or individual germ cell syncytia.

There was a slight statistically significant decrease in the prevalence of interstitial fibrosis (minimal) in males of 50.0 and 100.0 µg/L 2-EHHB treated groups relative to control males; however, a reduction in the frequency of this particular finding was not considered toxicologically relevant.

Except for the 6.3 µg/L dose group, mean testis stage scores were generally comparable among control and treated males. Testis stage scoring in male medaka

tends to be somewhat imprecise, and thus there is no toxicologic importance attributed to the increased mean scores in the 6.3 µg/L dose group.

Table 5. Selected Testis Findings for F_1 Adult Male Medaka [a]

Treatment Group (µg/L) [Mean Measured Concentration]		0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined		22	12	12	12	12	12
Testicular Degeneration	# affected	6	8	7	7	9	8
	minimal	5	8*	7*	7*	7*	8*
	mild	1	-	-	-	2	-
Interstitial Fibrosis	# affected	2	0	0	0	0	0
	minimal	1	-	-	-	-**	-**
	mild	1	-	-	-	-	-
Testis Stage Scores							
	Stage 1	6	1	3	4	5	4
	Stage 2	6	5	5	2	2	2
	Stage 3	4	3	2	4	1	3
	Stage 4	3	3	1	1	3	1
	Mean Score	2.2	2.7	2.1	2.2	2.2	2.1
	Unable to Stage	3	-	1	1	1	2

- = no occurrences at this severity grade

[a] Table does not include four fish for which the sex could not be determined.

*Statistically significant positive trend at the 0.05 level.

**Statistically significant negative trend at the 0.05 level.

OVARIES

There were no findings related to 2-EHHB exposure in the **ovaries** of female medaka. Instances of accelerated necrosis of post-ovulatory follicles were recorded in single females in each of the 50 and 100.0 µg/L dose groups; however, despite the statistical significance (minimal) of this result, its relationship to treatment remains at most uncertain. Mean ovary stage scores (Table 6) were generally comparable among control and treated females.

Table 6. Selected Ovary Findings for F_1 Adult Female Medaka [a]						
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined	24	10	12	12	12	12
Post-ovulatory Follicles, Accelerated Necrosis # affected	0	0	0	0	1	1
minimal	-	-	-	-	1	1*
Ovary Stage Scores						
Stage 1	1	-	-	-	-	-
Stage 3	18	8	8	10	8	8
Stage 4	5	-	4	2	3	4
Mean Score	3.1	2.8	3.3	3.2	3.2	3.3

- = no occurrences at this severity grade

[a] Table does not include four fish for which the sex could not be determined.

*Statistically significant positive trend at the 0.05 level.

F_2 ADULTS

LIVER

The prevalence of cystic degeneration of the liver (Table 7) was increased in some 2-EHHB–treated F_2 generation groups relative to controls (Figs. 15-16). In males, this finding was only substantially increased in the 100.0 µg/L dose group, whereas 2-EHHB-exposed females exhibited a slight general increase in the prevalence of cystic degeneration with no dose-response pattern.

There was a statistically significant decrease in the severity of glycogen-type hepatocellular vacuolation (mild and moderate) in males of the 50 and 100.0 µg/L dose groups and females of the 100.0 µg/L dose group relative to their respective controls.

There was a very slight statistically significant increase in the severity of basophilia (moderate) in females of the 100.0 µg/L dose group as compared to control females; however, there was no evidence of a dose-response pattern among the lower dose groups, and this finding was not considered to be treatment-related.

The very slight decrease in the prevalence of granulomatous inflammation (a background finding) in the livers of 100.0 µg/L dose group 2-EHHB-treated females relative to controls was not considered toxicologically relevant, despite statistical significance.

Table 7. Selected Liver Findings for F_2 Adult Male and Female Medaka [a]

Sex	Males						Females					
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined	22	12	12	11	12	12	24	11	10	12	12	12
Cystic Degeneration **# affected**	7	6	6	5	6	9	14	7	9	12	11	8
minimal	6	6	5	3	6	7*	12	5	7	6*	9*	4*
mild	-	-	1	1	-	2	2	-	2	6*	2*	3*
moderate	1	-	-	1	-	-	-	2	-	-	-	1
Hepatocellular Vacuolation, Glycogen-Type **# affected**	22	11	12	11	12	12	24	11	10	12	11	11
minimal	1	1	1	3	3	3	-	-	2	6	4	10
mild	15	6	7	8	8**	8**	19	10	6	5	7	1**
moderate	6	4	4	-	1**	1**	5	1	2	1	-	-
Basophilia **# affected**	0	1	0	0	1	0	23	10	10	12	12	12
minimal	-	1	-	-	1	-	-	2	-	-	1	-
mild	-	-	-	-	-	-	1	-	2	3	2	-
moderate	-	-	-	-	-	-	22	8	8	9	9	12*
Inflammation, Granulomatous **# affected**	0	0	0	0	0	0	0	1	0	0	0	0
minimal	-	-	-	-	-	-	-	1	-	-	-	-**
mild	-	-	-	-	-	-	1	-	-	-	-	-**
moderate	-	-	-	-	-	-	1	-	-	-	-	-

- = no occurrences at this severity grade

[a] Table does not include six fish for which the sex could not be determined.

*Statistically significant positive trend at the 0.05 level.

**Statistically significant negative trend at the 0.05 level.

KIDNEY

There were no kidney findings in male or female F_2 adult fish that were associated with 2-EHHB -treatment (Table 8).

The frequency of minimal cellular debris / casts was only slightly greater in the kidneys of 100.0 µg/L dose group males compared to controls, although this result was determined to be statistically significant. However, a similar increase was not observed in the kidneys of 2-EHHB -treated females, or in F1 adult males or females; consequently, that result was unlikely to have been treatment-related.

Although statistically significant, decreases in tubular dilation (minimal) (50 and 100.0 µg/L dose group females) and mineralization (minimal) (100.0 µg/L dose group males) were not considered to be toxicologically relevant.

Table 8. Selected Kidney Findings for F_2 Adult Male and Female Medaka [a]

Sex	Males						Females					
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined	22	12	12	11	12	12	24	11	10	12	12	12
Tubules, Cellular Debris / Casts												
# affected	15	10	11	10	10	11	11	3	4	2	5	2
minimal	9	6	6	4	5	7*	10	3	4	2	4	2
mild	6	4	5	6	5	4	1	-	-	-	1	-
Tubules, Dilation # affected	21	11	10	11	11	12	14	9	8	7	6	7
minimal	5	2	4	2	2	2	6	3	5	5	1**	3**
mild	8	6	3	5	5	6	3	6	1	2	2	1
moderate	6	3	2	1	3	3	5	-	2	-	2	1
severe	2	-	1	3	1	1	-	-	-	-	1	2
Tubules, Mineralization												
# affected	14	4	5	5	5	2	0	0	1	0	3	0
minimal	11	3	3	4	3	1**	-	-	1	-	3	-
mild	3	1	2	1	2	1	-	-	-	-	-	-

- = no occurrences at this severity grade

[a] Table does not include six fish for which the sex could not be determined.

*Statistically significant positive trend at the 0.05 level.

**Statistically significant negative trend at the 0.05 level.

TESTES

A finding in which the prevalence was increased in the **testes** of F_2 adult males exposed to 2-EHHB relative to those of F_2 adult control males (Table 9) was increased interstitial cells (Figs. 17-18); this finding was most prominent in fish of the 25.0 and 100.0 µg/L dose groups.

Testis stage scores tended to be slightly higher in 2-EHHB-exposed males than controls, and were only substantially greater in the 50.0 µg/L dose group; however, the lack of dose-response pattern suggests this is likely a spurious result.

Table 9. Selected Testis Findings for F_2 Adult Male Medaka [a]						
Sex	Males					
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined	22	12	12	11	12	12
Interstitial Cells, Increased						
# affected	2	2	3	5	3	5
minimal	1	2	3	5*	1*	4*
mild	1	0	-	-	2	1
Testis Stage Scores						
Stage 1	15	4	6	6	3	7
Stage 2	3	4	2	2	5	2
Stage 3	2	3	3	1	1	3
Stage 4	1	1	-	1	3	-
Mean Score	1.5	2.1	1.7	1.7	2.3	1.7
Unable to Stage	1	-	1	1	-	-

- = no occurrences at this severity grade

[a] Table does not include six fish for which the sex could not be determined.

*Statistically significant positive trend at the 0.05 level.

Ovaries

There were no ovary findings in 2-EHHB -treated F_2 adult females that were substantially different from those of controls (Table 10).

Statistically significant decreases in granulomatous inflammation (minimal) (50 and 100.0 µg/L dose groups), decreased oocyte retention (severe) (100.0 µg/L dose group), and increased ovarian stage scores (mild) (50 and 100.0 µg/L dose groups) all involved spontaneous types of occurrences in which the differences were based on very small numbers of animals; all are thus considered to be spurious results unrelated to 2-EHHB treatment (decreases in granulomatous inflammation or oocyte retention would not be considered toxicologically relevant in any event).

Other noteworthy gonad findings that were unlikely to be treatment-related included a malignant dysgerminoma (ovary-like germ cell neoplasm) with liver metastasis in a genetically male control fish (Animal No. 2570-J1), and ovarian spermatogenesis in a single 100.0 µg/L dose group female (Animal No. 2697-A2).

The malignant dysgerminoma (Figs. 19-21) was comprised of mildly disorganized immature ovarian tissue that exhibited oogenic progression to the cortical alveolar and even early vitellogenic phases, although the most mature cells were generally atretic. Occasional small patches of clonal cells within the oogenic tissue resembled

spermatocytes. A small amount of metastatic dysgerminoma tissue was evident in a hepatic vein in several sections (Fig. 22), and this consisted of perinucleolar oocytes and primordial ovarian tissue.

Ovarian spermatogenesis (Figs. 23-24) was characterized by the presence of disorganized but well-differentiated spermatogenic tissue, including spermatogonia, spermatocyte, and spermatid phases, located primarily at the anterior and ventral aspects of the affected ovary. Although this anomaly occurred in the ovary of a 100.0 µg/L dose group female, there is no other evidence (e.g., findings of gender ambiguity in other 2-EHHB-treated fish) to suggest that ovarian spermatogenesis was exposure-related in this case.

There were no mismatches between genotype sex and gonadal phenotype sex for any of the sacrifices (F_1 sub-adults, F_1 adults, or F_2 adults).

Table 10. Ovary Stage Scores for F_2 Adult Female Medaka [a]

Sex	Males					
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined	24	11	10	12	12	12
Inflammation, Granulomatous						
# affected	0	1	1	2	1	1
minimal	-	1	-	1	1**	-**
mild	-	-	1	1	-	-
Oocyte Retention						
# affected	0	0	1	1	1	1
mild	-	-	1	1	-	-
moderate	-	-	-	-	1	1
Ovary Stage Scores						
Stage 1	2	1	-	-	-	-
Stage 2	-	2	-	-	1*	1*
Stage 3	12	5	6	9	7	6
Stage 4	6	3	4	3	4	4
Mean Score	3.1	2.9	3.4	3.3	3.3	3.3
Unable to Stage	4	-	-	-	-	1

- = no occurrences at this severity grade

[a] Table does not include six fish for which the sex could not be determined.

*Statistically significant positive trend at the 0.05 level.

**Statistically significant negative trend at the 0.05 level.

DISCUSSION

There were relatively few findings associated with 2-EHHB exposure in this large study, and such findings tended to be non-specific and inconsistent among the three sacrifices. With the exception of testicular hypoplasia in F_1 sub-adult males, most differences between control and 2-EHHB exposed fish were minor in terms of prevalence and/or severity. Organs affected included: the testes of F_1 sub-adult males, F_1 adult males, and F_2 adult males (different types of findings in each sacrifice); the livers of F_1 and F_2 adult males and females (with the exception of decreased glycogen-type vacuolation, different types of findings in each sacrifice); and the kidneys of F_1 adult males and females.

The exposure-related finding of testicular hypoplasia in F_1 sub-adult males of the 50.0 and 100.0 µg/L 2-EHHB dose groups could potentially be attributed, at least in part, to a delay in reproductive tract development secondary to diminished overall somatic growth, as suggested by the decreased body weights of males in of those two highest dose groups relative to controls (Table 11). The relationship between negative energy balance and delayed testicular maturation have been documented in various fish species (de Vlaming, 1971; Shearer et al., 2000; Izquierdo et al., 2001), however, recent evidence also suggests that somatic growth in teleosts may be regulated to some degree by the gonads (Bhatta et al., 2012). Similarly, the decreased severity of hepatocellular glycogen-type vacuolation in F_1 and F_2 adult males and females exposed to 2-EHHB may have been attributable to negative energy balance, as might be caused by diminished feed intake (as a result of inappetence or general malaise), increased energy demand, or both. For example, in F_1 generation adults, body weights of males and females of 2-EHHB-exposed groups were generally lower than those of controls, and especially so in the 50.0 and 100.0 µg/L dose groups (Table 12). On the other hand, in the F_2 generation, males and female body weights of 2-EHHB-exposed groups tended to be substantially greater than those of controls, with the exception of 100.0 µg/L dose group (Table 13).

Table 11. Median Body Weights (g) for F_1 Sub-adult Male and Female Medaka [a]						
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Sacrificed	23	10	10	11	8	6
Males	0.1122	0.1014	0.1104	0.1158	0.0451	0.0473
Number Sacrificed	1	2	2	1	4	6
Females	0.0405	0.1182	0.0729	0.0487	0.0580	0.0478

[a] Sex based on external phenotype

Table 12. Median Body Weights (g) for F_1 Adult Male and Female Medaka [a]						
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Sacrificed	22	12	12	12	12	12
Males	0.2994	0.2839	0.3112	0.2932	0.2407	0.2642
Number Sacrificed	24	10	12	12	12	12
Females	0.3746	0.3701	0.3652	0.3718	0.3382	0.3147

[a] Sex based on external phenotype

Table 13. Median Body Weights (g) for F_2 Adult Male and Female Medaka [a]						
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Sacrificed	24	12	12	12	12	12
Males	0.2697	0.3930	0.4194	0.3996	0.4355	0.2921
Number Sacrificed	24	12	12	12	12	12
Females	0.3618	0.4440	0.5472	0.5020	0.5149	0.3625

[a] Sex based on external phenotype

There was only a slightly higher prevalence of cytoplasmic eosinophilic inclusions, which were graded minimal to mild, in female medaka exposed to the two highest dose groups of 2-EHHB of the F_1 adult generation. It is not unusual to observe a low incidence of eosinophilic cytoplasmic inclusions in the livers of untreated fish (as in one F_1 adult control female in this study), and although considered a degenerative-type finding, the toxicologic importance of those inclusions, if any, is not well-established (Wolf et al., 2015).

In the current study, the severity of renal tubular eosinophilia in the F_1 adult generation was increased in females of the 100.0 µg/L dose group as compared to controls. The consistent presence of fine eosinophilic granular material in the basal cytoplasm of renal proximal tubule epithelia in adult control male medaka, and the

absence of this material in the tubular epithelia of female or juvenile medaka of either gender, suggests that it may represent an androgen-dependent secondary sex characteristic in this species. However, there is little published information on this particular feature, and the range of potential factors might influence the phenotypic expression of this characteristic (e.g., hepatic or renal impairment) is not yet known.

The prevalence of minimal to mild testicular degeneration was slightly greater in F_1 adult males exposed to 2-EHHB relative to concurrent controls. This non-specific finding could potentially be related to hormonal imbalances, direct germ cell toxicity, direct Sertoli cell toxicity, or physiological stress. It is also possible that by chance the prevalence of this finding just happened to be slightly lower in the control male group.

The prevalence of cystic degeneration of the liver was increased in some 2-EHHB-treated F_2 generation groups relative to controls. Cystic degeneration is another common background finding in adult medaka, and the exacerbation of this change by chemical exposure has been reported (Boorman et al., 1997; Hobbie et al., 2012). As yet there is no reported relationship between this non-specific finding and endocrine disruption.

The prevalence of increased interstitial cells was substantially greater than controls in the testes of F_2 adult males of the 25.0 and 100.0 µg/L dose group males relative to controls, although it was also slightly greater than controls in the other 2-EHHB dose groups. Causes of increased interstitial cells in male fish may include, for example, substances that interfere with androgen production, such as the known steroidogenesis inhibitor ketoconazole (Dietrich and Krieger, 2009). If steroidogenic inhibition was a key characteristic of 2-EHHB, then it would be expected that males of the F_1 generation exposed to the test article would also have displayed interstitial cell hyperplasia, yet that was not the case in the current study.

SUMMARY/CONCLUSION

There were relatively few findings that were convincingly associated with 2-EHHB exposure in this large study. Although a number of results were statistically significant, many of those had only marginally low p-values, and based on the nature of the changes (e.g., decreases in results that would only be important if increased), they were not considered to be toxicologically relevant. Of the findings that were associated with 2-

EHHB exposure, they tended to be non-specific and inconsistent among the three sacrifices. One of the most prominent findings was minimal to severe testicular hypoplasia in F_1 sub-adult males of the 50.0 and 100.0 µg/L 2-EHHB dose groups. Other findings associated with 2-EHHB exposure relative to concurrent controls included: a decrease in the amount of hepatocellular glycogen-type vacuolation in the livers of male and female F_1 and F_2 adults; a slightly higher prevalence of cytoplasmic eosinophilic inclusions among F_1 adult females of the 50.0 and 100.0 µg/L dose groups; a slight increase in the severity of tubular epithelial eosinophilia in F_1 adult females of the 100.0 µg/L dose group, and the 50.0 µg/L dose group to a lesser degree; a slightly greater prevalence of testicular degeneration in 2-EHHB-exposed F_1 adult males; an increased prevalence of cystic degeneration of the liver in some male and female 2-EHHB–treated groups of the F_2 generation; and an increase in the prevalence of increased interstitial cells in the testes of F_2 adult males of especially the 25.0 and 100.0 µg/L dose groups. Decreased body growth in 2-EHHB fish may have contributed to two of the treatment-associated findings: testicular hypoplasia in F_1 sub-adult males, and decrease in hepatocellular glycogen in F_1 adult males and females. There were no findings associated with 2-EHHB exposure in the thyroid glands or ovaries of medaka from any of the three sacrifices.

3 July 18

JEFFREY C. WOLF, DVM, Diplomate, ACVP — Date
Senior Pathologist

JCW/cb

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GLOSSARY

Brightfield microscopy: a standard technique of microscopic observation in which a histologic tissue section is observed from above but illuminated from below using white light.

Follicular Atresia: oocyte degeneration and decomposition. This non-specific change can be physiological (e.g., resorption of unreleased senescent oocytes post-spawning) or pathological (e.g. treatment- or stress-induced). It is common to observe a low level of oocyte atresia in control fish; consequently, the pathologist employed a diagnostic threshold of 3 or more affected follicles per ovarian section.

Ovarian Follicle: the functional unit of the ovary, this term encompasses the oocyte (egg) and its surrounding envelope of supportive cells (granulosa and theca cells).

Post-ovulatory Follicle: a collapsed ovarian follicle following release of an oocyte post-spawning, its presence is an indication of recent spawning activity.

EPL® Experimental Pathology Laboratories, Inc.

COMPLIANCE STATEMENT

Test Facility	Fort Environmental Laboratories, Inc.	EPL Principal Investigator	Dr. Jeffrey C. Wolf
Study No.	BATT01-00393	EPL Pathologist	Dr. Jeffrey C. Wolf
Species	Medaka *(Oryzias latipes)*	EPL Project Number	237-077
Study Title	Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexl 4-Hydroxybenzoate		
Test Article	2-Ethylhexyl 4-Hydroxybenzoate		

The Histopathology portions of the above-referenced study were conducted in compliance with the Good Laboratory Practice regulations of the Environmental Protection Agency as stipulated by 40 CFR Part 160 (FIFRA); and all applicable amendments.

EPL Principal Investigator

3 July 18
Date

EPL® Experimental Pathology Laboratories, Inc.

QUALITY ASSURANCE FINAL CERTIFICATION

Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexl 4-Hydroxybenzoate

Client Study: BATT01-00393 EPL Principal Investigator: Dr. Jeffrey C. Wolf

EPL Project Number: 237-077 EPL Pathologist: Dr. Jeffrey C. Wolf

The following aspects of this study were inspected by the Quality Assurance Unit of Experimental Pathology Laboratories, Inc. Dates inspections were performed and findings reported to the EPL Principal Investigator and Management are indicated below.

Area Inspected	Dates	
	Inspection	Reporting
EPL Project Sheets	6/8,9/16; 7/7,8/16; 11/3/16; 2/24/17	6/9/16; 7/8/16; 11/3/16; 2/24/17
Project Setup	6/22/16; 8/1/16; 10/31/16; 11/1/16; 11/14/16	6/22/16; 8/2/16; 11/1/16; 11/14/16
In-Process - Staining	9/6/16	9/6/16
Data Review	7/8/16; 8/3/16; 9/14/16; 9/15/16; 9/20/16; 1/4/17; 1/11/17; 1/12/17; 2/22/17	7/8/16; 8/3/16; 9/14/16; 9/15/16; 9/20/16; 1/4/17; 1/11/17; 1/12/17; 2/24/17
Draft Pathology Report	2/22-24/17; 3/21-22/17; 4/12/17; 3/19-23/17; 3/19-23,26-28/18; 5/29-31/18; 6/1/18	2/24/17; 3/2/17; 3/20/17; 3/22/17; 4/12/17; 4/13-14/17; 4/2/18; 6/8/18
Final Pathology Report	7/3/18	7/3/18

Date reported to Study Director/Management 7/3/18

Date of last annual facility inspection 6/18

Barbara Meinel 3 Jul 2018

EPL Quality Assurance Unit Date

SUMMARY INCIDENCE TABLES

F1 SUB-ADULT

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 100 ug/L				
THYROID (NO. EXAMINED)	(23)	(6)				
Follicular Cell						
Hypertrophy/Hyperplasia						
Follicular Cells, Hyaline						
Degeneration						
Hypoplasia/Atrophy						

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 100 ug/L				
THYROID (NO. EXAMINED)	(1)	(6)				
Follicular Cell						
Hypertrophy/Hyperplasia						
Follicular Cells, Hyaline						
Degeneration						
Hypoplasia/Atrophy		1				

HISTOPATHOLOGY INCIDENCE TABLES

F1 SUB-ADULT

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)																			
ANIMAL	749-A1	750-A2	757-B1	758-B2	766-C2	773-D1	774-D2	781-E1	782-E2	789-F1	790-F2	797-G1	798-G2	805-H1	806-H2	813-I1	814-I2	821-J1	822-J2	829-K1
THYROID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Follicular Cell																				
Hypertrophy/Hyperplasia																				
Follicular Cells, Hyaline																				
Degeneration																				
Hypoplasia/Atrophy																				

EPL Experimental Pathology Laboratories, Inc.

II-1

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Sub-Adult Sacrifice Male Medaka (*Oryzias latipes*)	GROUP 0.0 ug/L (Control)																					
ANIMAL	830-K2	837-L1	838-L2																			
THYROID	X	X	X																			
Follicular Cell																						
Hypertrophy/Hyperplasia																						
Follicular Cells, Hyaline																						
Degeneration																						
Hypoplasia/Atrophy																						

EPL Experimental Pathology Laboratories, Inc.

II-2

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Sub-Adult Sacrifice Male Medaka (*Oryzias latipes*)	GROUP 100 ug/L																			
ANIMAL	1053-C1	1054-C2	1061-D1	1070-E2	1077-F1	1078-F2														
THYROID	X	X	X	X	X	X														
Follicular Cell																				
Hypertrophy/Hyperplasia																				
Follicular Cells, Hyaline																				
Degeneration																				
Hypoplasia/Atrophy																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F1 Sub-Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	765-C1																				
THYROID	X																				
Follicular Cell																					
Hypertrophy/Hyperplasia																					
Follicular Cells, Hyaline																					
Degeneration																					
Hypoplasia/Atrophy																					

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Sub-Adult Sacrifice Female Medaka (*Oryzias latipes*)	GROUP 100 ug/L ANIMAL																				
	1037-A1	1038-A2	1045-B1	1046-B2	1062-D2	1069-E1															
THYROID	X	X	X	X		X															
Follicular Cell																					
Hypertrophy/Hyperplasia																					
Follicular Cells, Hyaline																					
Degeneration																					
Hypoplasia/Atrophy					1																

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

SUMMARY INCIDENCE TABLES

F1 ADULT

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L	GROUP 50.0 ug/L	GROUP 100 ug/L
KIDNEY (NO. EXAMINED)	(22)	(12)	(12)	(12)	(12)	(12)
Glomeruli, Hyaline Inclusions						
Glomerulomegaly						
Hematopoietic Tissue,						
Decreased						
Hematopoietic Tissue,						
Increased						
Inflammation, Granulomatous	1			1		
Tubules, Cellular Debris/Casts	15	9	8	9	8	3
Tubules, Dilation	18	11	10	11	10	5
Tubules, Epithelium,						
Eosinophilia	22	12	12	12	12	12
Tubules, Epithelium,						
Eosinophilic Inclusions						
Tubules, Epithelium,						
Hyperplasia						
Tubules, Epithelium,						
Hypertrophy						
Tubules, Epithelium,						
Vacuolation	2		2	5	2	
Tubules, Mineralization	3	3	3	4	3	
LIVER (NO. EXAMINED)	(22)	(12)	(12)	(12)	(12)	(12)
Hepatocellular Adenoma						
Metastatic Dysgerminoma						
Anisokaryosis						
Basophilia						
Cellular Infiltrate,						
Mononuclear Cell	1					1
Cystic Degeneration	4	3	2	1	2	2
Cytoplasmic Inclusions,						
Eosinophilic						
Focus of Cellular Alteration	3		2			
Hepatocellular Vacuolation,						
Glycogen-Type	22	12	12	12	12	11
Hepatocellular Vacuolation,						
Lipid-Type						
Hepatocytes, Fatty Change,						
Regional		2	1			
Hepatocytes, Hypertrophy						
Individual Cell Necrosis					1	
Inflammation, Granulomatous				1		
Oval Cell Proliferation						

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L	GROUP 50.0 ug/L	GROUP 100 ug/L
TESTIS (NO. EXAMINED)	(22)	(12)	(12)	(12)	(12)	(12)
Asynchronous						
Development/Maldevelopment						
Decreased Spermatozoa						
Gonad Stage 1	6	1	3	4	5	4
Gonad Stage 2	6	5	5	2	2	2
Gonad Stage 3	4	3	2	4	1	3
Gonad Stage 4	3	3	1	1	3	1
Histiocytic Cells,						
Intraluminal	1					
Hypoplasia/Atrophy			2			
Increased Spermatagonia	1					
Interstitial Cells, Increased	3		3	1	3	1
Interstitial Fibrosis	2					
Phenotype 1	22	12	12	12	12	12
Phenotype 2						
Testicular Degeneration	6	8	7	7	9	8
Testicular Oocytes						
Testis, Exfoliated Cells						
Unable to Stage	3		1	1	1	2
THYROID (NO. EXAMINED)	(22)					(12)
Follicular Cell						
Hypertrophy/Hyperplasia	21					11
Follicular Cells, Hyaline						
Degeneration	2					
Hypoplasia/Atrophy						

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L	GROUP 50.0 ug/L	GROUP 100 ug/L
KIDNEY (NO. EXAMINED)	(24)	(10)	(12)	(12)	(12)	(12)
Glomeruli, Hyaline Inclusions					1	
Glomerulomegaly					1	
Hematopoietic Tissue,						
Decreased						
Hematopoietic Tissue,						
Increased						
Inflammation, Granulomatous					1	
Tubules, Cellular Debris/Casts	11	5	5	5	4	4
Tubules, Dilation	14	8	8	12	7	7
Tubules, Epithelium,						
Eosinophilia	24	10	12	12	12	12
Tubules, Epithelium,						
Eosinophilic Inclusions	4	1	3	2	5	
Tubules, Epithelium,						
Hyperplasia						
Tubules, Epithelium,						
Hypertrophy						
Tubules, Epithelium,						
Vacuolation	4	4	4	2	6	
Tubules, Mineralization		1		1		
LIVER (NO. EXAMINED)	(24)	(10)	(12)	(12)	(12)	(12)
Hepatocellular Adenoma			1			
Metastatic Dysgerminoma						
Anisokaryosis						
Basophilia	23	9	12	12	12	12
Cellular Infiltrate,						
Mononuclear Cell						
Cystic Degeneration	10	7	9	7	7	6
Cytoplasmic Inclusions,						
Eosinophilic	1				3	3
Focus of Cellular Alteration	2	1		1	1	
Hepatocellular Vacuolation,						
Glycogen-Type	24	10	12	12	12	11
Hepatocellular Vacuolation,						
Lipid-Type						
Hepatocytes, Fatty Change,						
Regional						
Hepatocytes, Hypertrophy						
Individual Cell Necrosis	5	5	2	2	2	3
Inflammation, Granulomatous						
Oval Cell Proliferation						

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L	GROUP 50.0 ug/L	GROUP 100 ug/L
OVARY (NO. EXAMINED)	(24)	(10)	(12)	(12)	(12)	(12)
Decreased Yolk Formation						
Gonad Stage 0						
Gonad Stage 1	1					
Gonad Stage 2		2			1	
Gonad Stage 3	18	8	8	10	8	8
Gonad Stage 4	5		4	2	3	4
Inflammation, Granulomatous		1	1			1
Oocyte Atresia	2	2	1		1	1
Oocyte Retention						
Ovarian Spermatogenesis						
Ovary, Edema						
Phenotype 5	24	10	12	12	12	12
Post-ovulatory Follicles	21	7	11	10	8	9
Post-ovulatory Follicles,						
Accelerated Necrosis					1	1
Unable to Stage						
THYROID (NO. EXAMINED)	(24)					(12)
Follicular Cell						
Hypertrophy/Hyperplasia						1
Follicular Cells, Hyaline						
Degeneration						
Hypoplasia/Atrophy						1

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Adult Sacrifice
Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L				
GONAD (NO. EXAMINED)		(1)				
Dysgerminoma, Malignant						
Hypoplasia/Atrophy		1				
Unable to Stage		1				
KIDNEY (NO. EXAMINED)	(2)	(2)				
Glomeruli, Hyaline Inclusions						
Glomerulomegaly						
Hematopoietic Tissue,						
Decreased						
Hematopoietic Tissue,						
Increased						
Inflammation, Granulomatous						
Tubules, Cellular Debris/Casts		1				
Tubules, Dilation		1				
Tubules, Epithelium,						
Eosinophilia	2	2				
Tubules, Epithelium,						
Eosinophilic Inclusions						
Tubules, Epithelium,						
Hyperplasia						
Tubules, Epithelium,						
Hypertrophy						
Tubules, Epithelium,						
Vacuolation						
Tubules, Mineralization						
LIVER (NO. EXAMINED)	(2)	(2)				
Hepatocellular Adenoma						
Metastatic Dysgerminoma						
Anisokaryosis						
Basophilia						
Cellular Infiltrate,						
Mononuclear Cell						
Cystic Degeneration		1				
Cytoplasmic Inclusions,						
Eosinophilic						
Focus of Cellular Alteration						
Hepatocellular Vacuolation,						
Glycogen-Type	2	2				
Hepatocellular Vacuolation,						
Lipid-Type						

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Adult Sacrifice
Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L				
LIVER (CONTINUED)						
Hepatocytes, Fatty Change,						
Regional						
Hepatocytes, Hypertrophy						
Individual Cell Necrosis						
Inflammation, Granulomatous						
Oval Cell Proliferation						
THYROID (NO. EXAMINED)	(2)					
Follicular Cell						
Hypertrophy/Hyperplasia	1					
Follicular Cells, Hyaline						
Degeneration						
Hypoplasia/Atrophy						

HISTOPATHOLOGY INCIDENCE TABLES

F1 ADULT

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

GROUP
0.0 ug/L (Control)

ANIMAL	1394-A2	1396-B2	1397-C1	1399-D1	1401-E1	1404-F2	1405-G1	1408-H2	1409-I1	1412-J2	1414-K2	1419-N1	1421-O1	1424-P2	1426-Q2	1428-R2	1430-S2	1432-T2	1433-U1	1435-V1
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous	1																			
Tubules, Cellular Debris/Casts				2	2		2	2	1		1	1		1		1	1	1	1	1
Tubules, Dilation				2	3	1	3	2	2	3	3	3	2	3		2	2	2	1	2
Tubules, Epithelium, Eosinophilia	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation																1				2
Tubules, Mineralization	1			1										1						
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate, Mononuclear Cell	1																			
Cystic Degeneration	1	2									1			1						
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration		1	3															2		
Hepatocellular Vacuolation, Glycogen-Type	3	2	3	3	3	3	3	2	3	3	2	2	2	2	2	3	2	3	3	3
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	1394-A2	1396-B2	1397-C1	1399-D1	1401-E1	1404-F2	1405-G1	1408-H2	1409-I1	1412-J2	1414-K2	1419-N1	1421-O1	1424-P2	1426-Q2	1428-R2	1430-S2	1432-T2	1433-U1	1435-V1
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis																				
Inflammation, Granulomatous																				
Oval Cell Proliferation																				
TESTIS																				
Asynchronous																				
Development/Maldevelopment																				
Decreased Spermatozoa																				
Gonad Stage 1			P		P					P		P	P							
Gonad Stage 2	P													P	P		P			P
Gonad Stage 3		P					P	P								P				
Gonad Stage 4									P		P							P		
Histiocytic Cells,																				
Intraluminal																				
Hypoplasia/Atrophy																				
Increased Spermatagonia						1														
Interstitial Cells, Increased			2							1				1						
Interstitial Fibrosis			2	1																
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2																				
Testicular Degeneration						1		1	1	1					1	2				
Testicular Oocytes																				
Testis, Exfoliated Cells																				
Unable to Stage				P		P													P	
THYROID																				
Follicular Cell																				
Hypertrophy/Hyperplasia	1	1	2	1	1	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1
Follicular Cells, Hyaline																				
Degeneration								2						2						
Hypoplasia/Atrophy																				

EPL Experimental Pathology Laboratories, Inc.

IV-2

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	ANIMAL																					
	1438-W2	1440-X2																				
KIDNEY																						
Glomeruli, Hyaline Inclusions																						
Glomerulomegaly																						
Hematopoietic Tissue, Decreased																						
Hematopoietic Tissue, Increased																						
Inflammation, Granulomatous																						
Tubules, Cellular Debris/Casts	1	1																				
Tubules, Dilation	2	1																				
Tubules, Epithelium, Eosinophilia	3	3																				
Tubules, Epithelium, Eosinophilic Inclusions																						
Tubules, Epithelium, Hyperplasia																						
Tubules, Epithelium, Hypertrophy																						
Tubules, Epithelium, Vacuolation																						
Tubules, Mineralization																						
LIVER																						
Hepatocellular Adenoma																						
Metastatic Dysgerminoma																						
Anisokaryosis																						
Basophilia																						
Cellular Infiltrate, Mononuclear Cell																						
Cystic Degeneration																						
Cytoplasmic Inclusions, Eosinophilic																						
Focus of Cellular Alteration																						
Hepatocellular Vacuolation, Glycogen-Type	3	3																				
Hepatocellular Vacuolation, Lipid-Type																						
Hepatocytes, Fatty Change, Regional																						

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	ANIMAL																					
	1438-W2	1440-X2																				
LIVER (CONTINUED)																						
Hepatocytes, Hypertrophy																						
Individual Cell Necrosis																						
Inflammation, Granulomatous																						
Oval Cell Proliferation																						
TESTIS																						
Asynchronous																						
Development/Maldevelopment																						
Decreased Spermatozoa																						
Gonad Stage 1	P																					
Gonad Stage 2		P																				
Gonad Stage 3																						
Gonad Stage 4																						
Histiocytic Cells,																						
Intraluminal	3																					
Hypoplasia/Atrophy																						
Increased Spermatagonia																						
Interstitial Cells, Increased																						
Interstitial Fibrosis																						
Phenotype 1	P	P																				
Phenotype 2																						
Testicular Degeneration																						
Testicular Oocytes																						
Testis, Exfoliated Cells																						
Unable to Stage																						
THYROID		X																				
Follicular Cell																						
Hypertrophy/Hyperplasia	1																					
Follicular Cells, Hyaline																						
Degeneration																						
Hypoplasia/Atrophy																						

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 ug/L

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	1442-A2	1444-B2	1448-D2	1450-E2	1452-F2	1453-G1	1454-G2	1456-H2	1457-I1	1459-J1	1462-K2	1464-L2								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts	1	1	1	2	1	1			1		1	1								
Tubules, Dilation	1	1	2	2	1	2		1	2	1	2	1								
Tubules, Epithelium, Eosinophilia	3	3	3	3	3	3	3	3	3	3	3	3								
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation																				
Tubules, Mineralization	1			1								1								
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration					1	2				1										
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	2	3	2	2	2	3	2	2	2	3	3	3								
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional				1		1														

EPL Experimental Pathology Laboratories, Inc.

IV-5

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 ug/L

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	1442-A2	1444-B2	1448-D2	1450-E2	1452-F2	1453-G1	1454-G2	1456-H2	1457-I1	1459-J1	1462-K2	1464-L2
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis												
Inflammation, Granulomatous												
Oval Cell Proliferation												
TESTIS												
Asynchronous												
Development/Maldevelopment												
Decreased Spermatozoa												
Gonad Stage 1			P									
Gonad Stage 2	P			P	P			P		P		
Gonad Stage 3		P				P					P	
Gonad Stage 4							P		P			P
Histiocytic Cells,												
Intraluminal												
Hypoplasia/Atrophy												
Increased Spermatagonia												
Interstitial Cells, Increased												
Interstitial Fibrosis												
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2												
Testicular Degeneration	1	1	1	1		1	1	1	1			
Testicular Oocytes												
Testis, Exfoliated Cells												
Unable to Stage												

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
12.5 ug/L

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	146-A2	146-B2	147-C2	147-D1	147-E1	147-F1	147-G1	147-H1	148-I2	148-J2	148-K1	148-L1
KIDNEY												
Glomeruli, Hyaline Inclusions												
Glomerulomegaly												
Hematopoietic Tissue, Decreased												
Hematopoietic Tissue, Increased												
Inflammation, Granulomatous												
Tubules, Cellular Debris/Casts		1	1	2			1		1	2	1	1
Tubules, Dilation	1	2	2	3			2	2	2	3	1	2
Tubules, Epithelium, Eosinophilia	3	3	3	3	3	3	3	3	3	3	3	3
Tubules, Epithelium, Eosinophilic Inclusions												
Tubules, Epithelium, Hyperplasia												
Tubules, Epithelium, Hypertrophy												
Tubules, Epithelium, Vacuolation				1	1							
Tubules, Mineralization		1		1						1		
LIVER												
Hepatocellular Adenoma												
Metastatic Dysgerminoma												
Anisokaryosis												
Basophilia												
Cellular Infiltrate, Mononuclear Cell												
Cystic Degeneration								1		1		
Cytoplasmic Inclusions, Eosinophilic												
Focus of Cellular Alteration	1							1				
Hepatocellular Vacuolation, Glycogen-Type	3	2	2	2	3	2	2	2	3	2	2	3
Hepatocellular Vacuolation, Lipid-Type												
Hepatocytes, Fatty Change, Regional	1											

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
12.5 ug/L

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	146-A2	148-B2	147-C2	141-D1	143-E1	145-F1	147-G1	149-H1	148-I2	148-J2	148-K1	148-L1
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis												
Inflammation, Granulomatous												
Oval Cell Proliferation												
TESTIS												
Asynchronous												
Development/Maldevelopment												
Decreased Spermatozoa												
Gonad Stage 1	P					P		P				
Gonad Stage 2		P	P				P			P	P	
Gonad Stage 3				P								P
Gonad Stage 4									P			
Histiocytic Cells,												
Intraluminal												
Hypoplasia/Atrophy									1			1
Increased Spermatagonia												
Interstitial Cells, Increased			1		2					1		
Interstitial Fibrosis												
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2												
Testicular Degeneration	1		1	1		1		1	1		1	
Testicular Oocytes												
Testis, Exfoliated Cells												
Unable to Stage					P							

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
25.0 ug/L

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	1490-A2	1491-B1	1494-C2	1496-D2	1498-E2	1500-F2	1502-G2	1504-H2	1506-I2	1508-J2	1509-K1	1511-L1								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous									1											
Tubules, Cellular Debris/Casts	2	1	1	1	2	2	1		2			1								
Tubules, Dilation	3	1	2		3	2	1	2	2	1	1	2								
Tubules, Epithelium, Eosinophilia	3	3	3	3	3	3	3	3	3	3	3	3								
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation				1				1	1	1	1									
Tubules, Mineralization	1		1			1			2											
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration								1												
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	2	2	1	2	2	1	2	2	1	2	2	2								
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

EPL Experimental Pathology Laboratories, Inc.

IV-9

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
25.0 ug/L

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	1490-A2	1491-B1	1494-C2	1496-D2	1498-E2	1500-F2	1502-G2	1504-H2	1506-I2	1508-J2	1509-K1	1511-L1
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis												
Inflammation, Granulomatous											1	
Oval Cell Proliferation												
TESTIS												
Asynchronous												
Development/Maldevelopment												
Decreased Spermatozoa												
Gonad Stage 1	P					P	P		P			
Gonad Stage 2		P			P							
Gonad Stage 3								P		P	P	P
Gonad Stage 4			P									
Histiocytic Cells,												
Intraluminal												
Hypoplasia/Atrophy												
Increased Spermatagonia												
Interstitial Cells, Increased							1					
Interstitial Fibrosis												
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2												
Testicular Degeneration	1		1	1			1			1	1	1
Testicular Oocytes												
Testis, Exfoliated Cells												
Unable to Stage				P								

EPL Experimental Pathology Laboratories, Inc.

IV-10

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
50.0 ug/L

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	15136-A1	15162-B2	15171-C1	15191-D1	15211-E1	15244-F2	15255-G1	15282-H2	15291-I1	15322-J2	15342-K2	15362-L2
KIDNEY												
Glomeruli, Hyaline Inclusions												
Glomerulomegaly												
Hematopoietic Tissue, Decreased												
Hematopoietic Tissue, Increased												
Inflammation, Granulomatous												
Tubules, Cellular Debris/Casts	1		1	1	1		1	2	1			1
Tubules, Dilation	1	1		3	2	1	2	2	1	1		2
Tubules, Epithelium, Eosinophilia	3	3	3	3	3	3	3	3	3	3	3	3
Tubules, Epithelium, Eosinophilic Inclusions												
Tubules, Epithelium, Hyperplasia												
Tubules, Epithelium, Hypertrophy												
Tubules, Epithelium, Vacuolation	1		3									
Tubules, Mineralization	1								1			2
LIVER												
Hepatocellular Adenoma												
Metastatic Dysgerminoma												
Anisokaryosis												
Basophilia												
Cellular Infiltrate, Mononuclear Cell												
Cystic Degeneration				2		1						
Cytoplasmic Inclusions, Eosinophilic												
Focus of Cellular Alteration												
Hepatocellular Vacuolation, Glycogen-Type	2	2	1	2	2	2	2	2	2	2	1	1
Hepatocellular Vacuolation, Lipid-Type												
Hepatocytes, Fatty Change, Regional												

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
50.0 ug/L

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	153-A1	156-B2	157-C1	159-D1	161-E1	162-F2	163-G1	164-H2	165-I1	166-J2	167-K2	168-L2
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis								1				
Inflammation, Granulomatous												
Oval Cell Proliferation												
TESTIS												
Asynchronous												
Development/Maldevelopment												
Decreased Spermatozoa												
Gonad Stage 1	P	P	P							P	P	
Gonad Stage 2						P		P				
Gonad Stage 3												P
Gonad Stage 4				P			P		P			
Histiocytic Cells,												
Intraluminal												
Hypoplasia/Atrophy												
Increased Spermatagonia												
Interstitial Cells, Increased					1			1				1
Interstitial Fibrosis												
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2												
Testicular Degeneration	1	1	1	2	1	1			2	1	1	
Testicular Oocytes												
Testis, Exfoliated Cells												
Unable to Stage					P							

EPL Experimental Pathology Laboratories, Inc.

IV-12

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100 ug/L

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	1537-A1	1540-B2	1542-C2	1543-D1	1545-E1	1547-F1	1550-G2	1552-H2	1553-I1	1555-J1	1557-K1	1560-L2								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts		1			1		1													
Tubules, Dilation		1			1		2	1	1											
Tubules, Epithelium, Eosinophilia	3	3	3	3	3	3	3	3	3	3	3	3								
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation																				
Tubules, Mineralization																				
LIVER											X									
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate, Mononuclear Cell						1														
Cystic Degeneration						1		1												
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	1	1	1	1	2	1	1	1	1	1		1								
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

GROUP
100 ug/L

ANIMAL	1537-A1	1540-B2	1542-C2	1543-D1	1545-E1	1547-F1	1550-G2	1552-H2	1553-I1	1555-J1	1557-K1	1560-L2
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis												
Inflammation, Granulomatous												
Oval Cell Proliferation												
TESTIS												
Asynchronous												
Development/Maldevelopment												
Decreased Spermatozoa												
Gonad Stage 1		P	P			P						P
Gonad Stage 2				P						P		
Gonad Stage 3					P		P		P			
Gonad Stage 4											P	
Histiocytic Cells,												
Intraluminal												
Hypoplasia/Atrophy												
Increased Spermatagonia												
Interstitial Cells, Increased										1		
Interstitial Fibrosis												
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2												
Testicular Degeneration		1	1	1			1		1	1	1	1
Testicular Oocytes												
Testis, Exfoliated Cells												
Unable to Stage	P							P				
THYROID						X						
Follicular Cell												
Hypertrophy/Hyperplasia	1	2	1	1	1		1	2	1	1	1	1
Follicular Cells, Hyaline												
Degeneration												
Hypoplasia/Atrophy												

EPL Experimental Pathology Laboratories, Inc.

IV-14

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1393-A1	1395-B1	1398-C2	1400-D2	1402-E2	1403-F1	1406-G2	1407-H1	1410-I2	1411-J1	1413-K1	1415-L1	1418-M2	1420-N2	1422-O2	1423-P1	1425-Q1	1427-R1	1429-S1	1431-T1
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts				1	1	2		1		1	1							1	1	1
Tubules, Dilation	1		3	2	3	3	1	1		1	3							1	1	3
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tubules, Epithelium, Eosinophilic Inclusions	1		1							1									1	
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation			2		1													1	1	
Tubules, Mineralization																				
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration			2	1		1	1		1	1	1						1			
Cytoplasmic Inclusions, Eosinophilic									1											
Focus of Cellular Alteration	1											2								
Hepatocellular Vacuolation, Glycogen-Type	3	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1393-A1	1395-B1	1398-C2	1400-D2	1402-E2	1403-F1	1406-G2	1407-H1	1410-I2	1411-J1	1413-K1	1415-L1	1418-M2	1420-N2	1422-O2	1423-P1	1425-Q1	1427-R1	1429-S1	1431-T1
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis		1	1	1	1												1			
Inflammation, Granulomatous																				
Oval Cell Proliferation																				
OVARY																				
Decreased Yolk Formation																				
Gonad Stage 0																				
Gonad Stage 1																				P
Gonad Stage 2																				
Gonad Stage 3			P	P	P	P	P	P	P	P	P	P	P	P	P	P				
Gonad Stage 4	P	P															P	P	P	
Inflammation, Granulomatous																				
Oocyte Atresia															1					1
Oocyte Retention																				
Ovarian Spermatogenesis																				
Ovary, Edema																				
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles	1	2	1	1	2	1	1	1	1	2	1	1	1	1	1		1		3	
Post-ovulatory Follicles, Accelerated Necrosis																				
Unable to Stage																				
THYROID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Follicular Cell Hypertrophy/Hyperplasia																				
Follicular Cells, Hyaline Degeneration																				
Hypoplasia/Atrophy																				

EPL Experimental Pathology Laboratories, Inc.

IV-16

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Adult Sacrifice Female Medaka (*Oryzias latipes*)	GROUP 0.0 ug/L (Control)																					
ANIMAL	143 4- U 2	143 6- V 2	143 7- W 1	143 9- X 1																		
KIDNEY																						
Glomeruli, Hyaline Inclusions																						
Glomerulomegaly																						
Hematopoietic Tissue, Decreased																						
Hematopoietic Tissue, Increased																						
Inflammation, Granulomatous																						
Tubules, Cellular Debris/Casts	1		1																			
Tubules, Dilation	2		2																			
Tubules, Epithelium, Eosinophilia	1	1	1	1																		
Tubules, Epithelium, Eosinophilic Inclusions																						
Tubules, Epithelium, Hyperplasia																						
Tubules, Epithelium, Hypertrophy																						
Tubules, Epithelium, Vacuolation																						
Tubules, Mineralization																						
LIVER																						
Hepatocellular Adenoma																						
Metastatic Dysgerminoma																						
Anisokaryosis																						
Basophilia	3	3	3	2																		
Cellular Infiltrate, Mononuclear Cell																						
Cystic Degeneration		2		1																		
Cytoplasmic Inclusions, Eosinophilic																						
Focus of Cellular Alteration																						
Hepatocellular Vacuolation, Glycogen-Type	2	2	3	3																		
Hepatocellular Vacuolation, Lipid-Type																						
Hepatocytes, Fatty Change, Regional																						

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Adult Sacrifice Female Medaka (*Oryzias latipes*)	GROUP 0.0 ug/L (Control)																					
ANIMAL	1434-U2	1436-V2	1437-W1	1439-X1																		
LIVER (CONTINUED)																						
Hepatocytes, Hypertrophy																						
Individual Cell Necrosis																						
Inflammation, Granulomatous																						
Oval Cell Proliferation																						
OVARY																						
Decreased Yolk Formation																						
Gonad Stage 0																						
Gonad Stage 1																						
Gonad Stage 2																						
Gonad Stage 3	P	P	P	P																		
Gonad Stage 4																						
Inflammation, Granulomatous																						
Oocyte Atresia																						
Oocyte Retention																						
Ovarian Spermatogenesis																						
Ovary, Edema																						
Phenotype 5	P	P	P	P																		
Post-ovulatory Follicles	1	1	1	1																		
Post-ovulatory Follicles, Accelerated Necrosis																						
Unable to Stage																						
THYROID	X	X	X	X																		
Follicular Cell Hypertrophy/Hyperplasia																						
Follicular Cells, Hyaline Degeneration																						
Hypoplasia/Atrophy																						

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 ug/L

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1441-A1	1445-C1	1447-D1	1449-E1	1451-F1	1455-H1	1458-I2	1460-J2	1461-K1	1463-L1
KIDNEY										
Glomeruli, Hyaline Inclusions										
Glomerulomegaly										
Hematopoietic Tissue, Decreased										
Hematopoietic Tissue, Increased										
Inflammation, Granulomatous										
Tubules, Cellular Debris/Casts			1	1		1		1		1
Tubules, Dilation		1	1	3		2	2	2	1	2
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	1	1	1	1
Tubules, Epithelium, Eosinophilic Inclusions			1							
Tubules, Epithelium, Hyperplasia										
Tubules, Epithelium, Hypertrophy										
Tubules, Epithelium, Vacuolation			1			1			1	1
Tubules, Mineralization						1				
LIVER										
Hepatocellular Adenoma										
Metastatic Dysgerminoma										
Anisokaryosis										
Basophilia	3	2	3	3	3	3	3	3		3
Cellular Infiltrate, Mononuclear Cell										
Cystic Degeneration	1	2		1		2		1	2	2
Cytoplasmic Inclusions, Eosinophilic										
Focus of Cellular Alteration									1	
Hepatocellular Vacuolation, Glycogen-Type	2	3	1	2	1	2	1	2	3	1
Hepatocellular Vacuolation, Lipid-Type										
Hepatocytes, Fatty Change, Regional										

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 ug/L

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1441-A1	1445-C1	1447-D1	1449-E1	1451-F1	1455-H1	1458-I2	1460-J2	1461-K1	1463-L1
LIVER (CONTINUED)										
Hepatocytes, Hypertrophy										
Individual Cell Necrosis	1	1	1		1	1				
Inflammation, Granulomatous										
Oval Cell Proliferation										
OVARY										
Decreased Yolk Formation										
Gonad Stage 0										
Gonad Stage 1										
Gonad Stage 2									P	P
Gonad Stage 3	P	P	P	P	P	P	P	P		
Gonad Stage 4										
Inflammation, Granulomatous									1	
Oocyte Atresia									1	1
Oocyte Retention										
Ovarian Spermatogenesis										
Ovary, Edema										
Phenotype 5	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles	2	2		1	1	1	1	1		
Post-ovulatory Follicles, Accelerated Necrosis										
Unable to Stage										

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
12.5 ug/L

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1465-A1	1467-B1	1469-C1	1472-D2	1474-E2	1476-F2	1478-G2	1480-H2	1481-I1	1483-J1	1486-K2	1488-L2								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts	1				1			1	1			1								
Tubules, Dilation	2	1	1		2			2	3		2	2								
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	1	1	1	1	1	1								
Tubules, Epithelium, Eosinophilic Inclusions		1		1				1												
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation		1	1	1				1												
Tubules, Mineralization																				
LIVER																				
Hepatocellular Adenoma							P													
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia	3	3	3	2	3	3	3	3	2	3	2	3								
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration	1	1	1		2		1	1	1	1		1								
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	2	2	2	3	2	2	2	2	3	2	2	2								
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
12.5 ug/L

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1465-A1	1467-B1	1469-C1	1472-D2	1474-E2	1476-F2	1478-G2	1480-H2	1481-I1	1483-J1	1486-K2	1488-L2
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis		1			1							
Inflammation, Granulomatous												
Oval Cell Proliferation												
OVARY												
Decreased Yolk Formation												
Gonad Stage 0												
Gonad Stage 1												
Gonad Stage 2												
Gonad Stage 3	P	P			P	P	P			P	P	P
Gonad Stage 4			P	P				P	P			
Inflammation, Granulomatous				2								
Oocyte Atresia				2								
Oocyte Retention												
Ovarian Spermatogenesis												
Ovary, Edema												
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles	1	1	1		1	1	1	2	1	2	1	1
Post-ovulatory Follicles, Accelerated Necrosis												
Unable to Stage												

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
25.0 ug/L

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1489-A1	1492-B2	1493-C1	1495-D1	1497-E1	1499-F1	1501-G1	1503-H1	1505-I1	1507-J1	1510-K2	1512-L2								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts	1		1	1	1		1													
Tubules, Dilation	1	3	2	2	2	1	1	2	2	1	1	1								
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	1	1	1	1	1	1								
Tubules, Epithelium, Eosinophilic Inclusions					1		1													
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation		1									1									
Tubules, Mineralization					1															
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia	3	3	3	3	2	3	3	3	3	3	3	3								
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration		1			1	1	1	1		1	1									
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration						1														
Hepatocellular Vacuolation, Glycogen-Type	2	2	1	2	3	2	2	2	2	2	2	1								
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
25.0 ug/L

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1489-A1	1492-B2	1493-C1	1495-D1	1497-E1	1499-F1	1501-G1	1503-H1	1505-I1	1507-J1	1510-K2	1512-L2
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis								1				2
Inflammation, Granulomatous												
Oval Cell Proliferation												
OVARY												
Decreased Yolk Formation												
Gonad Stage 0												
Gonad Stage 1												
Gonad Stage 2												
Gonad Stage 3	P	P	P	P	P	P	P	P	P			P
Gonad Stage 4										P	P	
Inflammation, Granulomatous												
Oocyte Atresia												
Oocyte Retention												
Ovarian Spermatogenesis												
Ovary, Edema												
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles	1	1	2	1		1	1	1	1	1		1
Post-ovulatory Follicles, Accelerated Necrosis												
Unable to Stage												

EPL Experimental Pathology Laboratories, Inc.

IV-24

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
50.0 ug/L

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	154-A2	155-B1	158-C2	520-D2	522-E2	523-F1	526-G2	527-H1	530-I2	531-J1	533-K1	535-L1
KIDNEY												
Glomeruli, Hyaline Inclusions		2										
Glomerulomegaly		1										
Hematopoietic Tissue, Decreased												
Hematopoietic Tissue, Increased												
Inflammation, Granulomatous											1	
Tubules, Cellular Debris/Casts		1			1			1	1			
Tubules, Dilation		1			2	3		1	2		2	1
Tubules, Epithelium, Eosinophilia	1	1	1	2	1	1	1	1	1	1	1	1
Tubules, Epithelium, Eosinophilic Inclusions	1	2					1			1	1	
Tubules, Epithelium, Hyperplasia												
Tubules, Epithelium, Hypertrophy												
Tubules, Epithelium, Vacuolation	1	1				1	1				1	1
Tubules, Mineralization												
LIVER												
Hepatocellular Adenoma												
Metastatic Dysgerminoma												
Anisokaryosis												
Basophilia	3	3	3	3	3	3	3	3	2	3	3	3
Cellular Infiltrate, Mononuclear Cell												
Cystic Degeneration	1	1	1			1				2	1	1
Cytoplasmic Inclusions, Eosinophilic			1	1		1						
Focus of Cellular Alteration				2								
Hepatocellular Vacuolation, Glycogen-Type	2	2	1	2	2	1	2	2	2	1	1	1
Hepatocellular Vacuolation, Lipid-Type												
Hepatocytes, Fatty Change, Regional												

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
50.0 ug/L

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	154-A2	155-B1	158-C2	152-D2	152-E2	153-F1	156-G2	157-H1	153-I2	153-J1	153-K1	153-L1
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis			1			1						
Inflammation, Granulomatous												
Oval Cell Proliferation												
OVARY												
Decreased Yolk Formation												
Gonad Stage 0												
Gonad Stage 1												
Gonad Stage 2						P						
Gonad Stage 3		P	P	P	P		P		P	P	P	
Gonad Stage 4	P							P				P
Inflammation, Granulomatous												
Oocyte Atresia								1				
Oocyte Retention												
Ovarian Spermatogenesis												
Ovary, Edema												
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles		1	1		1	1	1	1		1		1
Post-ovulatory Follicles, Accelerated Necrosis			1									
Unable to Stage												

EPL Experimental Pathology Laboratories, Inc.

IV-26

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100 ug/L

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1538-A2	1539-B1	1541-C1	1544-D2	1546-E2	1548-F2	1549-G1	1551-H1	1554-I2	1556-J2	1558-K2	1559-L1								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts			1				1		1		2									
Tubules, Dilation	2	2	3				2		1	1	2									
Tubules, Epithelium, Eosinophilia	2	2	1	1	1	1	2	1	1	1	1	1								
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation																				
Tubules, Mineralization																				
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia	3	3	3	3	3	3	3	3	2	3	3	3								
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration	1		2	1		1		1				1								
Cytoplasmic Inclusions, Eosinophilic	1		1									2								
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	1	1	1	1	1		1	1	2	1	2	1								
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

GROUP
100 ug/L

ANIMAL	153 8- A2	153 9- B1	154 1- C1	154 4- D2	154 6- E2	154 8- F2	154 9- G1	155 1- H1	155 4- I2	155 6- J2	155 8- K2	155 9- L1
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis		1		1								1
Inflammation, Granulomatous												
Oval Cell Proliferation												
OVARY												
Decreased Yolk Formation												
Gonad Stage 0												
Gonad Stage 1												
Gonad Stage 2												
Gonad Stage 3	P	P		P		P		P	P		P	P
Gonad Stage 4			P		P		P			P		
Inflammation, Granulomatous										2		
Oocyte Atresia										3		
Oocyte Retention												
Ovarian Spermatogenesis												
Ovary, Edema												
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles		1	1	1		3	1	1	1		1	1
Post-ovulatory Follicles, Accelerated Necrosis				1								
Unable to Stage												
THYROID		X	X	X	X	X	X	X	X	X		X
Follicular Cell Hypertrophy/Hyperplasia											1	
Follicular Cells, Hyaline Degeneration												
Hypoplasia/Atrophy	1											

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Adult Sacrifice Medaka (*Oryzias latipes*)	GROUP 0.0 ug/L (Control)				GROUP 6.3 ug/L																	
ANIMAL	14161-L2	14171-M1		14443-B1	14466-C2																	
GONAD	N	N			N																	
Dysgerminoma, Malignant																						
Hypoplasia/Atrophy				4																		
Unable to Stage				P																		
KIDNEY																						
Glomeruli, Hyaline Inclusions																						
Glomerulomegaly																						
Hematopoietic Tissue, Decreased																						
Hematopoietic Tissue, Increased																						
Inflammation, Granulomatous																						
Tubules, Cellular Debris/Casts				1																		
Tubules, Dilation				1																		
Tubules, Epithelium, Eosinophilia	3	2		2	3																	
Tubules, Epithelium, Eosinophilic Inclusions																						
Tubules, Epithelium, Hyperplasia																						
Tubules, Epithelium, Hypertrophy																						
Tubules, Epithelium, Vacuolation																						
Tubules, Mineralization																						
LIVER																						
Hepatocellular Adenoma																						
Metastatic Dysgerminoma																						
Anisokaryosis																						
Basophilia																						
Cellular Infiltrate, Mononuclear Cell																						
Cystic Degeneration				1																		
Cytoplasmic Inclusions, Eosinophilic																						
Focus of Cellular Alteration																						

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Adult Sacrifice Medaka (*Oryzias latipes*)	GROUP 0.0 ug/L (Control)				GROUP 6.3 ug/L																	
ANIMAL	1416-L2	1417-M1		1443-B1	1446-C2																	
LIVER (CONTINUED)																						
Hepatocellular Vacuolation, Glycogen-Type	3	3		3	3																	
Hepatocellular Vacuolation, Lipid-Type																						
Hepatocytes, Fatty Change, Regional																						
Hepatocytes, Hypertrophy																						
Individual Cell Necrosis																						
Inflammation, Granulomatous																						
Oval Cell Proliferation																						
THYROID		X																				
Follicular Cell Hypertrophy/Hyperplasia	1																					
Follicular Cells, Hyaline Degeneration																						
Hypoplasia/Atrophy																						

EPL Experimental Pathology Laboratories, Inc.

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Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

SUMMARY INCIDENCE TABLES

F2 ADULT

SUMMARY INCIDENCE TABLE

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L	GROUP 50.0 ug/L	GROUP 100 ug/L
KIDNEY (NO. EXAMINED)	(22)	(12)	(12)	(11)	(12)	(12)
Glomeruli, Hyaline Inclusions						
Glomerulomegaly						
Hematopoietic Tissue,						
Decreased	3		1	1	1	
Hematopoietic Tissue,						
Increased						
Inflammation, Granulomatous	1		2			
Tubules, Cellular Debris/Casts	15	10	11	10	10	11
Tubules, Dilation	21	11	10	11	11	12
Tubules, Epithelium,						
Eosinophilia	22	12	12	11	12	12
Tubules, Epithelium,						
Eosinophilic Inclusions						
Tubules, Epithelium,						
Hyperplasia						
Tubules, Epithelium,						
Hypertrophy						
Tubules, Epithelium,						
Vacuolation						
Tubules, Mineralization	14	4	5	5	5	2
LIVER (NO. EXAMINED)	(22)	(12)	(12)	(11)	(12)	(12)
Hepatocellular Adenoma						
Metastatic Dysgerminoma						
Anisokaryosis						
Basophilia		1			1	
Cellular Infiltrate,						
Mononuclear Cell	1		1	1		
Cystic Degeneration	7	6	6	5	6	9
Cytoplasmic Inclusions,						
Eosinophilic				1		
Focus of Cellular Alteration		2	1			
Hepatocellular Vacuolation,						
Glycogen-Type	22	11	12	11	12	12
Hepatocellular Vacuolation,						
Lipid-Type						
Hepatocytes, Fatty Change,						
Regional						
Hepatocytes, Hypertrophy						
Individual Cell Necrosis						
Inflammation, Granulomatous						
Oval Cell Proliferation			1			

SUMMARY INCIDENCE TABLE

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L	GROUP 50.0 ug/L	GROUP 100 ug/L
TESTIS (NO. EXAMINED)	(22)	(12)	(12)	(11)	(12)	(12)
Asynchronous Development/Maldevelopment	1					
Decreased Spermatozoa	3	1	1	2	2	
Gonad Stage 1	15	4	6	6	3	7
Gonad Stage 2	3	4	2	2	5	2
Gonad Stage 3	2	3	3	1	1	3
Gonad Stage 4	1	1		1	3	
Histiocytic Cells, Intraluminal						1
Hypoplasia/Atrophy						
Increased Spermatagonia			1		1	
Interstitial Cells, Increased	2	2	3	5	3	5
Interstitial Fibrosis						
Phenotype 1	22	12	12	11	12	12
Phenotype 2						
Testicular Degeneration	16	9	5	8	10	9
Testicular Oocytes						
Testis, Exfoliated Cells	1					
Unable to Stage	1		1	1		

SUMMARY INCIDENCE TABLE

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L	GROUP 50.0 ug/L	GROUP 100 ug/L
KIDNEY (NO. EXAMINED)	(24)	(11)	(10)	(12)	(12)	(12)
Glomeruli, Hyaline Inclusions						
Glomerulomegaly						
Hematopoietic Tissue,						
Decreased						
Hematopoietic Tissue,						
Increased	4		1			1
Inflammation, Granulomatous	1				2	
Tubules, Cellular Debris/Casts	10	3	4	2	5	2
Tubules, Dilation	19	9	8	7	6	7
Tubules, Epithelium,						
Eosinophilia	24	11	10	12	12	12
Tubules, Epithelium,						
Eosinophilic Inclusions		1				
Tubules, Epithelium,						
Hyperplasia						
Tubules, Epithelium,						
Hypertrophy						
Tubules, Epithelium,						
Vacuolation	1		1			
Tubules, Mineralization	7		1		3	
LIVER (NO. EXAMINED)	(24)	(11)	(10)	(12)	(12)	(12)
Hepatocellular Adenoma						
Metastatic Dysgerminoma						
Anisokaryosis						
Basophilia	23	10	10	12	12	12
Cellular Infiltrate,						
Mononuclear Cell	2		1			
Cystic Degeneration	14	7	9	12	11	8
Cytoplasmic Inclusions,						
Eosinophilic	3	2	1		1	3
Focus of Cellular Alteration	2		1	1		
Hepatocellular Vacuolation,						
Glycogen-Type	19	11	10	12	11	11
Hepatocellular Vacuolation,						
Lipid-Type					2	
Hepatocytes, Fatty Change,						
Regional						
Hepatocytes, Hypertrophy						
Individual Cell Necrosis	1					2
Inflammation, Granulomatous	2	1				
Oval Cell Proliferation	1					

SUMMARY INCIDENCE TABLE

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L	GROUP 50.0 ug/L	GROUP 100 ug/L
OVARY (NO. EXAMINED)	(24)	(11)	(10)	(12)	(12)	(12)
Decreased Yolk Formation		2			1	
Gonad Stage 0						
Gonad Stage 1	2	1				
Gonad Stage 2		2			1	1
Gonad Stage 3	12	5	6	9	7	6
Gonad Stage 4	6	3	4	3	4	4
Inflammation, Granulomatous	8	1	1	2	1	1
Oocyte Atresia	5		2	1	1	1
Oocyte Retention	5		1	1	1	1
Ovarian Spermatogenesis						1
Ovary, Edema	4			1	3	1
Phenotype 5	24	11	10	12	12	12
Post-ovulatory Follicles	17	7	7	10	8	9
Post-ovulatory Follicles, Accelerated Necrosis						
Unable to Stage	4					1

SUMMARY INCIDENCE TABLE

BATT01-00393
F2 Adult Sacrifice
Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L		
GONAD (NO. EXAMINED)	(1)					
Dysgerminoma, Malignant	1					
Hypoplasia/Atrophy						
Unable to Stage	1					
KIDNEY (NO. EXAMINED)	(2)	(1)	(2)	(1)		
Glomeruli, Hyaline Inclusions						
Glomerulomegaly						
Hematopoietic Tissue,						
Decreased						
Hematopoietic Tissue,						
Increased						
Inflammation, Granulomatous	1					
Tubules, Cellular Debris/Casts	2	1	2	1		
Tubules, Dilation	2	1	2	1		
Tubules, Epithelium,						
Eosinophilia	2	1	2	1		
Tubules, Epithelium,						
Eosinophilic Inclusions						
Tubules, Epithelium,						
Hyperplasia						
Tubules, Epithelium,						
Hypertrophy						
Tubules, Epithelium,						
Vacuolation						
Tubules, Mineralization	1	1	1	1		
LIVER (NO. EXAMINED)	(2)	(1)	(2)	(1)		
Hepatocellular Adenoma						
Metastatic Dysgerminoma	1					
Anisokaryosis						
Basophilia	1					
Cellular Infiltrate,						
Mononuclear Cell				1		
Cystic Degeneration	1	1		1		
Cytoplasmic Inclusions,						
Eosinophilic						
Focus of Cellular Alteration						
Hepatocellular Vacuolation,						
Glycogen-Type	2	1	2	1		
Hepatocellular Vacuolation,						
Lipid-Type						

SUMMARY INCIDENCE TABLE

BATT01-00393
F2 Adult Sacrifice
Medaka (*Oryzias latipes*)

	GROUP 0.0 ug/L (Control)	GROUP 6.3 ug/L	GROUP 12.5 ug/L	GROUP 25.0 ug/L		
LIVER (CONTINUED)						
Hepatocytes, Fatty Change, Regional						
Hepatocytes, Hypertrophy						
Individual Cell Necrosis						
Inflammation, Granulomatous	1					
Oval Cell Proliferation			1			

HISTOPATHOLOGY INCIDENCE TABLES

F2 ADULT

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	2552-A1	2554-B1	2558-D1	2561-E2	2562-F1	2564-G1	2566-H1	2568-I1	2572-K1	2574-L1	2576-M1	2578-N1	2580-O1	2582-P1	2584-Q1	2586-R1	2588-S1	2590-T1	2592-U1	2594-V1
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue,																				
Decreased			2				2			1										
Hematopoietic Tissue,																				
Increased																				
Inflammation, Granulomatous				1																
Tubules, Cellular Debris/Casts	1	1		2			1	1	1	1	2	2	1	1	2			1		2
Tubules, Dilation	2	3	4	3	1	1	3	2	2	4	3	2	2	2	3	1	2	2	1	3
Tubules, Epithelium,																				
Eosinophilia	3	3	2	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3
Tubules, Epithelium,																				
Eosinophilic Inclusions																				
Tubules, Epithelium,																				
Hyperplasia																				
Tubules, Epithelium,																				
Hypertrophy																				
Tubules, Epithelium,																				
Vacuolation																				
Tubules, Mineralization	1	1	1	2	2		1	1	1	1	1		2		1					1
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate,																				
Mononuclear Cell																			1	
Cystic Degeneration	3							1	1			1	1					1		
Cytoplasmic Inclusions,																				
Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation,																				
Glycogen-Type	3	2	3	2	2	2	3	2	2	2	2	2	2	2	2	2	3	1	3	2
Hepatocellular Vacuolation,																				
Lipid-Type																				
Hepatocytes, Fatty Change,																				
Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	2552-A1	2554-B1	2558-D1	2561-E2	2562-F1	2564-G1	2566-H1	2568-I1	2572-K1	2574-L1	2576-M1	2578-N1	2580-O1	2582-P1	2584-Q1	2586-R1	2588-S1	2590-T1	2592-U1	2594-V1
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis																				
Inflammation, Granulomatous																				
Oval Cell Proliferation																				
TESTIS																				
Asynchronous																				
Development/Maldevelopment	1																			
Decreased Spermatozoa										1					1	1				
Gonad Stage 1	P				P		P	P	P	P		P			P	P	P	P	P	P
Gonad Stage 2		P		P		P														
Gonad Stage 3			P								P									
Gonad Stage 4													P							
Histiocytic Cells,																				
Intraluminal																				
Hypoplasia/Atrophy																				
Increased Spermatagonia																				
Interstitial Cells, Increased																	2			1
Interstitial Fibrosis																				
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2																				
Testicular Degeneration	3	1	1		1	1			1	1		1	1	1	1		2		1	1
Testicular Oocytes																				
Testis, Exfoliated Cells											1									
Unable to Stage														P						

EPL Experimental Pathology Laboratories, Inc.

VI-2

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F2 Adult Sacrifice Male Medaka (*Oryzias latipes*)	GROUP 0.0 ug/L (Control) ANIMAL																					
	25961-W1	25981-X1																				
KIDNEY																						
Glomeruli, Hyaline Inclusions																						
Glomerulomegaly																						
Hematopoietic Tissue, Decreased																						
Hematopoietic Tissue, Increased																						
Inflammation, Granulomatous																						
Tubules, Cellular Debris/Casts		2																				
Tubules, Dilation		1																				
Tubules, Epithelium, Eosinophilia	3	3																				
Tubules, Epithelium, Eosinophilic Inclusions																						
Tubules, Epithelium, Hyperplasia																						
Tubules, Epithelium, Hypertrophy																						
Tubules, Epithelium, Vacuolation																						
Tubules, Mineralization		1																				
LIVER																						
Hepatocellular Adenoma																						
Metastatic Dysgerminoma																						
Anisokaryosis																						
Basophilia																						
Cellular Infiltrate, Mononuclear Cell																						
Cystic Degeneration	1																					
Cytoplasmic Inclusions, Eosinophilic																						
Focus of Cellular Alteration																						
Hepatocellular Vacuolation, Glycogen-Type	3	2																				
Hepatocellular Vacuolation, Lipid-Type																						
Hepatocytes, Fatty Change, Regional																						

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F2 Adult Sacrifice Male Medaka (*Oryzias latipes*)	GROUP 0.0 ug/L (Control)																					
ANIMAL	2596-W1	2598-X1																				
LIVER (CONTINUED)																						
Hepatocytes, Hypertrophy																						
Individual Cell Necrosis																						
Inflammation, Granulomatous																						
Oval Cell Proliferation																						
TESTIS																						
Asynchronous																						
Development/Maldevelopment																						
Decreased Spermatozoa																						
Gonad Stage 1	P	P																				
Gonad Stage 2																						
Gonad Stage 3																						
Gonad Stage 4																						
Histiocytic Cells,																						
Intraluminal																						
Hypoplasia/Atrophy																						
Increased Spermatagonia																						
Interstitial Cells, Increased																						
Interstitial Fibrosis																						
Phenotype 1	P	P																				
Phenotype 2																						
Testicular Degeneration	1	2																				
Testicular Oocytes																						
Testis, Exfoliated Cells																						
Unable to Stage																						

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 ug/L

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	ANIMAL	2600-A1	2602-B1	2604-C1	2606-D1	2608-E1	2610-F1	2612-G1	2614-H1	2616-I1	2618-J1	2620-K1	2622-L1								
KIDNEY																					
Glomeruli, Hyaline Inclusions																					
Glomerulomegaly																					
Hematopoietic Tissue, Decreased																					
Hematopoietic Tissue, Increased																					
Inflammation, Granulomatous																					
Tubules, Cellular Debris/Casts			2	2	2	1	1		1	2	1	1	1								
Tubules, Dilation			3	2	3	2	2	1	3	2	1	2	2								
Tubules, Epithelium, Eosinophilia		3	3	3	3	3	3	3	3	3	3	3	3								
Tubules, Epithelium, Eosinophilic Inclusions																					
Tubules, Epithelium, Hyperplasia																					
Tubules, Epithelium, Hypertrophy																					
Tubules, Epithelium, Vacuolation																					
Tubules, Mineralization			1		2				1		1										
LIVER																					
Hepatocellular Adenoma																					
Metastatic Dysgerminoma																					
Anisokaryosis																					
Basophilia			1																		
Cellular Infiltrate, Mononuclear Cell																					
Cystic Degeneration		1	1	1			1				1		1								
Cytoplasmic Inclusions, Eosinophilic																					
Focus of Cellular Alteration		2		1																	
Hepatocellular Vacuolation, Glycogen-Type		2		2	3	2	3	2	3	2	1	3	2								
Hepatocellular Vacuolation, Lipid-Type																					
Hepatocytes, Fatty Change, Regional																					

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 ug/L

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	260-A1	260-B1	260-C1	260-D1	260-E1	260-F1	260-G1	260-H1	260-I1	260-J1	260-K1	260-L1
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis												
Inflammation, Granulomatous												
Oval Cell Proliferation												
TESTIS												
Asynchronous												
Development/Maldevelopment												
Decreased Spermatozoa		1										
Gonad Stage 1			P				P		P		P	
Gonad Stage 2	P	P		P				P				
Gonad Stage 3						P				P		P
Gonad Stage 4					P							
Histiocytic Cells,												
Intraluminal												
Hypoplasia/Atrophy												
Increased Spermatagonia												
Interstitial Cells, Increased				1				1				
Interstitial Fibrosis												
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2												
Testicular Degeneration	1	1	1		1	1	1		2	1	2	
Testicular Oocytes												
Testis, Exfoliated Cells												
Unable to Stage												

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
12.5 ug/L

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	ANIMAL	26424-A1	26226-B1	26228-C1	26330-D1	26232-E1	26334-F1	26336-G1	26338-H1	26340-I1	26442-J1	26444-K1	26446-L1								
KIDNEY																					
Glomeruli, Hyaline Inclusions																					
Glomerulomegaly																					
Hematopoietic Tissue,																					
Decreased											2										
Hematopoietic Tissue,																					
Increased																					
Inflammation, Granulomatous							1						1								
Tubules, Cellular Debris/Casts		2		1	2	1	2	1	1	1	2	1	2								
Tubules, Dilation		2		2	2	1	3	1	1	3	4	1									
Tubules, Epithelium,																					
Eosinophilia		3	3	3	3	3	3	3	3	3	2	3	3								
Tubules, Epithelium,																					
Eosinophilic Inclusions																					
Tubules, Epithelium,																					
Hyperplasia																					
Tubules, Epithelium,																					
Hypertrophy																					
Tubules, Epithelium,																					
Vacuolation																					
Tubules, Mineralization					1		2		1	1			2								
LIVER																					
Hepatocellular Adenoma																					
Metastatic Dysgerminoma																					
Anisokaryosis																					
Basophilia																					
Cellular Infiltrate,																					
Mononuclear Cell											1										
Cystic Degeneration		2				1	1	1			1	1									
Cytoplasmic Inclusions,																					
Eosinophilic																					
Focus of Cellular Alteration						1															
Hepatocellular Vacuolation,																					
Glycogen-Type		3	2	3	3	2	2	2	3	2	2	2	1								
Hepatocellular Vacuolation,																					
Lipid-Type																					
Hepatocytes, Fatty Change,																					
Regional																					

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F2 Adult Sacrifice Male Medaka (*Oryzias latipes*)	GROUP 12.5 ug/L ANIMAL																			
	26244-A1	26226-B1	26228-C1	26230-D1	26232-E1	26234-F1	26236-G1	26238-H1	26240-I1	26242-J1	26244-K1	26246-L1								
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis																				
Inflammation, Granulomatous																				
Oval Cell Proliferation						1														
TESTIS																				
Asynchronous																				
Development/Maldevelopment																				
Decreased Spermatozoa												1								
Gonad Stage 1			P	P	P	P	P			P										
Gonad Stage 2	P	P																		
Gonad Stage 3									P		P	P								
Gonad Stage 4																				
Histiocytic Cells,																				
Intraluminal																				
Hypoplasia/Atrophy																				
Increased Spermatagonia										1										
Interstitial Cells, Increased			1		1					1										
Interstitial Fibrosis																				
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P								
Phenotype 2																				
Testicular Degeneration	1	1				2				1		1								
Testicular Oocytes																				
Testis, Exfoliated Cells																				
Unable to Stage								P												

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
25.0 ug/L

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	2648-A1	2650-B1	2652-C1	2654-D1	2656-E1	2658-F1	2660-G1	2664-I1	2666-J1	2668-K1	2670-L1									
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue,																				
Decreased		1																		
Hematopoietic Tissue,																				
Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts	2	2	1	1	2		2	2	1	1	2									
Tubules, Dilation	2	4	2	1	2	4	3	4	1	2	2									
Tubules, Epithelium,																				
Eosinophilia	3	3	3	3	3	3	3	3	3	3	3									
Tubules, Epithelium,																				
Eosinophilic Inclusions																				
Tubules, Epithelium,																				
Hyperplasia																				
Tubules, Epithelium,																				
Hypertrophy																				
Tubules, Epithelium,																				
Vacuolation																				
Tubules, Mineralization		2					1	1	1		1									
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate,																				
Mononuclear Cell				1																
Cystic Degeneration	1					3		1		2	1									
Cytoplasmic Inclusions,																				
Eosinophilic	1																			
Focus of Cellular Alteration																				
Hepatocellular Vacuolation,																				
Glycogen-Type	1	2	2	2	2	2	2	2	1	1	2									
Hepatocellular Vacuolation,																				
Lipid-Type																				
Hepatocytes, Fatty Change,																				
Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
25.0 ug/L

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	2648-A1	2650-B1	2652-C1	2654-D1	2656-E1	2658-F1	2660-G1	2664-I1	2666-J1	2668-K1	2670-L1
LIVER (CONTINUED)											
Hepatocytes, Hypertrophy											
Individual Cell Necrosis											
Inflammation, Granulomatous											
Oval Cell Proliferation											
TESTIS											
Asynchronous											
Development/Maldevelopment											
Decreased Spermatozoa			1						2		
Gonad Stage 1	P		P	P		P	P				P
Gonad Stage 2					P				P		
Gonad Stage 3										P	
Gonad Stage 4								P			
Histiocytic Cells,											
Intraluminal											
Hypoplasia/Atrophy											
Increased Spermatagonia											
Interstitial Cells, Increased			1	1			1		1	1	
Interstitial Fibrosis											
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2											
Testicular Degeneration	1		1		1	1	1	1	1		1
Testicular Oocytes											
Testis, Exfoliated Cells											
Unable to Stage		P									

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Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
50.0 ug/L

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	26722-A1	26742-B1	26762-C1	26782-D1	26802-E1	26822-F1	26842-G1	26862-H1	26882-I1	26902-J1	26922-K1	26942-L1								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased									1											
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts	1		2	1	2	2		2	1	1	2	1								
Tubules, Dilation	2		3	3	2	2	1	3	4	1	2	2								
Tubules, Epithelium, Eosinophilia	3	3	3	3	3	3	3	3	3	3	3	3								
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation																				
Tubules, Mineralization			1		1			2	2			1								
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia			1																	
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration			1		1		1		1	1	1									
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	2	2	2	2	2	2	2	3	1	2	1	1								
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
50.0 ug/L

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	26772-A1	26774-B1	26776-C1	26778-D1	26780-E1	26782-F1	26784-G1	26786-H1	26788-I1	26790-J1	26792-K1	26794-L1
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis												
Inflammation, Granulomatous												
Oval Cell Proliferation												
TESTIS												
Asynchronous												
Development/Maldevelopment												
Decreased Spermatozoa					1							1
Gonad Stage 1			P		P			P				
Gonad Stage 2				P		P			P		P	P
Gonad Stage 3	P											
Gonad Stage 4		P					P			P		
Histiocytic Cells,												
Intraluminal												
Hypoplasia/Atrophy												
Increased Spermatagonia		2										
Interstitial Cells, Increased	2							2	1			
Interstitial Fibrosis												
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2												
Testicular Degeneration	1	1	1		2	1	1		1	1	1	1
Testicular Oocytes												
Testis, Exfoliated Cells												
Unable to Stage												

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100 ug/L

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	2696-A1	2698-B1	2700-C1	2702-D1	2704-E1	2706-F1	2708-G1	2710-H1	2712-I1	2714-J1	2716-K1	2718-L1								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts	1	1	1	2	2	2	1	1	2	1	1									
Tubules, Dilation	4	1	2	3	2	3	2	2	3	2	2	1								
Tubules, Epithelium, Eosinophilia	3	3	3	3	3	3	3	3	3	3	3	3								
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation																				
Tubules, Mineralization	2							1												
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration	1		1	2	1		2	1	1		1	1								
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	1	2	2	1	2	2	2	2	1	3	2	2								
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F2 Adult Sacrifice
Male Medaka (*Oryzias latipes*)

GROUP
100 ug/L

ANIMAL	2696-A1	2698-B1	2700-C1	2702-D1	2704-E1	2706-F1	2708-G1	2710-H1	2712-I1	2714-J1	2716-K1	2718-L1
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis												
Inflammation, Granulomatous												
Oval Cell Proliferation												
TESTIS												
Asynchronous												
Development/Maldevelopment												
Decreased Spermatozoa												
Gonad Stage 1	P		P	P	P			P		P		P
Gonad Stage 2		P							P			
Gonad Stage 3						P	P				P	
Gonad Stage 4												
Histiocytic Cells,												
Intraluminal										1		
Hypoplasia/Atrophy												
Increased Spermatagonia												
Interstitial Cells, Increased	1	2				1	1	1				
Interstitial Fibrosis												
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 2												
Testicular Degeneration	1	2	2	2		1			1	1	2	1
Testicular Oocytes												
Testis, Exfoliated Cells												
Unable to Stage												

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	25533-A2	25555-B2	25566-C1	25577-C2	25600-E1	25633-F2	25655-G2	25677-H2	25699-I2	25711-J2	25733-K2	25755-L2	25777-M2	25799-N2	25811-O2	25833-P2	25855-Q2	25877-R2	25899-S2	25911-T2
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased											3	3								2
Inflammation, Granulomatous						1														
Tubules, Cellular Debris/Casts			1			1	2	1		1			1		1					1
Tubules, Dilation	2	2		3		4	3	2	1	2	1		2		2	3	1	1	1	2
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation				1																
Tubules, Mineralization	1		1	1		1	2	1		1										
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia	2	3		2	3	3	3	3	3	3	2	2	3	3	3	3	2	2	3	3
Cellular Infiltrate, Mononuclear Cell										1									1	
Cystic Degeneration					1	2	2	1		1			1	1	1	1	1	1	1	
Cytoplasmic Inclusions, Eosinophilic					1		1							1						
Focus of Cellular Alteration	3														2					
Hepatocellular Vacuolation, Glycogen-Type	2	1	3	2		1	1	2	1			2	2		1	2	2	2	2	
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	2553-A2	2555-B2	2556-C1	2557-C2	2560-E1	2563-F2	2565-G2	2567-H2	2569-I2	2571-J2	2573-K2	2575-L2	2577-M2	2579-N2	2581-O2	2583-P2	2585-Q2	2587-R2	2589-S2	2591-T2
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis														1						
Inflammation, Granulomatous						3														
Oval Cell Proliferation							1													
OVARY																				
Decreased Yolk Formation																				
Gonad Stage 0																				
Gonad Stage 1			P																	
Gonad Stage 2																				
Gonad Stage 3	P	P			P	P		P	P					P			P	P	P	
Gonad Stage 4				P			P						P		P	P				
Inflammation, Granulomatous						2					3	4	1		2					4
Oocyte Atresia												2			1					3
Oocyte Retention										4	4	2			1					3
Ovarian Spermatogenesis																				
Ovary, Edema										4	3	1			1					
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles	1	1		1	1	1		1	1				1	1	1	1	1	1	1	
Post-ovulatory Follicles, Accelerated Necrosis																				
Unable to Stage										P	P	P								P

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Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	25933-U2	25955-V2	25975-W2	25995-X2
KIDNEY				
Glomeruli, Hyaline Inclusions				
Glomerulomegaly				
Hematopoietic Tissue, Decreased				
Hematopoietic Tissue, Increased		1		
Inflammation, Granulomatous				
Tubules, Cellular Debris/Casts		1		1
Tubules, Dilation		2	1	3
Tubules, Epithelium, Eosinophilia	1	1	1	1
Tubules, Epithelium, Eosinophilic Inclusions				
Tubules, Epithelium, Hyperplasia				
Tubules, Epithelium, Hypertrophy				
Tubules, Epithelium, Vacuolation				
Tubules, Mineralization				
LIVER				
Hepatocellular Adenoma				
Metastatic Dysgerminoma				
Anisokaryosis				
Basophilia	3	2	3	1
Cellular Infiltrate, Mononuclear Cell				
Cystic Degeneration		1	1	
Cytoplasmic Inclusions, Eosinophilic				
Focus of Cellular Alteration				
Hepatocellular Vacuolation, Glycogen-Type	2	2	2	2
Hepatocellular Vacuolation, Lipid-Type				
Hepatocytes, Fatty Change, Regional				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 ug/L (Control)

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	2593-U2	2595-V2	2597-W2	2599-X2
LIVER (CONTINUED)				
Hepatocytes, Hypertrophy				
Individual Cell Necrosis				
Inflammation, Granulomatous				2
Oval Cell Proliferation				
OVARY				
Decreased Yolk Formation				
Gonad Stage 0				
Gonad Stage 1				P
Gonad Stage 2				
Gonad Stage 3	P	P		
Gonad Stage 4			P	
Inflammation, Granulomatous		1		1
Oocyte Atresia		1		1
Oocyte Retention				
Ovarian Spermatogenesis				
Ovary, Edema				
Phenotype 5	P	P	P	P
Post-ovulatory Follicles	1	1	1	
Post-ovulatory Follicles, Accelerated Necrosis				
Unable to Stage				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 ug/L

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	2601-A2	2603-B2	2605-C2	2607-D2	2609-E2	2613-G2	2615-H2	2617-I2	2619-J2	2621-K2	2623-L2									
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts				1	1					1										
Tubules, Dilation	2	1	2	2	2	2		1	1	2										
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	1	1	1	1	1									
Tubules, Epithelium, Eosinophilic Inclusions						2														
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation																				
Tubules, Mineralization																				
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia	3	3	3	3	3	1	3	3		3	1									
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration	1		3	1	1	1	3			1										
Cytoplasmic Inclusions, Eosinophilic			1			1														
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	2	2	2	2	2	3	2	2	2	2	2									
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

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Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 ug/L

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	2601-A2	2603-B2	2605-C2	2607-D2	2609-E2	2613-G2	2615-H2	2617-I2	2619-J2	2621-K2	2623-L2
LIVER (CONTINUED)											
Hepatocytes, Hypertrophy											
Individual Cell Necrosis											
Inflammation, Granulomatous							1				
Oval Cell Proliferation											
OVARY											
Decreased Yolk Formation									3		1
Gonad Stage 0											
Gonad Stage 1									P		
Gonad Stage 2								P			P
Gonad Stage 3		P	P	P		P				P	
Gonad Stage 4	P				P		P				
Inflammation, Granulomatous			1								
Oocyte Atresia											
Oocyte Retention											
Ovarian Spermatogenesis											
Ovary, Edema											
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles	1		1	2		1	1	1		1	
Post-ovulatory Follicles, Accelerated Necrosis											
Unable to Stage											

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
12.5 ug/L

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	26625-A2	26627-B2	26631-D2	26633-E2	26635-F2	26637-G2	26641-I2	26643-J2	26645-K2	26647-L2
KIDNEY										
Glomeruli, Hyaline Inclusions										
Glomerulomegaly										
Hematopoietic Tissue, Decreased										
Hematopoietic Tissue, Increased					1					
Inflammation, Granulomatous										
Tubules, Cellular Debris/Casts			1		1				1	1
Tubules, Dilation	1		2	1	3	1	1	1		3
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	1	1	1	1
Tubules, Epithelium, Eosinophilic Inclusions										
Tubules, Epithelium, Hyperplasia										
Tubules, Epithelium, Hypertrophy										
Tubules, Epithelium, Vacuolation									1	
Tubules, Mineralization			1							
LIVER										
Hepatocellular Adenoma										
Metastatic Dysgerminoma										
Anisokaryosis										
Basophilia	3	3	3	3	2	3	3	2	3	3
Cellular Infiltrate, Mononuclear Cell								1		
Cystic Degeneration	1	1		2	1	1	1	2	1	1
Cytoplasmic Inclusions, Eosinophilic			1							
Focus of Cellular Alteration				1						
Hepatocellular Vacuolation, Glycogen-Type	2	2	1	2	3	2	1	3	2	2
Hepatocellular Vacuolation, Lipid-Type										
Hepatocytes, Fatty Change, Regional										

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
12.5 ug/L

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	ANIMAL	26625-A2	26627-B2	26631-D2	26633-E2	26635-F2	26637-G2	26641-I2	26643-J2	26645-K2	26647-L2
LIVER (CONTINUED)											
Hepatocytes, Hypertrophy											
Individual Cell Necrosis											
Inflammation, Granulomatous											
Oval Cell Proliferation											
OVARY											
Decreased Yolk Formation											
Gonad Stage 0											
Gonad Stage 1											
Gonad Stage 2											
Gonad Stage 3		P		P			P	P	P	P	
Gonad Stage 4			P		P	P					P
Inflammation, Granulomatous											2
Oocyte Atresia					1		2				
Oocyte Retention							2				
Ovarian Spermatogenesis											
Ovary, Edema											
Phenotype 5		P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles		1		2	1	1	1	1	1		
Post-ovulatory Follicles, Accelerated Necrosis											
Unable to Stage											

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Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
25.0 ug/L

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	2649-A2	2651-B2	2653-C2	2655-D2	2657-E2	2659-F2	2661-G2	2663-H2	2665-I2	2667-J2	2669-K2	2671-L2								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts		1	1																	
Tubules, Dilation	1	1		1	1	1			2		2									
Tubules, Epithelium, Eosinophilia	1	1	1	1	2	1	1	1	1	1	1	1								
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation																				
Tubules, Mineralization																				
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia	3	3	3	3	3	2	3	2	2	3	3	3								
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration	2	2	2	2	1	1	1	2	1	1	1	2								
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration												3								
Hepatocellular Vacuolation, Glycogen-Type	2	1	2	1	1	1	1	2	3	2	1	2								
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F2 Adult Sacrifice Female Medaka (*Oryzias latipes*)	GROUP 25.0 ug/L ANIMAL																				
	2649-A2	2651-B2	2653-C2	2655-D2	2657-E2	2659-F2	2661-G2	2663-H2	2665-I2	2667-J2	2669-K2	2671-L2									
LIVER (CONTINUED)																					
Hepatocytes, Hypertrophy																					
Individual Cell Necrosis																					
Inflammation, Granulomatous																					
Oval Cell Proliferation																					
OVARY																					
Decreased Yolk Formation																					
Gonad Stage 0																					
Gonad Stage 1																					
Gonad Stage 2																					
Gonad Stage 3	P	P		P	P	P	P	P			P	P									
Gonad Stage 4			P						P	P											
Inflammation, Granulomatous									2		1										
Oocyte Atresia									1												
Oocyte Retention									2												
Ovarian Spermatogenesis																					
Ovary, Edema									2												
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P	P									
Post-ovulatory Follicles	1	1	2	1	1	1	1	1		1		1									
Post-ovulatory Follicles, Accelerated Necrosis																					
Unable to Stage																					

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
50.0 ug/L

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	26773-A2	26775-B2	26777-C2	26779-D2	26781-E2	26783-F2	26785-G2	26787-H2	26789-I2	26791-J2	26793-K2	26795-L2								
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous								2				1								
Tubules, Cellular Debris/Casts	1				1			2	1		1									
Tubules, Dilation	2		2		3			4	1		3									
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	1	1	1	1	1	1								
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation																				
Tubules, Mineralization					1			1				1								
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia	1	2	3	3	2	3	3	3	3	3	3	3								
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration	1	1	1		1	1	1	1	2	1	2	1								
Cytoplasmic Inclusions, Eosinophilic			1																	
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	2	2	2		2	1	2	2	1	2	1	1								
Hepatocellular Vacuolation, Lipid-Type				1								1								
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
50.0 ug/L

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	2673-A2	2675-B2	2677-C2	2679-D2	2681-E2	2683-F2	2685-G2	2687-H2	2689-I2	2691-J2	2693-K2	2695-L2
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis												
Inflammation, Granulomatous												
Oval Cell Proliferation												
OVARY												
Decreased Yolk Formation	1											
Gonad Stage 0												
Gonad Stage 1												
Gonad Stage 2	P											
Gonad Stage 3			P	P	P	P	P	P				P
Gonad Stage 4		P							P	P	P	
Inflammation, Granulomatous							1					
Oocyte Atresia											1	
Oocyte Retention											3	
Ovarian Spermatogenesis												
Ovary, Edema		1								3	2	
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles			2	1	1	1	1	1		2		1
Post-ovulatory Follicles, Accelerated Necrosis												
Unable to Stage												

EPL Experimental Pathology Laboratories, Inc.

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Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100 ug/L

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	2697-A2	2699-B2	2701-C2	2703-D2	2705-E2	2707-F2	2709-G2	2711-H2	2713-I2	2715-J2	2717-K2	2719-L2
KIDNEY												
Glomeruli, Hyaline Inclusions												
Glomerulomegaly												
Hematopoietic Tissue, Decreased												
Hematopoietic Tissue, Increased						3						
Inflammation, Granulomatous												
Tubules, Cellular Debris/Casts			1					1				
Tubules, Dilation	2		4		1			3	4	1		1
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	1	1	1	1	1	1
Tubules, Epithelium, Eosinophilic Inclusions												
Tubules, Epithelium, Hyperplasia												
Tubules, Epithelium, Hypertrophy												
Tubules, Epithelium, Vacuolation												
Tubules, Mineralization												
LIVER												
Hepatocellular Adenoma												
Metastatic Dysgerminoma												
Anisokaryosis												
Basophilia	3	3	3	3	3	3	3	3	3	3	3	3
Cellular Infiltrate, Mononuclear Cell												
Cystic Degeneration	1	2	1				1	3	2		1	2
Cytoplasmic Inclusions, Eosinophilic			1				1					1
Focus of Cellular Alteration												
Hepatocellular Vacuolation, Glycogen-Type	1	1	1	1	1	2		1	1	1	1	1
Hepatocellular Vacuolation, Lipid-Type												
Hepatocytes, Fatty Change, Regional												

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100 ug/L

BATT01-00393
F2 Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	2697-A2	2699-B2	2701-C2	2703-D2	2705-E2	2707-F2	2709-G2	2711-H2	2713-I2	2715-J2	2717-K2	2719-L2
LIVER (CONTINUED)												
Hepatocytes, Hypertrophy												
Individual Cell Necrosis		1									1	
Inflammation, Granulomatous												
Oval Cell Proliferation												
OVARY												
Decreased Yolk Formation												
Gonad Stage 0												
Gonad Stage 1												
Gonad Stage 2										P		
Gonad Stage 3		P	P	P	P		P	P				
Gonad Stage 4	P								P		P	P
Inflammation, Granulomatous						4						
Oocyte Atresia						4						
Oocyte Retention						3						
Ovarian Spermatogenesis	1											
Ovary, Edema						1						
Phenotype 5	P	P	P	P	P	P	P	P	P	P	P	P
Post-ovulatory Follicles		1	1	1	1		1	1	1	1	1	
Post-ovulatory Follicles, Accelerated Necrosis												
Unable to Stage						P						

EPL Experimental Pathology Laboratories, Inc.

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Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F2 Adult Sacrifice Medaka (Oryzias latipes)	GROUP 0.0 ug/L (Control)			GROUP 6.3 ug/L		GROUP 12.5 ug/L			GROUP 25.0 ug/L													
ANIMAL	25589-D2	25570-J1		26111-F2		26229-C2	26239-H2		26622-H1													
GONAD	N			N		N	N		N													
Dysgerminoma, Malignant		P																				
Hypoplasia/Atrophy																						
Unable to Stage		P																				
KIDNEY																						
Glomeruli, Hyaline Inclusions																						
Glomerulomegaly																						
Hematopoietic Tissue, Decreased																						
Hematopoietic Tissue, Increased																						
Inflammation, Granulomatous	2																					
Tubules, Cellular Debris/Casts	2	2		2		2	2		1													
Tubules, Dilation	3	1		3		3	2		1													
Tubules, Epithelium, Eosinophilia	1	1		1		1	1		3													
Tubules, Epithelium, Eosinophilic Inclusions																						
Tubules, Epithelium, Hyperplasia																						
Tubules, Epithelium, Hypertrophy																						
Tubules, Epithelium, Vacuolation																						
Tubules, Mineralization	1			2		1			1													
LIVER																						
Hepatocellular Adenoma																						
Metastatic Dysgerminoma		P																				
Anisokaryosis																						
Basophilia		1																				
Cellular Infiltrate, Mononuclear Cell									1													
Cystic Degeneration		1		2					1													
Cytoplasmic Inclusions, Eosinophilic																						
Focus of Cellular Alteration																						

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F2 Adult Sacrifice
Medaka (Oryzias latipes)

	GROUP 0.0 ug/L (Control)			GROUP 6.3 ug/L			GROUP 12.5 ug/L			GROUP 25.0 ug/L										
ANIMAL	2559-D2	2570-J1		2611-F2		2629-C2	2639-H2		2662-H1											
LIVER (CONTINUED)																				
Hepatocellular Vacuolation, Glycogen-Type	3	3		3		3	3		2											
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis																				
Inflammation, Granulomatous	2																			
Oval Cell Proliferation						1														

EPL Experimental Pathology Laboratories, Inc.

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Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4=severe
P=Present

APPENDIX A

F_1 SUB-ADULT ADDITIONAL FINDINGS AND TABLES

F_1 SUB-ADULTS

LIVER

There were no liver findings in 2-EHHB-treated F_1 sub-adult male or female fish that were substantially different from those of F_1 sub-adult controls.

KIDNEY

There were no treatment-related kidney findings in 2-EHHB-treated F_1 sub-adult male or female fish (Table A1). A few findings were statistically decreased in 2-EHHB-treated females relative to control females, including cellular debris/casts in tubules (minimal), tubule dilation (minimal), and vacuolation of the tubular epithelium (minimal); however, decreases in these particular types of minor background findings are not considered to be toxicologically relevant.

Table A1. Selected Kidney Findings for F_1 Sub-adult Male and Female Medaka

Sex	Males						Females					
Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined	23	10	10	11	8	6	1	2	2	1	4	6
Tubules, Cellular Debris / Casts												
# affected	0	1	0	0	2	0	1	0	1	0	0	0
minimal	-	1	-	-	2	-	1	-	1	-	-**	-**
Tubules, Dilation												
# affected	8	5	3	6	4	1	1	2	1	-	2	2
minimal	4	1	2	5	2	-	1	2	1	-	1	-**
mild	4	3	-	1	2	1	-	-	-	-	1	2
moderate	-	1	1	-	-	-	-	-	-	-	-	-
Tubules, Epithelium, Vacuolation												
# affected	5	2	3	5	3	0	1	0**	0**	0**	0**	0**
minimal	5	2	3	4	3	-	1	-	-	-	-	-
mild	-	-	-	1	-	-	-	-	-	-	-	-

- = no occurrences at this severity grade

**Statistically significant negative trend at the 0.05 level.

TESTES

The predominant finding in the **testes** of male F_1 sub-adults exposed to 2-EHHB (Table A2) was an increase in the prevalence of testicular hypoplasia/atrophy (moderate to severe) in males of the 50 and 100 µg/L dose groups relative to controls (Figs. 1-3). In each instance, testicular hypoplasia/atrophy presented as a small, underdeveloped

gonad populated primarily by spermatogonia and spermatocytes. Given the age of these sub-adult fish, it is more likely that affected testes were hypoplastic than atrophic.

The occurrence of intraluminal histiocytic cells (mild) in the testis of a single 100.0 µg/L dose group male, although statistically significant, is not considered toxicologically relevant.

Despite the statistical increase in Stage 3 scores in the 12.5, 25.0, 50.0 and 100.0 µg/L dose groups relative to controls, mean testis stage scores results were not considered to be a reliable indicator of effect for males of this sacrifice due to the large number of testes that were too small to reasonably stage (i.e., the central efferent duct was not evident in the acquired sections).

Table A2. Selected Testis Findings for F_1 Sub-adult Male Medaka

Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined	23	10	10	11	8	6
Hypoplasia/Atrophy						
# affected	2	2	3	2	7	5
minimal	-	1	-	2	-*	-*
mild	-	-	1	-	-*	-*
moderate	1	-	2	-	4*	2*
severe	1	1	-	-	3	3*
Histiocytic Cells, Intraluminal						
# affected	0	0	0	0	0	1
mild	-	-	-	-	-	1*
Testis Stage Scores						
Stage 1	7	1	3	-	1	-
Stage 2	5	3	1	3	-	-
Stage 3	-	-	1*	1*	-*	1*
Stage 4	-	-	1	-	-	-
Mean Score	1.4	1.8	2.0	2.3	1.0	3.0
Unable to Stage	11	6	4	7	7	5

- = no occurrences at this severity grade

*Statistically significant positive trend at the 0.05 level.

OVARIES

There were no **ovary** findings in 2-EHHB -treated F_1 sub-adult females that were substantially different from those of F_1 sub-adult control females (Table A3). Mean ovary stage scores results were not considered to be a reliable indicator for this sacrifice due to the small number of ovaries examined per group.

Table A3. Selected Ovary Findings for F_1 Sub-adult Female Medaka

Treatment Group (µg/L) [Mean Measured Concentration]	0.0 [0.321]	6.3 [5.32]	12.5 [11.3]	25.0 [24.0]	50.0 [48.8]	100.0 [101]
Number Examined	1	2	2	1	4	6
Ovary Stage Scores						
Stage 0	1	1	2	1	3	5
Stage 1	-	1	-	-	1	1
Mean Score	0.0	0.5	0.0	0.0	0.3	0.2

- = no occurrences at this severity grade

SUMMARY INCIDENCE TABLES

F1 SUB-ADULT

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 0.0 µg/L (Control)	GROUP 6.3 µg/L	GROUP 12.5 µg/L	GROUP 25.0 µg/L	GROUP 50.0 µg/L	GROUP 100 µg/L
KIDNEY (NO. EXAMINED)	(23)	(10)	(10)	(11)	(8)	(6)
Glomeruli, Hyaline Inclusions						
Glomerulomegaly						
Hematopoietic Tissue,						
Decreased						
Hematopoietic Tissue,						
Increased						
Inflammation, Granulomatous						
Tubules, Cellular Debris/Casts		1			2	
Tubules, Dilation	8	5	3	6	4	1
Tubules, Epithelium,						
Eosinophilia	21	10	7	10	6	5
Tubules, Epithelium,						
Eosinophilic Inclusions	3		1	2	2	1
Tubules, Epithelium,						
Hyperplasia			1			
Tubules, Epithelium,						
Hypertrophy				2	1	
Tubules, Epithelium,						
Vacuolation	5	2	3	5	3	
Tubules, Mineralization						
LIVER (NO. EXAMINED)	(23)	(10)	(10)	(11)	(8)	(6)
Hepatocellular Adenoma						
Metastatic Dysgerminoma						
Anisokaryosis						
Basophilia						
Cellular Infiltrate,						
Mononuclear Cell						
Cystic Degeneration	2		1			
Cytoplasmic Inclusions,						
Eosinophilic						
Focus of Cellular Alteration						
Hepatocellular Vacuolation,						
Glycogen-Type	23	10	10	11	8	6
Hepatocellular Vacuolation,						
Lipid-Type						
Hepatocytes, Fatty Change,						
Regional						
Hepatocytes, Hypertrophy						
Individual Cell Necrosis						
Inflammation, Granulomatous						
Oval Cell Proliferation						

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (Oryzias latipes)

	GROUP 0.0 µg/L (Control)	GROUP 6.3 µg/L	GROUP 12.5 µg/L	GROUP 25.0 µg/L	GROUP 50.0 µg/L	GROUP 100 µg/L
TESTIS (NO. EXAMINED)	(23)	(10)	(10)	(11)	(8)	(6)
Asynchronous Development/Maldevelopment				1		
Decreased Spermatozoa						
Gonad Stage 1	7	1	3		1	
Gonad Stage 2	5	3	1	3		
Gonad Stage 3			1	1		1
Gonad Stage 4			1			
Histiocytic Cells, Intraluminal						1
Hypoplasia/Atrophy	2	2	3	2	7	5
Increased Spermatagonia						
Interstitial Cells, Increased						
Interstitial Fibrosis				1		
Phenotype 1	22	10	10	11	8	6
Phenotype 2	1					
Testicular Degeneration	7	4	6	1	2	2
Testicular Oocytes	1					
Testis, Exfoliated Cells						
Unable to Stage	11	6	4	7	7	5

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	GROUP 0.0 µg/L (Control)	GROUP 6.3 µg/L	GROUP 12.5 µg/L	GROUP 25.0 µg/L	GROUP 50.0 µg/L	GROUP 100 µg/L
KIDNEY (NO. EXAMINED)	(1)	(2)	(2)	(1)	(4)	(6)
Glomeruli, Hyaline Inclusions						
Glomerulomegaly						
Hematopoietic Tissue,						
Decreased						
Hematopoietic Tissue,						
Increased						
Inflammation, Granulomatous						
Tubules, Cellular Debris/Casts	1		1			
Tubules, Dilation	1	2	1		2	2
Tubules, Epithelium,						
Eosinophilia	1	1	2	1	3	5
Tubules, Epithelium,						
Eosinophilic Inclusions						
Tubules, Epithelium,						
Hyperplasia						
Tubules, Epithelium,						
Hypertrophy						
Tubules, Epithelium,						
Vacuolation	1					
Tubules, Mineralization						
LIVER (NO. EXAMINED)	(1)	(2)	(2)	(1)	(4)	(6)
Hepatocellular Adenoma						
Metastatic Dysgerminoma						
Anisokaryosis						1
Basophilia						
Cellular Infiltrate,						
Mononuclear Cell						
Cystic Degeneration		1				1
Cytoplasmic Inclusions,						
Eosinophilic						
Focus of Cellular Alteration						
Hepatocellular Vacuolation,						
Glycogen-Type	1	2	2	1	4	6
Hepatocellular Vacuolation,						
Lipid-Type						
Hepatocytes, Fatty Change,						
Regional						
Hepatocytes, Hypertrophy						1
Individual Cell Necrosis						1
Inflammation, Granulomatous						
Oval Cell Proliferation						

SUMMARY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	GROUP 0.0 µg/L (Control)	GROUP 6.3 µg/L	GROUP 12.5 µg/L	GROUP 25.0 µg/L	GROUP 50.0 µg/L	GROUP 100 µg/L
OVARY (NO. EXAMINED)	(1)	(2)	(2)	(1)	(4)	(6)
Decreased Yolk Formation						
Gonad Stage 0	1	1	2	1	3	5
Gonad Stage 1		1			1	1
Gonad Stage 2						
Gonad Stage 3						
Gonad Stage 4						
Inflammation, Granulomatous						
Oocyte Atresia			1			
Oocyte Retention						
Ovarian Spermatogenesis						
Ovary, Edema						
Phenotype 5	1	2	2	1	4	6
Post-ovulatory Follicles						
Post-ovulatory Follicles,						
Accelerated Necrosis						
Unable to Stage						

HISTOPATHOLOGY INCIDENCE TABLES

F1 SUB-ADULT

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

GROUP
0.0 µg/L (Control)

ANIMAL	749-A1	750-A2	757-B1	758-B2	766-C2	773-D1	774-D2	781-E1	782-E2	789-F1	790-F2	797-G1	798-G2	805-H1	806-H2	813-I1	814-I2	821-J1	822-J2	829-K1
KIDNEY																X				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts																				
Tubules, Dilation		2		2								1	1		2			1	1	
Tubules, Epithelium, Eosinophilia	1	1	1		2	2	1	1	2	1	1	1	1	1	1		1	1	1	2
Tubules, Epithelium, Eosinophilic Inclusions				1														1	1	
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation				1										1			1		1	1
Tubules, Mineralization																				
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration																1				2
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	1	1	1	1	1	2	2	2	2	2	2	1	2	3	2	2	2	2	2	2
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 µg/L (Control)

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	749-A1	750-A2	757-B1	758-B2	766-C2	773-D1	774-D2	781-E1	782-E2	789-F1	790-F2	797-G1	798-G2	805-H1	806-H2	813-I1	814-I2	821-J1	822-J2	829-K1
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis																				
Inflammation, Granulomatous																				
Oval Cell Proliferation																				
TESTIS																				
Asynchronous Development/Maldevelopment																				
Decreased Spermatozoa																				
Gonad Stage 1			P	P									P	P	P			P		
Gonad Stage 2						P			P								P			
Gonad Stage 3																				
Gonad Stage 4																				
Histiocytic Cells, Intraluminal																				
Hypoplasia/Atrophy		4																		3
Increased Spermatagonia																				
Interstitial Cells, Increased																				
Interstitial Fibrosis																				
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		P	P	P	P
Phenotype 2																P				
Testicular Degeneration				1	1				1			1	1						1	
Testicular Oocytes																1				
Testis, Exfoliated Cells																				
Unable to Stage	P	P			P		P	P		P	P	P				P			P	P

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Sub-Adult Sacrifice Male Medaka (*Oryzias latipes*)	GROUP 0.0 µg/L (Control)																					
ANIMAL	830-K2	837-L1	838-L2																			
KIDNEY																						
Glomeruli, Hyaline Inclusions																						
Glomerulomegaly																						
Hematopoietic Tissue, Decreased																						
Hematopoietic Tissue, Increased																						
Inflammation, Granulomatous																						
Tubules, Cellular Debris/Casts																						
Tubules, Dilation	2																					
Tubules, Epithelium, Eosinophilia	1	2	1																			
Tubules, Epithelium, Eosinophilic Inclusions																						
Tubules, Epithelium, Hyperplasia																						
Tubules, Epithelium, Hypertrophy																						
Tubules, Epithelium, Vacuolation																						
Tubules, Mineralization																						
LIVER																						
Hepatocellular Adenoma																						
Metastatic Dysgerminoma																						
Anisokaryosis																						
Basophilia																						
Cellular Infiltrate, Mononuclear Cell																						
Cystic Degeneration																						
Cytoplasmic Inclusions, Eosinophilic																						
Focus of Cellular Alteration																						
Hepatocellular Vacuolation, Glycogen-Type	2	2	3																			
Hepatocellular Vacuolation, Lipid-Type																						
Hepatocytes, Fatty Change, Regional																						

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0 µg/L (Control)

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	830-K2	837-L1	838-L2																		
LIVER (CONTINUED)																					
Hepatocytes, Hypertrophy																					
Individual Cell Necrosis																					
Inflammation, Granulomatous																					
Oval Cell Proliferation																					
TESTIS																					
Asynchronous Development/Maldevelopment																					
Decreased Spermatozoa																					
Gonad Stage 1			P																		
Gonad Stage 2	P	P																			
Gonad Stage 3																					
Gonad Stage 4																					
Histiocytic Cells, Intraluminal																					
Hypoplasia/Atrophy																					
Increased Spermatagonia																					
Interstitial Cells, Increased																					
Interstitial Fibrosis																					
Phenotype 1	P	P	P																		
Phenotype 2																					
Testicular Degeneration		1																			
Testicular Oocytes																					
Testis, Exfoliated Cells																					
Unable to Stage																					

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 µg/L

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	845-A1	846-A2	853-B1	854-B2	861-C1	862-C2	870-D2	878-E2	885-F1	886-F2
KIDNEY										
Glomeruli, Hyaline Inclusions										
Glomerulomegaly										
Hematopoietic Tissue, Decreased										
Hematopoietic Tissue, Increased										
Inflammation, Granulomatous										
Tubules, Cellular Debris/Casts				1						
Tubules, Dilation		3		2		2			1	2
Tubules, Epithelium, Eosinophilia	1	1	1	1	1	1	2	1	1	1
Tubules, Epithelium, Eosinophilic Inclusions										
Tubules, Epithelium, Hyperplasia										
Tubules, Epithelium, Hypertrophy										
Tubules, Epithelium, Vacuolation		1	1							
Tubules, Mineralization										
LIVER										
Hepatocellular Adenoma										
Metastatic Dysgerminoma										
Anisokaryosis										
Basophilia										
Cellular Infiltrate, Mononuclear Cell										
Cystic Degeneration										
Cytoplasmic Inclusions, Eosinophilic										
Focus of Cellular Alteration										
Hepatocellular Vacuolation, Glycogen-Type	2	3	2	2	1	1	2	2	1	2
Hepatocellular Vacuolation, Lipid-Type										
Hepatocytes, Fatty Change, Regional										

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
6.3 µg/L

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	845-A1	846-A2	853-B1	854-B2	861-C1	862-C2	870-D2	878-E2	885-F1	886-F2										
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis																				
Inflammation, Granulomatous																				
Oval Cell Proliferation																				
TESTIS																				
Asynchronous Development/Maldevelopment																				
Decreased Spermatozoa																				
Gonad Stage 1									P											
Gonad Stage 2			P	P			P													
Gonad Stage 3																				
Gonad Stage 4																				
Histiocytic Cells, Intraluminal																				
Hypoplasia/Atrophy	1							4												
Increased Spermatagonia																				
Interstitial Cells, Increased																				
Interstitial Fibrosis																				
Phenotype 1	P	P	P	P	P	P	P	P	P	P										
Phenotype 2																				
Testicular Degeneration		1			1		1			1										
Testicular Oocytes																				
Testis, Exfoliated Cells																				
Unable to Stage	P	P			P	P		P		P										

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
12.5 µg/L

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

ANIMAL	893-A1	894-A2	901-B1	902-B2	909-C1	910-C2	925-E1	926-E2	933-F1	934-F2
KIDNEY			X							
Glomeruli, Hyaline Inclusions										
Glomerulomegaly										
Hematopoietic Tissue, Decreased										
Hematopoietic Tissue, Increased										
Inflammation, Granulomatous										
Tubules, Cellular Debris/Casts										
Tubules, Dilation		1					1	3		
Tubules, Epithelium, Eosinophilia		1		1		2	1	1	2	3
Tubules, Epithelium, Eosinophilic Inclusions					1					
Tubules, Epithelium, Hyperplasia				1						
Tubules, Epithelium, Hypertrophy										
Tubules, Epithelium, Vacuolation	1			1	1					
Tubules, Mineralization										
LIVER										
Hepatocellular Adenoma										
Metastatic Dysgerminoma										
Anisokaryosis										
Basophilia										
Cellular Infiltrate, Mononuclear Cell										
Cystic Degeneration								3		
Cytoplasmic Inclusions, Eosinophilic										
Focus of Cellular Alteration										
Hepatocellular Vacuolation, Glycogen-Type	1	1	2	2	3	3	2	2	2	2
Hepatocellular Vacuolation, Lipid-Type										
Hepatocytes, Fatty Change, Regional										

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
12.5 µg/L

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	ANIMAL	893-A1	894-A2	901-B1	902-B2	909-C1	910-C2	925-E1	926-E2	933-F1	934-F2										
LIVER (CONTINUED)																					
Hepatocytes, Hypertrophy																					
Individual Cell Necrosis																					
Inflammation, Granulomatous																					
Oval Cell Proliferation																					
TESTIS																					
Asynchronous Development/Maldevelopment																					
Decreased Spermatozoa																					
Gonad Stage 1					P			P		P											
Gonad Stage 2									P												
Gonad Stage 3							P														
Gonad Stage 4											P										
Histiocytic Cells, Intraluminal																					
Hypoplasia/Atrophy		3	3			2															
Increased Spermatagonia																					
Interstitial Cells, Increased																					
Interstitial Fibrosis																					
Phenotype 1		P	P	P	P	P	P	P	P	P	P										
Phenotype 2																					
Testicular Degeneration		1		1	1	1	1	1													
Testicular Oocytes																					
Testis, Exfoliated Cells																					
Unable to Stage		P	P	P		P															

EPL Experimental Pathology Laboratories, Inc.

A-15

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 25.0 µg/L												GROUP 50.0 µg/L							
ANIMAL	941-A1	942-A2	949-B1	957-C1	958-C2	965-D1	966-D2	973-E1	974-E2	981-F1	982-F2		989-A1	990-A2	997-B1	1014-D2	1021-E1	1022-E2	1029-F1	1030-F2
KIDNEY																				
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts																1				1
Tubules, Dilation	1	1		1	1			1			2				2	1			1	2
Tubules, Epithelium, Eosinophilia	1	2	1	1	1	1	1	2	1	1			1	1	1		1	1		1
Tubules, Epithelium, Eosinophilic Inclusions			1		2											1	1			
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy			1								1					2				
Tubules, Epithelium, Vacuolation			1	1	2		1			1				1		1			1	
Tubules, Mineralization																				
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration																				
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	1	1	2	2	3	2	3	2	1	2	2		2	2	2	2	3	3	3	3
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 25.0 µg/L												GROUP 50.0 µg/L							
ANIMAL	941-A1	942-A2	949-B1	957-C1	958-C2	965-D1	966-D2	973-E1	974-E2	981-F1	982-F2		989-A1	990-A2	997-B1	1014-D2	1021-E1	1022-E2	1029-F1	1030-F2
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis																				
Inflammation, Granulomatous																				
Oval Cell Proliferation																				
TESTIS																				
Asynchronous																				
Development/Maldevelopment											1									
Decreased Spermatozoa																				
Gonad Stage 1														P						
Gonad Stage 2		P					P		P											
Gonad Stage 3								P												
Gonad Stage 4																				
Histiocytic Cells, Intraluminal																				
Hypoplasia/Atrophy	1			1									3		3	3	4	4	4	3
Increased Spermatagonia																				
Interstitial Cells, Increased																				
Interstitial Fibrosis											2									
Phenotype 1	P	P	P	P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P
Phenotype 2																				
Testicular Degeneration	2													1						1
Testicular Oocytes																				
Testis, Exfoliated Cells																				
Unable to Stage	P		P	P	P	P				P	P		P		P	P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Sub-Adult Sacrifice Male Medaka (*Oryzias latipes*)	GROUP 100 µg/L																				
ANIMAL	1053-C1	1054-C2	1061-D1	1070-E2	1077-F1	1078-F2															
KIDNEY																					
Glomeruli, Hyaline Inclusions																					
Glomerulomegaly																					
Hematopoietic Tissue, Decreased																					
Hematopoietic Tissue, Increased																					
Inflammation, Granulomatous																					
Tubules, Cellular Debris/Casts																					
Tubules, Dilation	2																				
Tubules, Epithelium, Eosinophilia		1	1	1	1	2															
Tubules, Epithelium, Eosinophilic Inclusions			1																		
Tubules, Epithelium, Hyperplasia																					
Tubules, Epithelium, Hypertrophy																					
Tubules, Epithelium, Vacuolation																					
Tubules, Mineralization																					
LIVER																					
Hepatocellular Adenoma																					
Metastatic Dysgerminoma																					
Anisokaryosis																					
Basophilia																					
Cellular Infiltrate, Mononuclear Cell																					
Cystic Degeneration																					
Cytoplasmic Inclusions, Eosinophilic																					
Focus of Cellular Alteration																					
Hepatocellular Vacuolation, Glycogen-Type	2	2	2	2	1	2															
Hepatocellular Vacuolation, Lipid-Type																					
Hepatocytes, Fatty Change, Regional																					

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Male Medaka (*Oryzias latipes*)

	GROUP 100 µg/L					
ANIMAL	1053-C1	1054-C2	1061-D1	1070-E2	1077-F1	1078-F2
LIVER (CONTINUED)						
Hepatocytes, Hypertrophy						
Individual Cell Necrosis						
Inflammation, Granulomatous						
Oval Cell Proliferation						
TESTIS						
Asynchronous Development/Maldevelopment						
Decreased Spermatozoa						
Gonad Stage 1						
Gonad Stage 2						
Gonad Stage 3						P
Gonad Stage 4						
Histiocytic Cells, Intraluminal						2
Hypoplasia/Atrophy	4	3	4	4	3	
Increased Spermatagonia						
Interstitial Cells, Increased						
Interstitial Fibrosis						
Phenotype 1	P	P	P	P	P	P
Phenotype 2						
Testicular Degeneration				1		1
Testicular Oocytes						
Testis, Exfoliated Cells						
Unable to Stage	P	P	P	P	P	

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393 F1 Sub-Adult Sacrifice Female Medaka (*Oryzias latipes*)	GROUP 0.0 µg/L (Control)				GROUP 6.3 µg/L				GROUP 12.5 µg/L				GROUP 25.0 µg/L				GROUP 50.0 µg/L			
ANIMAL	765-C1		869-D1	877-E1		917-D1	918-D2		950-B2		998-B2	1005-C1	1006-C2	1013-D1						
KIDNEY													X							
Glomeruli, Hyaline Inclusions																				
Glomerulomegaly																				
Hematopoietic Tissue, Decreased																				
Hematopoietic Tissue, Increased																				
Inflammation, Granulomatous																				
Tubules, Cellular Debris/Casts	1						1													
Tubules, Dilation	1		1	1			1				1			2						
Tubules, Epithelium, Eosinophilia	1		1			1	1		1		1	1		1						
Tubules, Epithelium, Eosinophilic Inclusions																				
Tubules, Epithelium, Hyperplasia																				
Tubules, Epithelium, Hypertrophy																				
Tubules, Epithelium, Vacuolation	1																			
Tubules, Mineralization																				
LIVER																				
Hepatocellular Adenoma																				
Metastatic Dysgerminoma																				
Anisokaryosis																				
Basophilia																				
Cellular Infiltrate, Mononuclear Cell																				
Cystic Degeneration			1																	
Cytoplasmic Inclusions, Eosinophilic																				
Focus of Cellular Alteration																				
Hepatocellular Vacuolation, Glycogen-Type	2		1	1		1	1		3		3	1	2	2						
Hepatocellular Vacuolation, Lipid-Type																				
Hepatocytes, Fatty Change, Regional																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	GROUP 0.0 µg/L (Control)				GROUP 6.3 µg/L				GROUP 12.5 µg/L				GROUP 25.0 µg/L				GROUP 50.0 µg/L			
ANIMAL	765-C1		869-D1	877-E1		917-D1	918-D2		950-B2		998-B2	1005-C1	1006-C2	1013-D1						
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy																				
Individual Cell Necrosis																				
Inflammation, Granulomatous																				
Oval Cell Proliferation																				
OVARY																				
Decreased Yolk Formation																				
Gonad Stage 0	P		P			P	P		P		P	P	P							
Gonad Stage 1				P										P						
Gonad Stage 2																				
Gonad Stage 3																				
Gonad Stage 4																				
Inflammation, Granulomatous																				
Oocyte Atresia							1													
Oocyte Retention																				
Ovarian Spermatogenesis																				
Ovary, Edema																				
Phenotype 5	P		P	P		P	P		P		P	P	P	P						
Post-ovulatory Follicles																				
Post-ovulatory Follicles, Accelerated Necrosis																				
Unable to Stage																				

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Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00393
F1 Sub-Adult Sacrifice
Female Medaka (*Oryzias latipes*)

	GROUP 100 µg/L																				
ANIMAL	1037-A1	1038-A2	1045-B1	1046-B2	1062-D2	1069-E1															
KIDNEY																					
Glomeruli, Hyaline Inclusions																					
Glomerulomegaly																					
Hematopoietic Tissue, Decreased																					
Hematopoietic Tissue, Increased																					
Inflammation, Granulomatous																					
Tubules, Cellular Debris/Casts																					
Tubules, Dilation		2			2																
Tubules, Epithelium, Eosinophilia	1		1	2	1	1															
Tubules, Epithelium, Eosinophilic Inclusions																					
Tubules, Epithelium, Hyperplasia																					
Tubules, Epithelium, Hypertrophy																					
Tubules, Epithelium, Vacuolation																					
Tubules, Mineralization																					
LIVER																					
Hepatocellular Adenoma																					
Metastatic Dysgerminoma																					
Anisokaryosis	1																				
Basophilia																					
Cellular Infiltrate, Mononuclear Cell																					
Cystic Degeneration	1																				
Cytoplasmic Inclusions, Eosinophilic																					
Focus of Cellular Alteration																					
Hepatocellular Vacuolation, Glycogen-Type	1	2	2	2	2	1															
Hepatocellular Vacuolation, Lipid-Type																					
Hepatocytes, Fatty Change, Regional																					

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100 µg/L

BATT01-00393
F1 Sub-Adult Sacrifice
Female Medaka (*Oryzias latipes*)

ANIMAL	1037-A1	1038-A2	1045-B1	1046-B2	1062-D2	1069-E1														
LIVER (CONTINUED)																				
Hepatocytes, Hypertrophy	1																			
Individual Cell Necrosis		1																		
Inflammation, Granulomatous																				
Oval Cell Proliferation																				
OVARY																				
Decreased Yolk Formation																				
Gonad Stage 0	P	P	P		P	P														
Gonad Stage 1				P																
Gonad Stage 2																				
Gonad Stage 3																				
Gonad Stage 4																				
Inflammation, Granulomatous																				
Oocyte Atresia																				
Oocyte Retention																				
Ovarian Spermatogenesis																				
Ovary, Edema																				
Phenotype 5	P	P	P	P	P	P														
Post-ovulatory Follicles																				
Post-ovulatory Follicles, Accelerated Necrosis																				
Unable to Stage																				

Key: X=Not Remarkable N=No Section I=Incomplete A=Autolysis
1=minimal 2=mild 3=moderate 4= severe
P=Present

APPENDIX B
GRADING CRITERIA

Grade	Oocyte Atresia, Increased
1	Average of 3-5 atretic follicles per ovary section
2	Average of 6-9 atretic follicles per ovary section
3	Average > 9 atretic follicles per ovary section, but less than the vast majority
4	Vast majority of oocytes are atretic

Grade	Post-ovulatory Follicles (POF)
1	Average of 3-5 POF per ovary section
2	Average of 6-9 POF per ovary section
3	Average > 9 POF per ovary section, but less than vast majority
4	Vast majority of follicles are POF

APPENDIX C

FIGURES AND LEGENDS



Figure 1 (Z18806). Testis from an F_1 sub-adult control male, Animal No. 837-L1. This is a relatively normal-appearing Stage 2 testis. H&E.



Figure 2 (Z18076). Testis from an F_1 sub-adult male exposed to 100.0 µg/L 2-EHHB, Animal No. 1053-C1. Severe hypoplasia/atrophy of the testis (arrow). H&E.

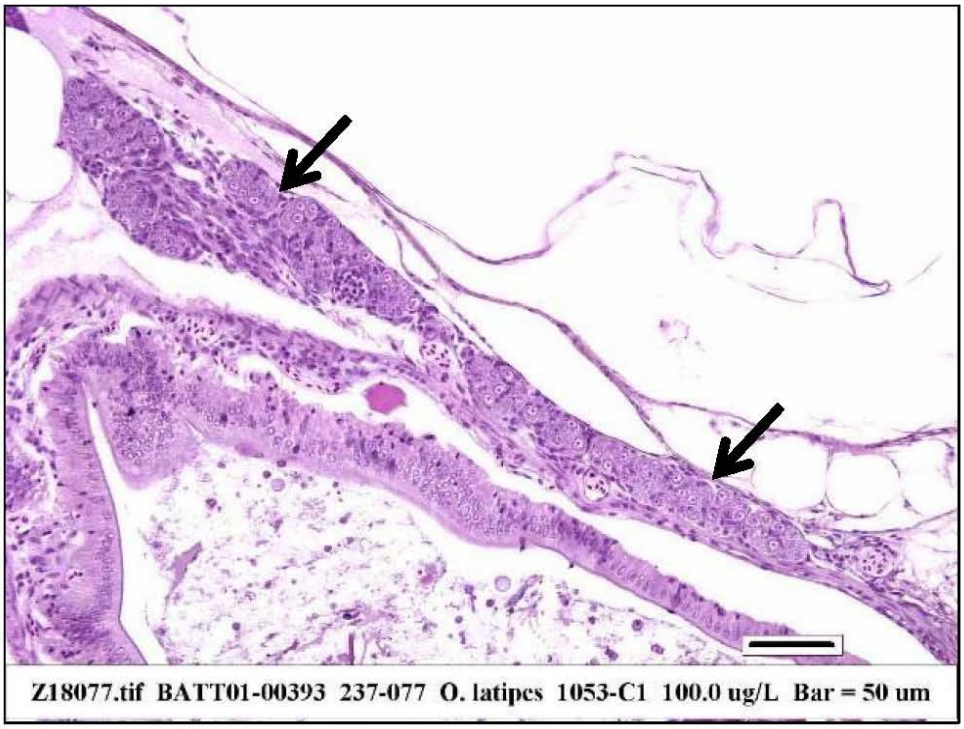


Figure 3 (Z18077). High magnification view of hypoplastic/atrophic testis (arrows) from preceding figure. This immature testis is populated primarily by spermatogonia and lesser numbers of spermatocytes. H&E.

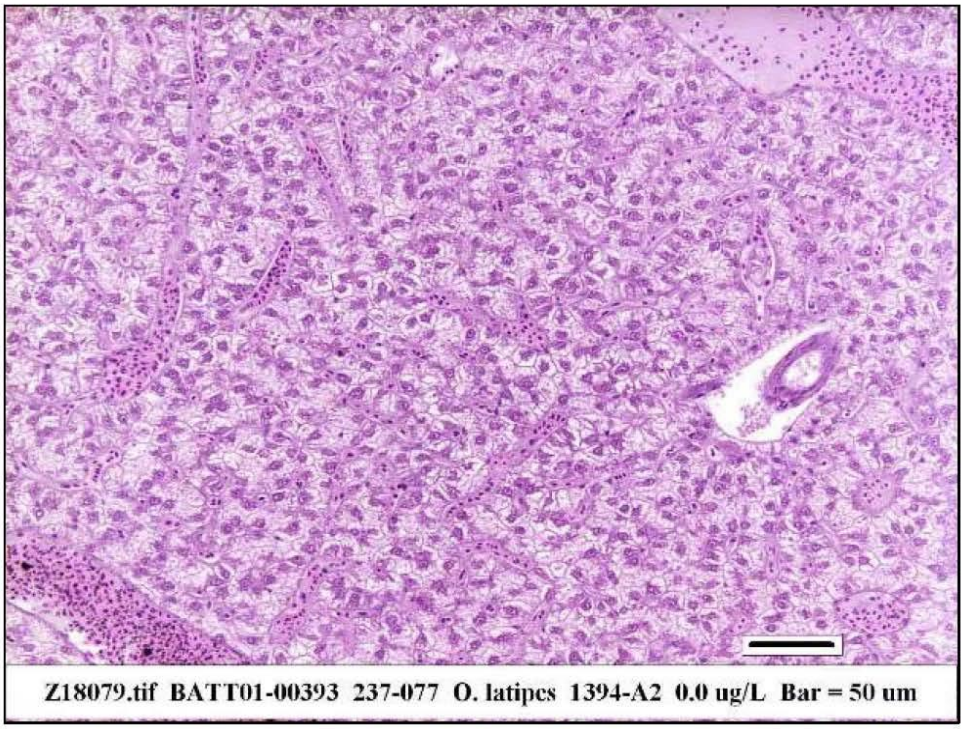


Figure 4 (Z18079). Liver from an F_1 adult control male, Animal No. 1394-A2. Grade 3 glycogen-type vacuolation typical of many livers in control males. Provided for comparison. H&E.

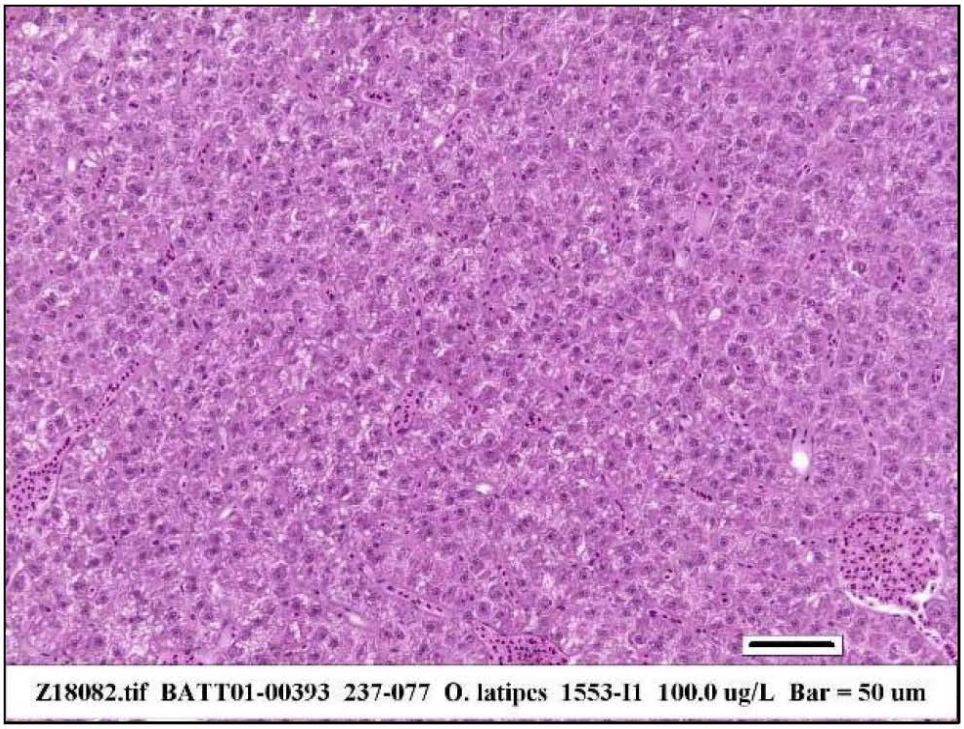


Figure 5 (Z18082). Liver from an F_1 male exposed to 100.0 µg/L 2-EHHB, Animal No. 1553-I1. Grade 1 glycogen-type vacuolation. Compare to preceding figure. H&E.

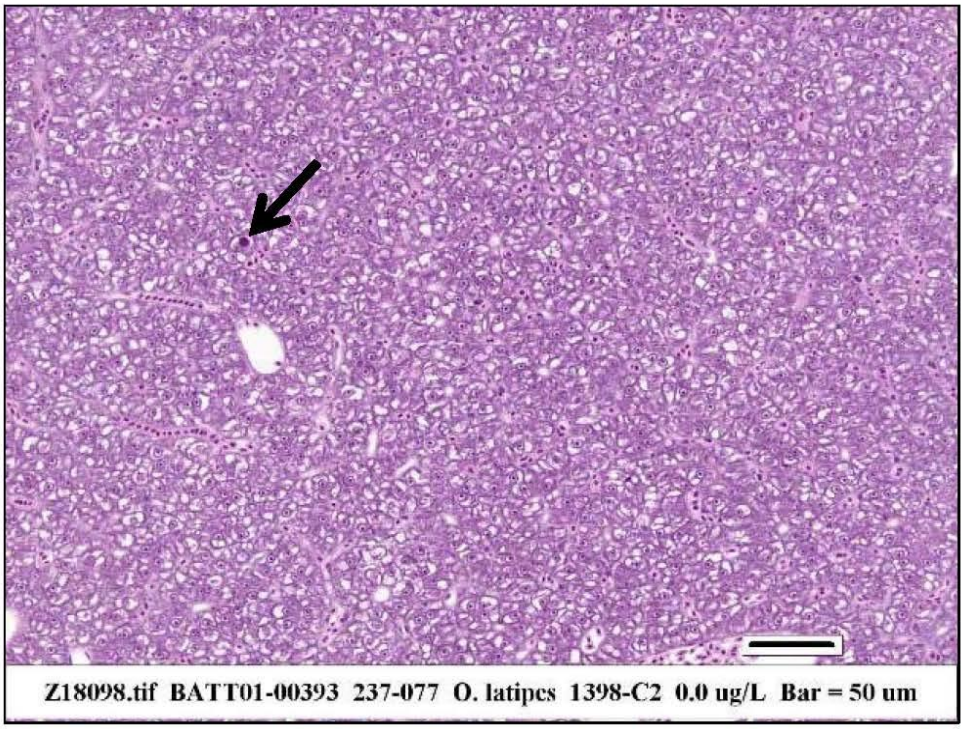


Figure 6 (Z18098). Liver from an F_1 adult control female, Animal No. 1398-C2. Grade 2 glycogen-type vacuolation typical of many livers in control females. Provided for comparison. Note the presence of a single apoptotic-type necrotic hepatocyte (arrow); low numbers of such dead cells have been observed to occur in in the livers of otherwise healthy, reproductively-active, adult female medaka (personal observation of the pathologist). H&E.

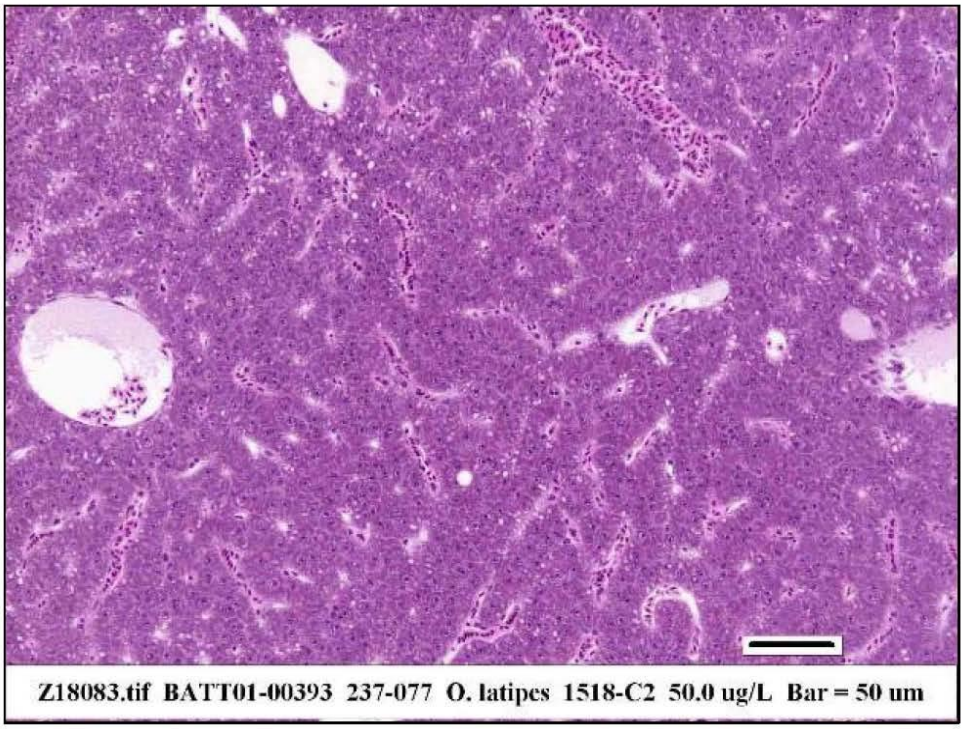


Figure 7 (Z18083). Liver from an F_1 adult female exposed to 50.0 µg/L 2-EHHB, Animal No. 1518-C2. Grade 1 glycogen-type vacuolation. Compare with preceding figure. H&E.

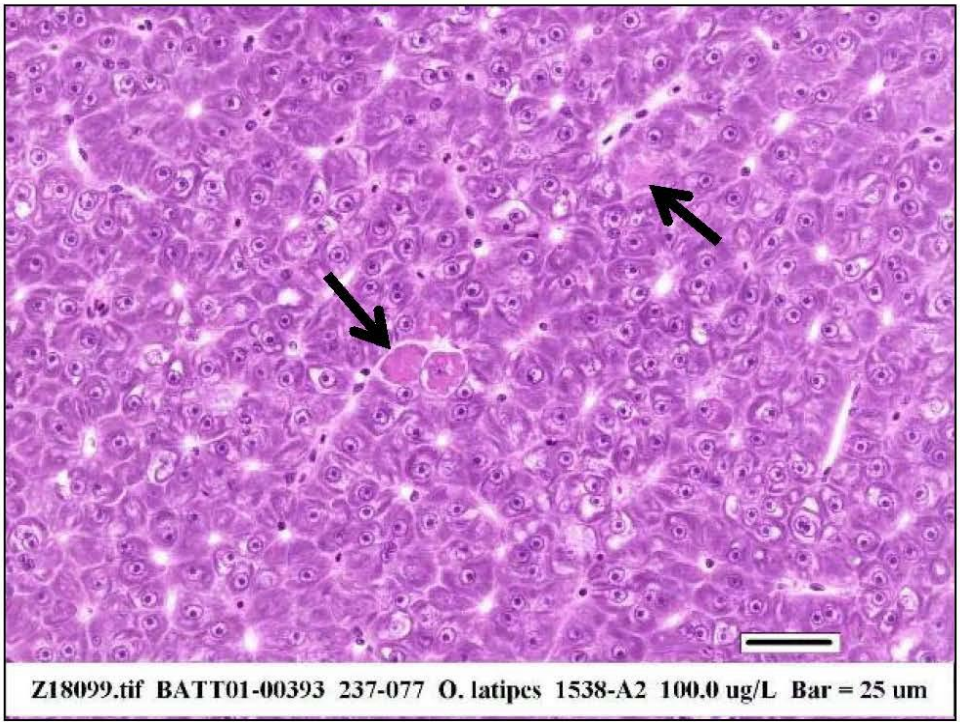


Figure 8 (Z18099). Liver from an F_1 adult female exposed to 100.0 µg/L 2-EHHB, Animal No. 1538-A2. Eosinophilic cytoplasmic inclusions (arrows). In this particular case the inclusions are globular, but in most other livers they tended to be finely granular. H&E.

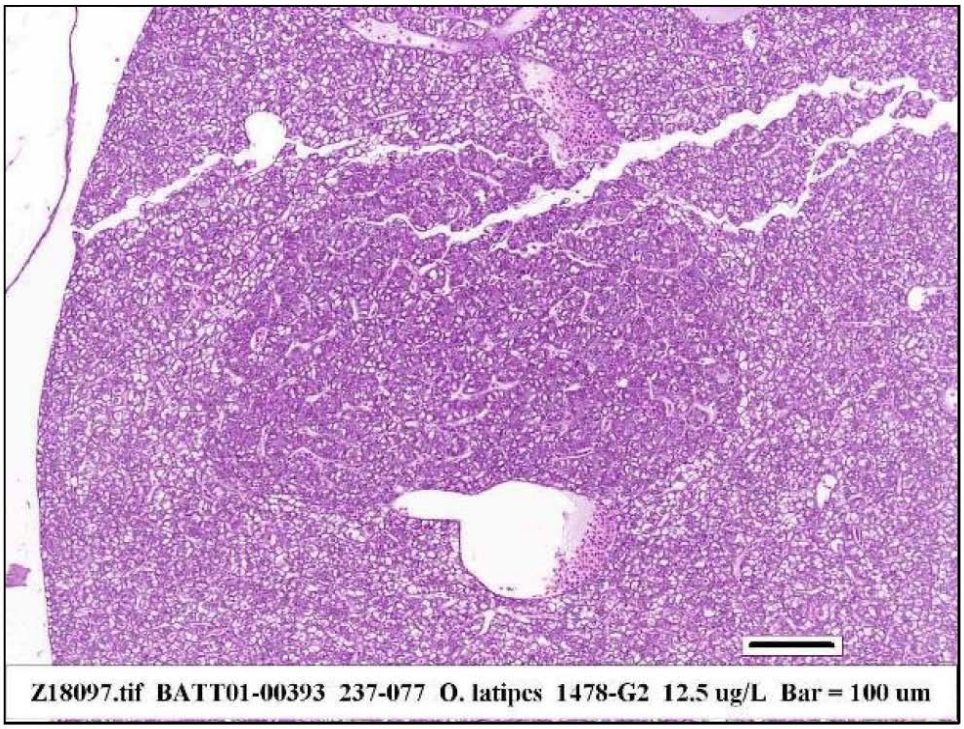


Figure 9 (Z18097). Liver from an F_1 adult female exposed to 12.5 µg/L 2-EHHB, Animal No. 1478-G2. Benign hepatocellular adenoma. This was diagnosed as an adenoma rather than a focus of alteration, due to slight compression of the hepatic parenchyma at the tumor periphery. This finding was not considered to be treatment-related. H&E.

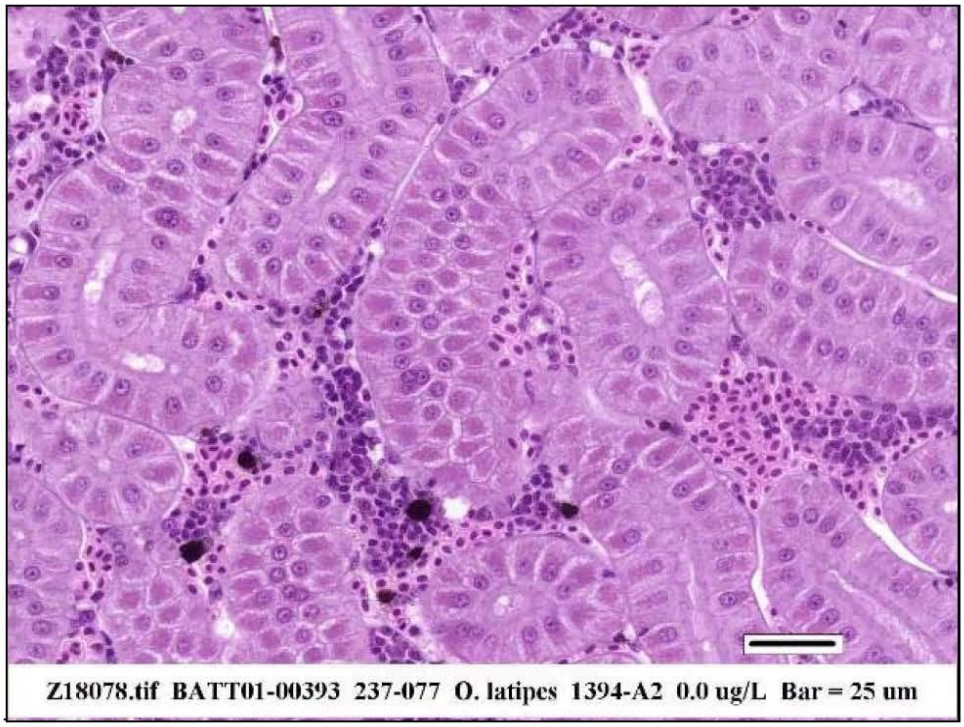


Figure 10 (Z18078). Kidney from a control male, Animal No. 1394-A2, provided for comparison. Grade 3 eosinophilia of the renal tubular epithelium, as is typical of kidneys in adult male medaka. H&E.

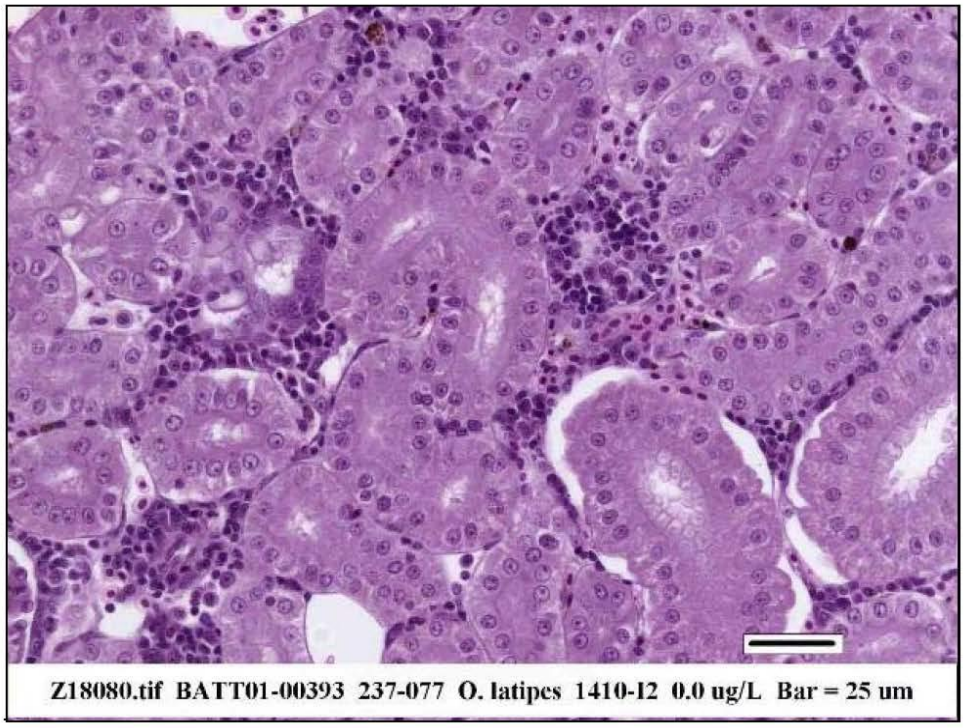


Figure 11 (Z18080). Kidney from a control female, Animal No. 1410-I2. Grade 1 eosinophilia (representative of little to no eosinophilia) of the renal tubular epithelium as is typical of kidneys in adult female medaka. Compare to Fig. 10. H&E.

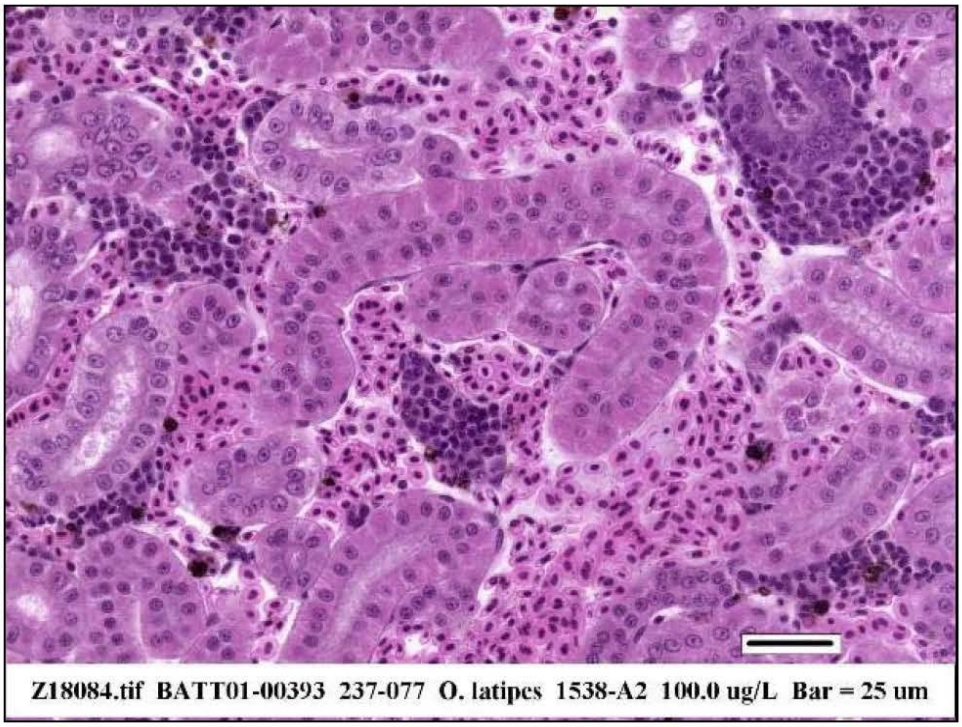


Figure 12 (Z18084). Kidney from a female exposed to 100.0 µg/L 2-EHHB, Animal No. 1538-A2. Grade 2 eosinophilia. There was a modest increase in the severity of this finding in 3/12 and 1/12 females of the 100.0 and 50.0 µg/L dose groups, respectively. H&E.

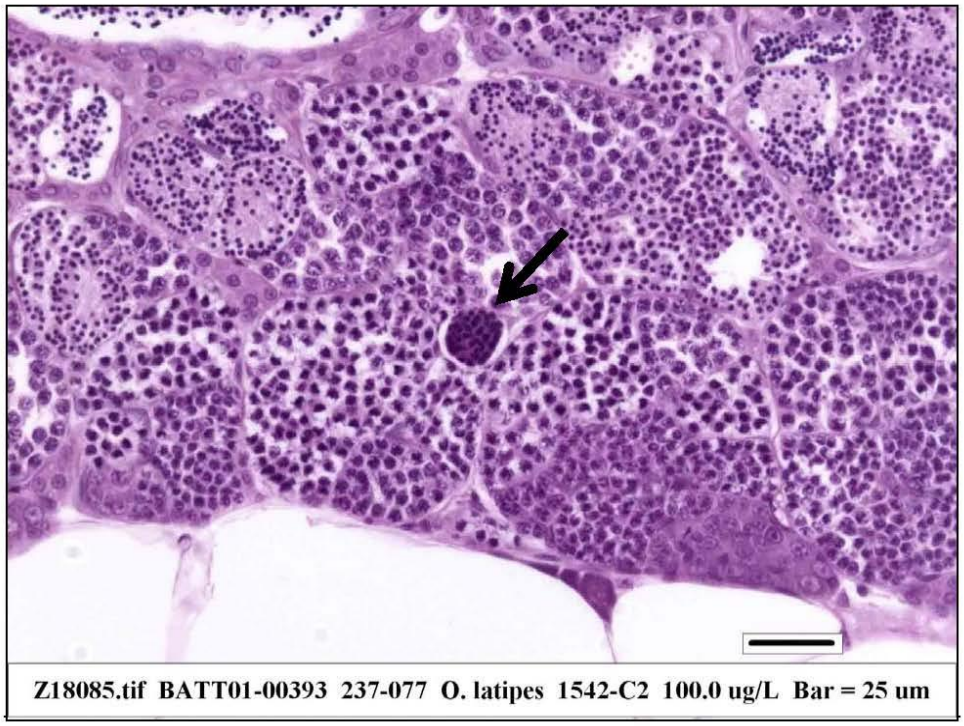


Figure 13 (Z18085). Testis from an F_1 adult male exposed to 100.0 µg/L 2-EHHB, Animal No. 1542-C2. Testicular degeneration in the form of a germ cell syncytium (arrow). H&E.

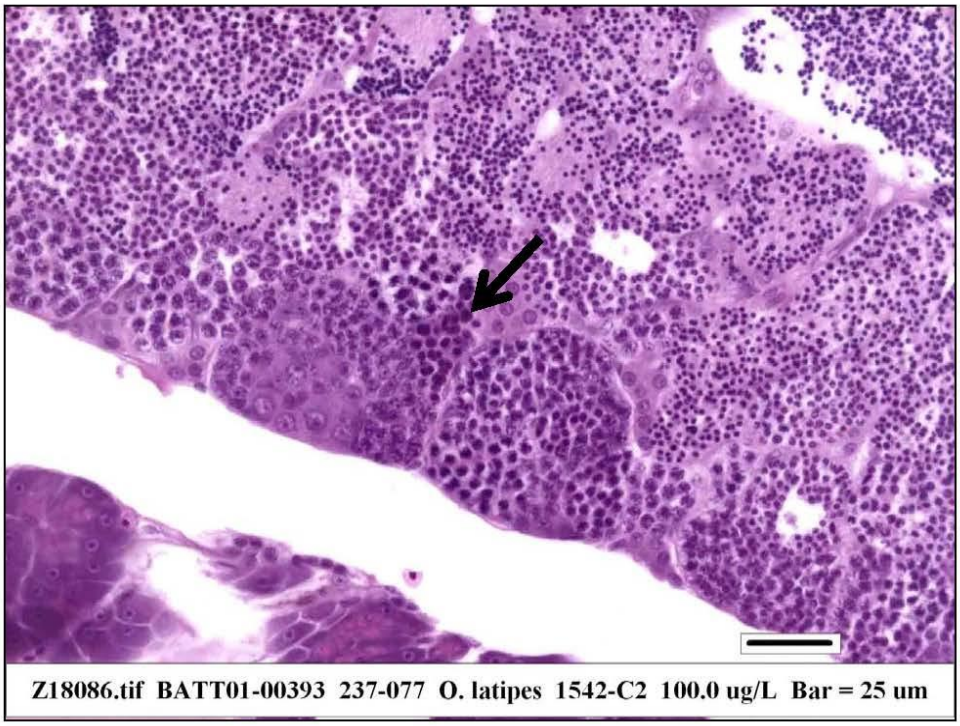


Figure 14 (Z18086). Another area of the same testis from the preceding figure, in which testicular degeneration is represented by a nest of apoptotic-appearing germ cells (arrow). H&E.

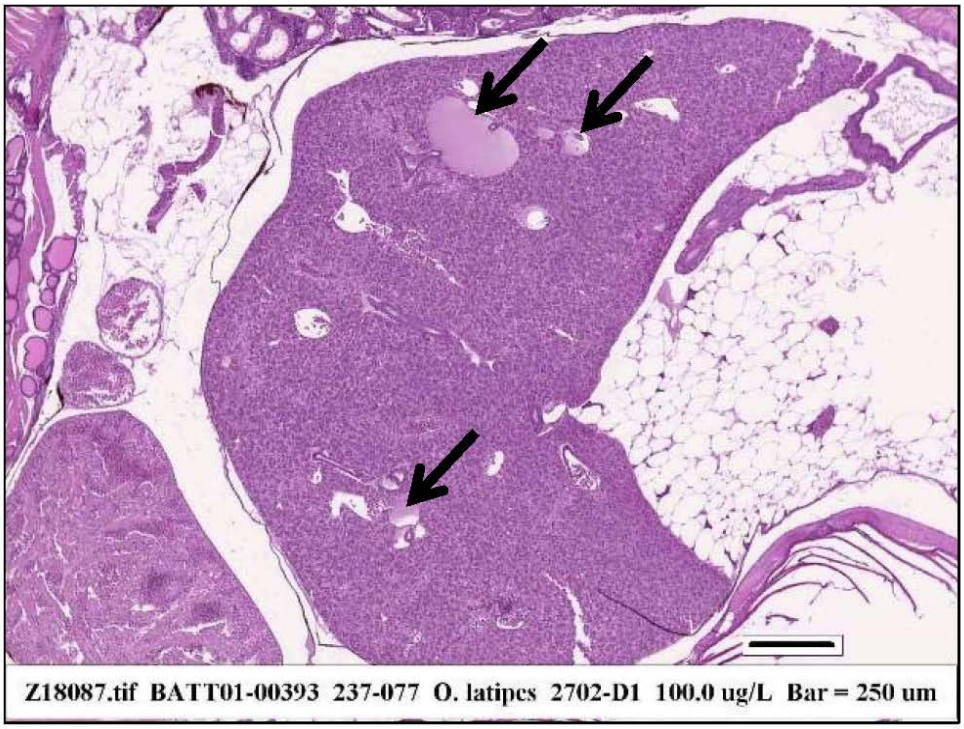


Figure 15 (Z18087). Liver from an F_2 adult male exposed to 100.0 µg/L 2-EHHB, Animal No.2702-D1. Grade 2 cystic degeneration (arrows). H&E.

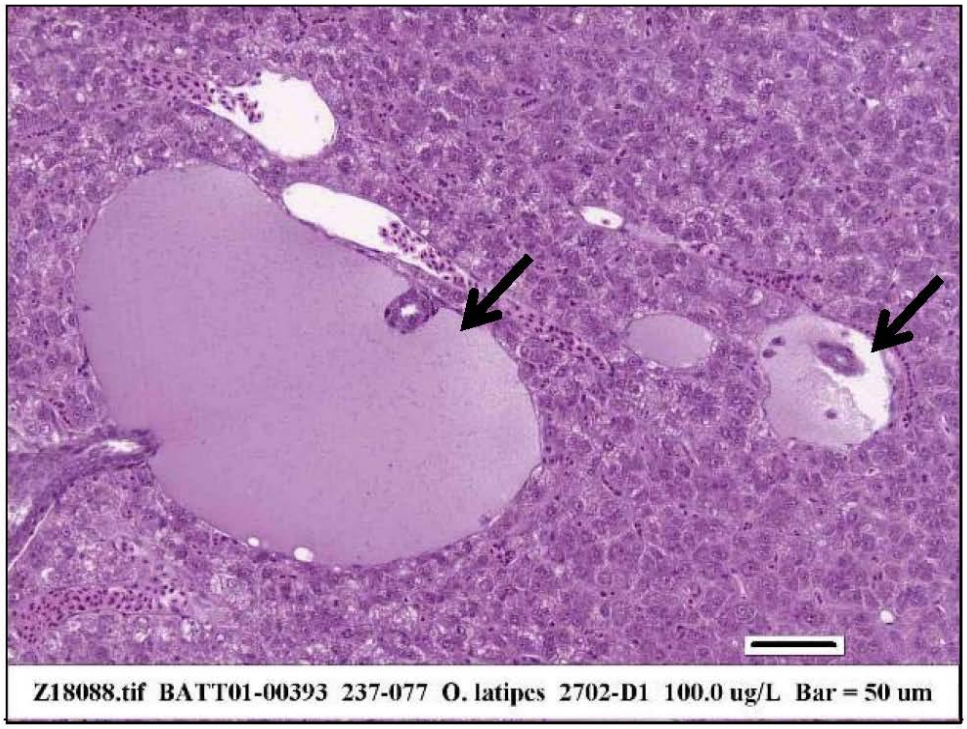


Figure 16 (Z18088). Higher magnification of liver from preceding figure to better demonstrate cystic degeneration (arrows). The unilocular or multilocular cysts, which are not lined by endothelial cells, typically contain plasma-like fluid devoid of erythrocytes. In this particular case, the cysts also happen to surround arterioles. H&E.

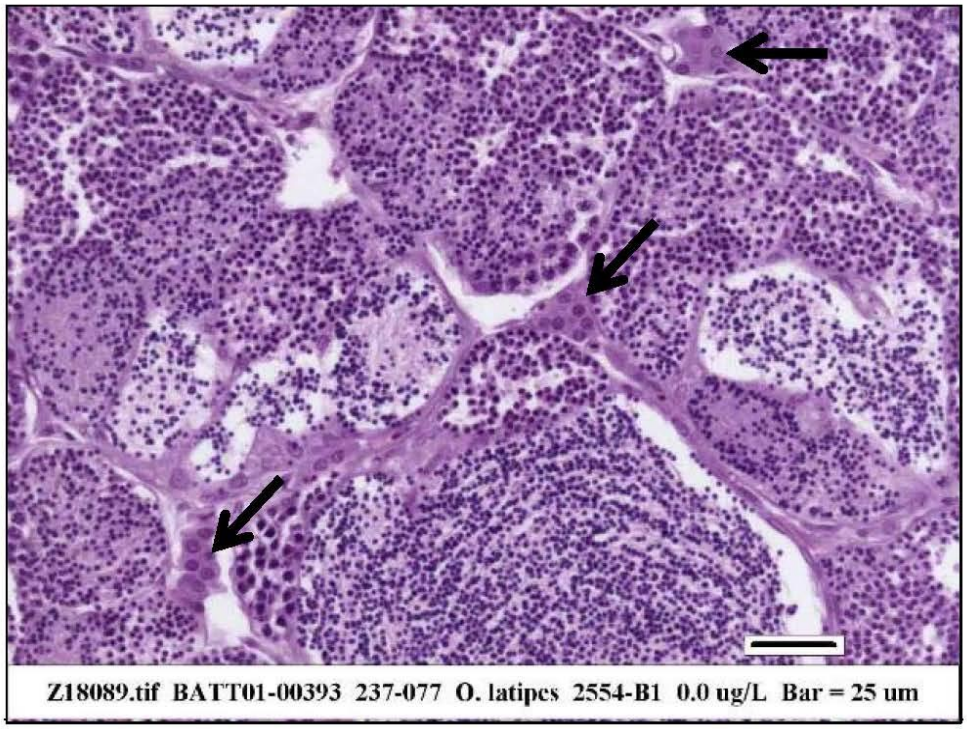


Figure 17 (Z18089). Testis from an F_2 adult control male, Animal No. 2554-B1. Interstitial cells (arrows) are present as small, densely packed clusters located between tubules. H&E.

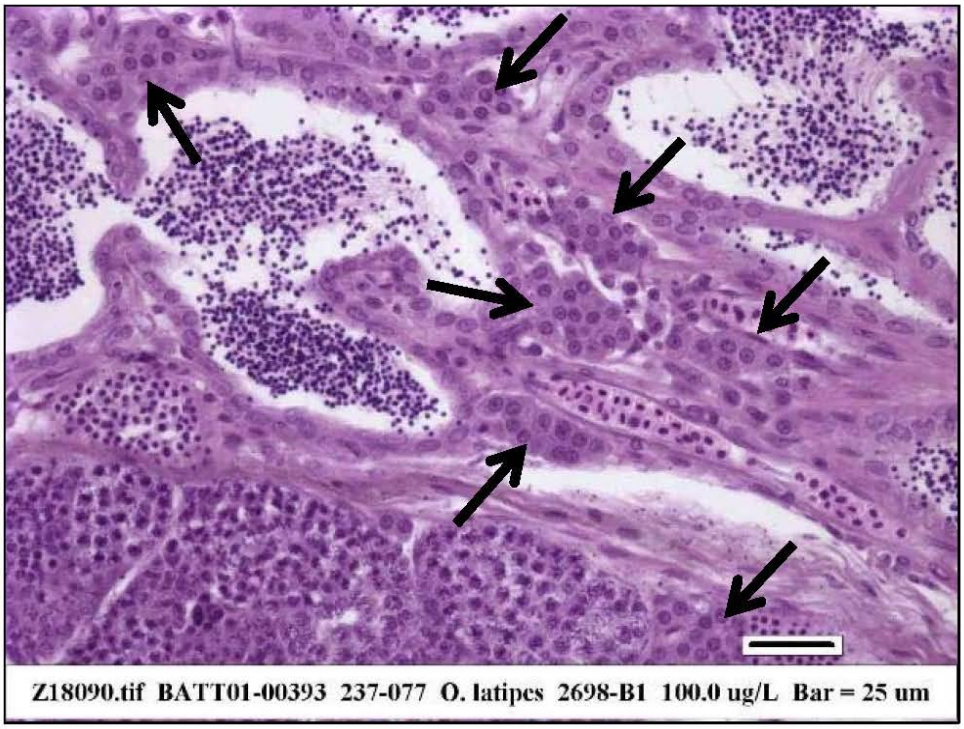


Figure 18 (Z18090). Testis from an F_2 adult male exposed to 100.0 μg/L 2-EHHB, Animal No. 2698-B1. Interstitial cells aggregates (arrows) in this testis are larger and more numerous than in most control testes. Compare with preceding figure. H&E.

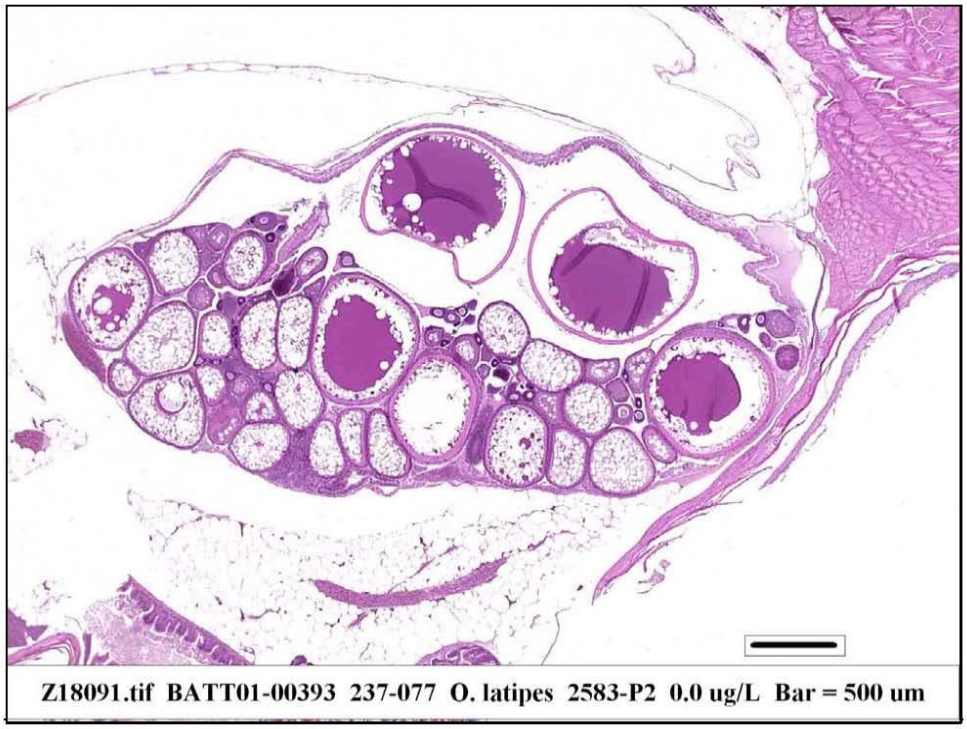


Figure 19 (Z18091). Ovary from an F_2 adult control female, Animal No. 2583-P2. Normal Stage 4 ovary provided for comparison. H&E.

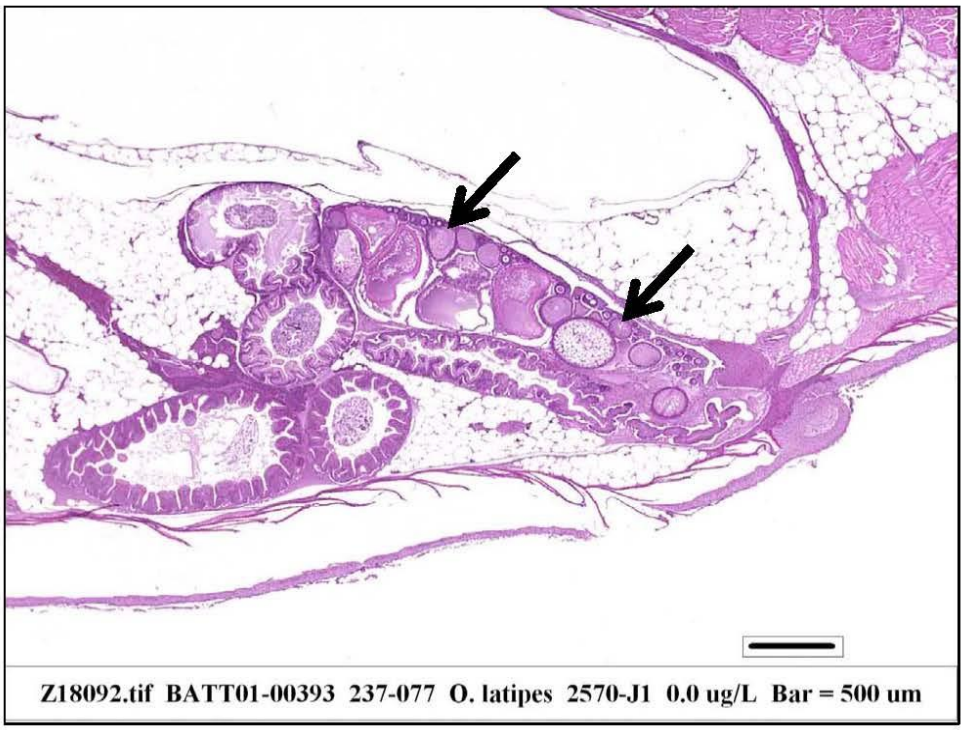


Figure 20 (Z18092). Neoplastic ovary-like gonadal tissue (arrows) in an F_2 adult externally phenotypic male, Animal No. 2570-J1. This malignant dysgerminoma is highly unusual because development of some of germ cells has progressed to the cortical alveolar phase, and several atretic oocytes are visible. H&E.

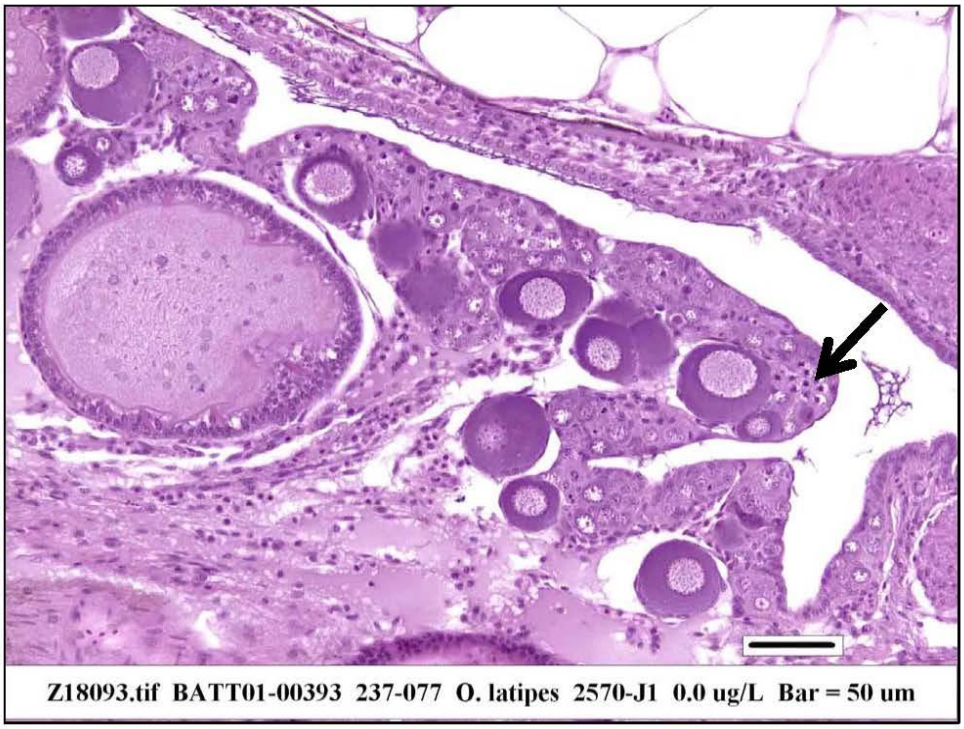


Figure 21 (Z18093). Higher magnification of dysgerminoma from preceding figure. The immature germinal tissue is disorganized, and there is a small patch of spermatocyte-like cells (arrow). H&E.

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Battelle Memorial Institute Study Number BATT01-00393

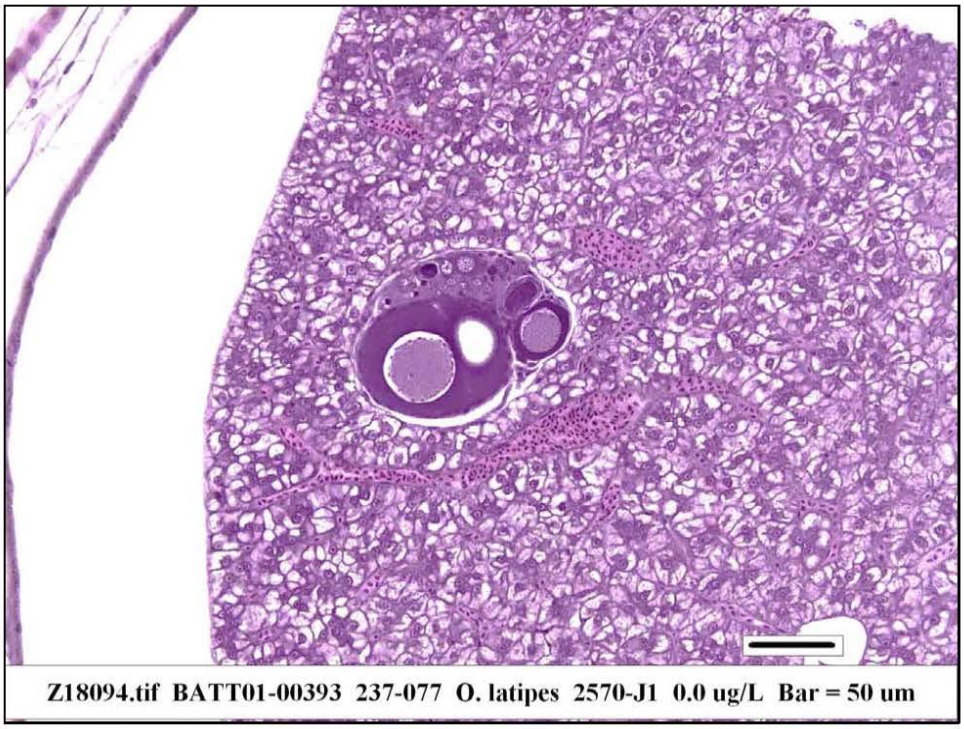


Figure 22 (Z18094). Liver from the same fish as in the preceding two figures. Metastatic dysgerminoma tissue is evident within a hepatic vein. H&E.

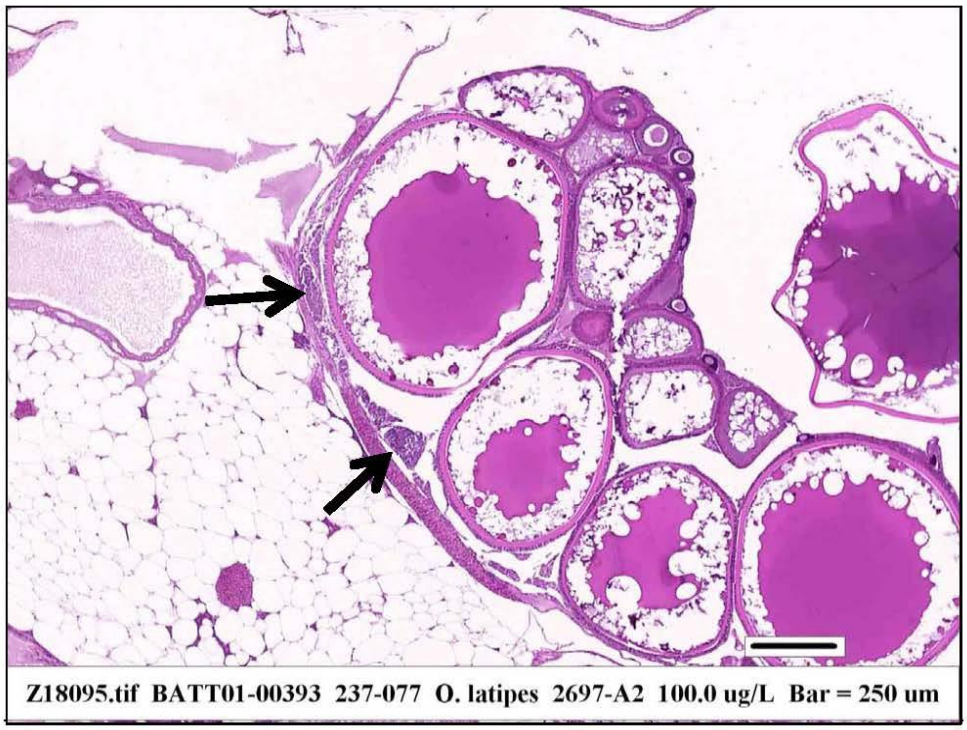


Figure 23 (Z18095). Ovary from an F_2 adult female exposed to 100.0 µg/L 2-EHHB, Animal No. 2697-A2. Spermatogenic tissue lies just within the ovarian wall along the anteroventral surface (arrows). This was not considered to be a treatment-related finding. H&E.

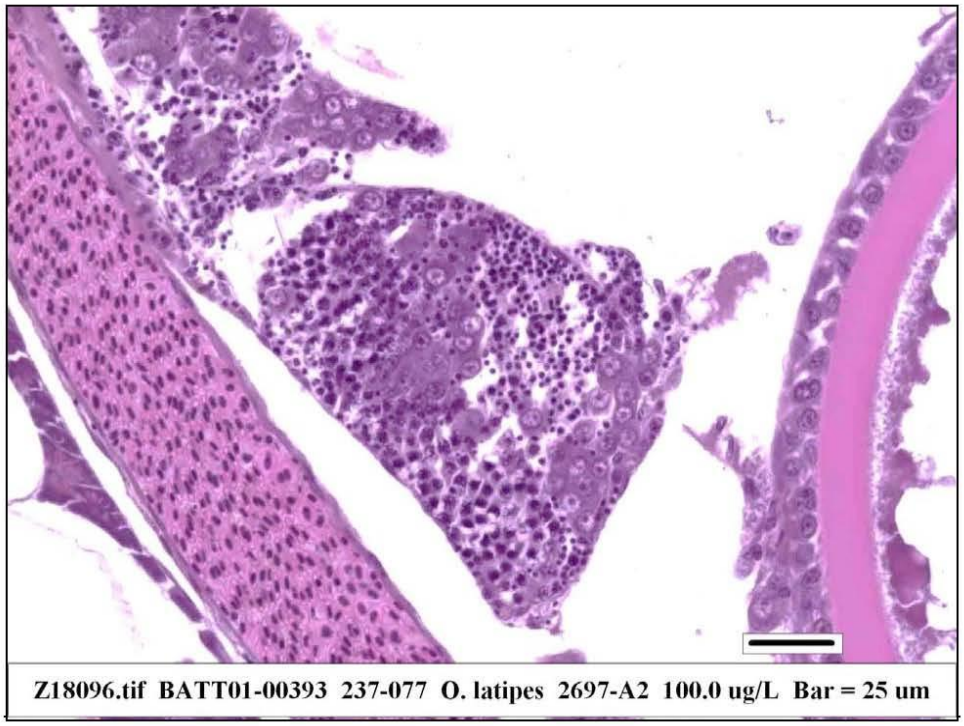


Figure 24 (Z18096). Higher magnification of spermatogenic tissue from preceding figure. Spermatogonia, spermatocytes, and spermatids are evident. H&E.

Appendix E. LIVER VITELLOGENIN MRNA EXPRESSION REPORT

MEDAKA EXTENDED ONE-GENERATION REPRODUCTION TEST (MEOGRT) OF 2-ETHYHEXYL 4-HYDROXYBENZOATE: ANALYSIS OF LIVER VITELLOGENIN mRNA

FINAL REPORT

EAG LABORATORIES – EASTON PROJECT NUMBER: 607A-102
FEL STUDY NUMBER: BATT01-00393

U.S. EPA OCSPP NUMBER 890.2200

AUTHORS:

Amanda L. Milligan, B.S.
Suzanne Z. Schneider, Ph.D.

VTG ANALYSIS EXPERIMENTAL START DATE: August 8, 2016
VTG ANALYSIS TERMINATION DATE: October 14, 2016
STUDY COMPLETION DATE: June 15, 2018

SUBMITTED TO:

U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460



TESTING FACILITY:
Fort Environmental Laboratories, Inc. (FEL)
515 South Duncan Street
Stillwater, OK 74074

PI SUPPORT SITE:
EAG, Inc.
8598 Commerce Drive
Easton, Maryland 21601 USA

EAG LABORATORIES

PROJECT NO.: 607A-102

GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT

SPONSOR: U.S. Environmental Protection Agency

TITLE: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate: Analysis of Liver Vitellogenin mRNA

FEL STUDY NUMBER: BATT01-00393

EAG LABORATORIES – EASTON PROJECT NUMBER: 607A-102

STUDY COMPLETION DATE: June 15, 2018

The analysis performed at EAG Laboratories - Easton was conducted in compliance with Good Laboratory Practice Standards as published by the U.S. Environmental Protection Agency (40 CFR Part 160), USEPA Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

PRINCIPAL INVESTIGATOR:

Amanda L. Milligan, B.S.
Senior Biologist
EAG Laboratories-Easton

June 15, 2018
Date

EAG LABORATORIES

PROJECT NO.: 607A-102

QUALITY ASSURANCE STATEMENT

This study was examined for compliance with Good Laboratory Practice Standards as published by the U.S. Environmental Protection Agency (40 CFR Part 160), USEPA Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). The dates of all inspections and audits and the dates that any findings were reported to the Study Director and Laboratory Management were as follows:

		DATE REPORTED TO:		DATE REPORTED TO:	
ACTIVITY:	DATE CONDUCTED:	PRINCIPLE INVESTIGATOR:	MANAGEMENT:	STUDY DIRECTOR:	MANAGEMENT:
VTG RNA Standards Preparation	October 7, 2016	October 7, 2016	October 7, 2016	October 7, 2016	October 7, 2016
Vitellogenin mRNA Analysis Data and Draft Report	November 4, 28 and 30, 2016 and December 1, 2, and 5-9, 2016	December 9, 2016	December 15, 2016	December 20, 2016	December 20, 2016
Final Report	June 15, 2018	June 15, 2018	June 15, 2018	June 15, 2018	June 15, 2018

All inspections were study-based unless otherwise noted.

Allison M. Jacobs
Quality Assurance Representative III
EAG Laboratories-Easton

June 15, 2018
Date

EAG LABORATORIES

PROJECT NO.: 607A-102

REPORT APPROVAL

SPONSOR: U.S. Environmental Protection Agency

TITLE: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate: Analysis of Liver Vitellogenin mRNA

EAG LABORATORIES PROJECT NUMBER: 607A-102

FEL STUDY NUMBER: BATT01-00393

PRINCIPAL INVESTIGATOR:

Amanda L. Milligan, B.S.
Senior Biologist
EAG Laboratories - Easton

June 15, 2018
Date

EAG LABORATORIES MANAGEMENT:

Suzanne Z. Schneider

Suzanne Z. Schneider, Ph.D.
Manager of Study Directors
EAG Laboratories – Easton

15 JUNE 2018
Date

EAG LABORATORIES

PROJECT NO.: 607A-102

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INTRODUCTION

The analysis of vitellogenin 1 (*Vtg* 1) mRNA in Japanese medaka liver tissue treated with 2-Ethylhexyl 4-Hydroxybenzoate (FEL study 393) was conducted by EAG Laboratories for the U.S. Environmental Protection Agency at the EAG Laboratories aquatic toxicology facility in Easton, Maryland. The analyses were conducted from July 28, 2016 to November 15, 2016. The original raw data and the original report will be sent to Battelle Memorial Institute for archiving.

Liver tissues preserved in RNA*later*® solution were received at the EAG Laboratories, Easton, Maryland facility on June 1, 2016 (F1 generation) and September 15, 2016 (F2 generation). Upon receipt, samples were visually inspected to confirm presence of tissue and assigned unique EAG Laboratories accession numbers, logged into the in-house sample tracking system, and stored at -20˚C. It was noted upon examination of the F1 generation liver samples that there appeared to be tissue other than liver contained in the samples, including gastrointestinal tract, spleen, gill, and heart tissue. The various tissue types present along with each liver sample are detailed in Table 1. The measurement of copies *Vtg* 1 mRNA/ ng total RNA was analyzed in livers from 2 male and 2 female fish per replicate and performed using real-time quantitative PCR (RT-qPCR) methodology (1).

MATERIALS AND METHODS

Preparation of RNA Standards

Extraction of RNA

To prepare the RNA standards, livers were aseptically removed from surplus medaka housed in the culture unit of EAG, Laboratories, Easton, Maryland facility. Livers were immediately placed in micro-tubes containing RNA*later*® solution and transferred for long-term storage in a freezer at -20˚C. Extraction of the RNA from the livers was done as described in Appendix 1.1. A method outline for the preparation of mRNA standards is included in Appendix 1.2.

Dilution and Reverse Transcription

After extraction of the RNA, a ~2 µL volume of each sample was analyzed on the NanoDrop 2000 (Thermo Scientific) to determine RNA concentration. Each standard was analyzed in duplicate and the values averaged to determine mean RNA concentration. Next, RNASTD7, RNASTD8, RNASTD9, RNASTD10, RNASTD11 and RNASTD12 were diluted with RNase/DNase-free water to 200 ng

RNA/µL. Diluted samples were used with the SuperScript™ II Reverse Transcription kit (Invitrogen, Carlsbad, CA) to produce cDNA. Component volumes used and incubation time and temperatures are presented Appendix 1.3.

Amplification of cDNA and Transcription to RNA

cDNA generated from the SuperScript™ II (Invitrogen) reaction was then selectively amplified using AmpliTaq Gold® DNA Polymerase kit via RT-qPCR with primers specific to a region surrounding the vitellogenin 1 gene. The nucleotide sequence positions of the forward and reverse primers used in mRNA standard preparation are presented in Appendix 1.4. The *Vtg* 1 standard forward and reverse primer sequences are detailed in Appendix 1.5. Typical component volumes for the PCR reaction and cycling parameters are listed in Appendices 1.6 and 1.7, respectively. After amplification of the cDNA, a transcription step was initiated to produce RNA strands similar to naturally occurring vitellogenin 1 mRNA using MEGAscript® Transcription kit. A typical reaction mix is shown in Appendix 1.8.

DNase Treatment and Sample Clean-up

Upon completion of the second reverse transcription, standard samples were treated with DNase I (Invitrogen, Carlsbad, CA). A 1 µL aliquot of DNase I was added directly to the reverse transcription tubes, mixed by pipetting, and incubated at 37˚C for 1 hour. At the end of the incubation period, samples were spun in a centrifuge to collect the mixture in the bottom of the tube and immediately processed through the MEGAClear™ kit (Ambion, Vilnius, Lithuania) as outlined in Appendix 1.9.

An aliquot of five of the standard samples was analyzed on the NanoDrop 2000 (Thermo Scientific) (2). Since analysis of the standard samples showed that the purity was not in the optimum range, an optional clean-up step was performed on the two standard samples with the highest RNA concentration using the RNeasy® Protect Mini Kit, product #74126 (Qiagen, Valencia, CA).

Adjustment of Standard Concentration

In order to calculate the starting concentration of the prepared standards, an ~2 µL aliquot of two select standard samples was analyzed in duplicate on the NanoDrop 2000 (Thermo Scientific) (2). Values for each selected standard were averaged to determine the mean concentration for use in further calculations. The RNA sample with the optimum purity and concentration was chosen as the stock solution for the high calibration standard, from which all subsequent standard concentrations were

prepared. Starting concentrations of copy number per µL were determined by the equation given by the U.S. EPA (1) (Appendix 1.10).

Once the number of *Vtg* 1 copies per µL of RNA was determined, the high calibration standard was diluted to a concentration of $2.7x10^9$ copies *Vtg* 1 mRNA/µL with RNase/DNase-free water. The high calibration standard was then portioned into 20 µL aliquots in individual tubes for storage at -80˚C.

Dilution of Standards

Prior to the master mix preparation for each assay, a serial dilution of the RNA standard was made from a single 20 µL aliquot. The aliquot was removed from frozen storage and a serial dilution was prepared. Dilutions were made as shown in Appendix 1.11.

Sample Analysis of Vitellogenin 1 mRNA

Extraction of RNA

Prior to being processed for RNA extraction, samples were removed from frozen storage and allowed to gradually equilibrate to room temperature. Extraction of total RNA from liver tissues was performed using the RNeasy® Protect Mini Kit, product #74126 (Qiagen, Valencia, CA) with methodology presented by the U.S. EPA (1). Liver tissue was removed from the RNA*later*® solution and placed in a micro-centrifuge tube containing 600 µL of Buffer RLT and a small amount of glass beads. The tubes were then placed on a pulse vortexer and allowed to vortex for ≥ 5 minutes to disrupt the tissue sample. Samples were then processed further as outlined in Appendix 1.1.

RNA Quantitation of Samples

Once the samples were extracted, a small volume of each sample was used to determine the RNA concentration using a NanoDrop 2000 Spectrophotometer (Thermo Scientific, NanoDrop Products, Wilmington, DE) (2). Prior to and periodically during analysis of samples, RNase-free water supplied with the RNeasy® Protect Mini Kit (Qiagen) was used as a blank on the NanoDrop 2000 (2). Each sample was analyzed in duplicate or triplicate for total RNA concentration (ng/µL), and the results were averaged to determine mean total RNA concentration per sample. Total RNA in each study sample was then normalized to a concentration of approximately 45 ng/µL by adding 15 µL of RNA template to a calculated amount of nuclease-free water. If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45 ng/µL, the

normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA. Although normalizing the concentration of total RNA is not specified in the guideline (1), it was discovered during the non-GLP optimization process that normalizing RNA/cDNA to 45 ng/µL produced uniform and consistent conditions across the tested samples during qPCR analysis.

Primer/Probe Design

New primers and probe were designed by EAG Laboratories – Easton, since the forward primer sequence listed in the guideline (1) was not successful in amplifying *Vtg* 1 gene during the non-GLP method optimization. To verify the accuracy of EAG Laboratories designed primers and probe (sequences shown in Appendix 2.1), which are used to measure the absolute quantity of *Vtg* 1 mRNA in medaka study samples, these sequences were entered in the NCBI nucleotide BLAST program and aligned to GenBank accession number XM_020702291.1 (*Oryzias latipes* vitellogenin-1-like (LOC101173135), mRNA (3, 4)). In order to validate EAG forward primer, reverse primer and probe sequences, the whole XM_020702291.1 FASTA sequence of mRNA Japanese medaka (*Oryzias latipes*) was selected from GenBank and entered into the PrimerQuest tool of Integrated DNA Technologies (5). The custom design section was chosen and the EAG forward primer, reverse primer and probe sequences were entered into partial design input of the custom target region section under the custom design parameters within the IDT platform. The nucleotide position information including start and stop positions, amplicon length (106 bp), melting temperature (Tm), GC content of primer (designed by PrimerQuest) are presented in Appendix 2.1. Primers and probe sequences are provided in Appendix 2.2. The BLAST analysis of EAG primers and probe sequences showed 100% genetic similarities with mRNA Japanese medaka under the accession number of XM_020702291.1 (6).

Measurement of Vitellogenin 1 mRNA

Analysis for vitellogenin 1 mRNA was conducted on the Rotor-Gene Q platform (Qiagen) using the 72-place locking ring. Cycling parameters for the assay are outlined in Appendix 2.3. The reverse transcription quantitative PCR (RT-qPCR) master mix used for the assay was made by keeping all components on ice blocks, adding each component individually to a 2.0 mL clean micro-tube and vortexing the mixture for 5 seconds. Target component concentrations for a typical run are presented in Appendix 2.4. After vortexing, 20.5 µL aliquots of the master mix were added to individual PCR clean strip tubes and 4.5 µL of extracted RNA was added to its designated tube.

For each sample set analyzed, two No-Template Control (NTC) samples, consisting of 4.5 µL of RNase/DNase free water plus 20.5 µL of master mix, and two Positive Control samples, consisting of 4.5 µL of a known concentration of RNA (STD6) plus 20.5 µL of master mix, were added to the sample run. The blank was an empty tube. For analysis of RNA standard samples, 4.5 µL of each RNA standard was added to 20.5 µL of the master mix for a total of 25 µL in triplicate to the run. A sample layout for a typical 72-place locking ring is included in Appendix 2.5.

After a RT-qPCR run was finished, the Rotor-Gene Q software (7) was used to calculate the standard curve and vitellogenin 1 mRNA concentrations in test samples. An example of a typical standard curve is presented in Appendix 2.6. Calculated values of replicate samples were determined by the software through comparison to the standard curve. The concentrations generated by the Rotor-Gene Q software were then used to calculate a final concentration of Copies *Vtg* 1 mRNA/ng Total RNA using the equation listed in Appendix 2.7.

RESULTS

Measured concentrations of vitellogenin 1 mRNA in F1 generation liver samples are presented in Appendix 2.8. Measured concentrations of vitellogenin 1 mRNA in F2 generation liver samples are presented in Appendix 2.10. Measured concentrations of vitellogenin 1 mRNA in F1 and F2 no-template control (NTC) and positive control samples are presented in Appendices 2.9 and 2.11, respectively.

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EAG LABORATORIES

PROJECT NO.: 607A-102

Table 1

Various Types of Tissue Present in F1 Samples Upon Receipt

Sample ID (607A-102-)	Test Concentration (µg/L)	G.I. Tract[1]	Spleen[1]	Gills[1]	Heart[1]	Other[2]
1085	0.0	✓	--	--	--	--
1086	0.0	✓	--	--	--	skin/scales
1087	0.0	✓	--	--	--	gall bladder
1088	0.0	✓	✓	--	--	--
1089	0.0	--	✓	--	--	--
1090	0.0	✓	--	--	--	--
1091	0.0	--	--	✓	✓	--
1092	0.0	--	--	--	--	--
1093	0.0	--	✓	--	--	--
1094	0.0	✓	--	--	--	--
1095	0.0	✓	✓	--	✓	gall bladder
1096	0.0	✓	✓	--	✓	gall bladder
1097	0.0	✓	--	--	--	skin/scales
1098	0.0	✓	--	--	✓	--
1099	0.0	✓	--	--	✓	--
1100	0.0	--	--	--	--	--
1101	0.0	✓	--	--	--	--
1102	0.0	✓	--	✓	--	--
1103	0.0	--	--	--	--	fin/muscle
1104	0.0	✓	--	✓	--	--
1105	0.0	✓	--	--	--	gall bladder
1106	0.0	--	--	--	--	--
1107	0.0	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]
1108	0.0	✓	--	--	--	--
1109	0.0	✓	--	--	--	--
1110	0.0	✓	✓	--	--	--
1111	0.0	✓	--	--	--	--
1112	0.0	--	--	✓	--	muscle
1113	0.0	✓	✓	--	--	--
1114	0.0	✓	--	✓	--	fin, muscle
1115	0.0	✓	--	--	✓	--
1116	0.0	✓	--	✓	--	Fin, muscle, skin/scales

[1] A ✓ indicates that tissue type was present within the sample. "--" indicates that tissue type was not present in sample.
[2] Unless noted otherwise, liver tissue was present in sample.
[3] Observations of tissue type were not made on sample.

EAG LABORATORIES

PROJECT NO.: 607A-102

Table 1 (Continued)

Various Types of Tissue Present in F1 Samples Upon Receipt

Sample ID (607A-102-)	Test Concentration (µg/L)	G.I. Tract[1]	Spleen[1]	Gills[1]	Heart[1]	Other[2]
1117	0.0	--	--	--	✓	--
1118	0.0	✓	--	✓	--	--
1119	0.0	✓	✓	✓	--	skin/scales
1120	0.0	✓	--	--	✓	skin/scales
1121	0.0	✓	--	✓	--	--
1122	0.0	✓	--	--	--	--
1123	0.0	✓	--	--	--	gall bladder
1124	0.0	✓	--	--	--	fin, muscle, gonad
1125	0.0	✓	✓	--	--	--
1126	0.0	✓	--	--	--	fin, muscle, gonad
1127	0.0	✓	--	--	--	--
1128	0.0	✓	✓	--	--	--
1129	0.0	✓	--	--	--	--
1130	0.0	✓	--	--	--	gall bladder
1131	0.0	✓	--	--	✓	--
1132	0.0	✓	--	--	--	--
1133	0.0	✓	--	--	✓	--
1134	0.0	✓	--	✓	✓	gall bladder, fin, muscle
1135	0.0	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]
1136	0.0	✓	✓	--	--	--
1137	0.0	✓	--	--	--	no discernible liver in sample
1138	0.0	✓	--	--	✓	gonad, fin, muscle
1139	0.0	✓	--	--	--	--
1140	0.0	✓	--	--	--	skin/scales
1141	0.0	✓	--	--	--	fin/muscle
1142	0.0	✓	--	✓	--	fin/muscle
1143	0.0	✓	--	--	--	--
1144	0.0	✓	--	--	--	--
1145	0.0	--	--	--	--	--
1146	0.0	✓	--	--	✓	--
1147	0.0	✓	--	--	--	--
1148	0.0	✓	--	--	✓	fin, muscle

[1] A ✓ indicates that tissue type was present within the sample. "--" indicates that tissue type was not present in sample.
[2] Unless noted otherwise, liver tissue was present in sample.
[3] Observations of tissue type were not made on sample.

EAG LABORATORIES

PROJECT NO.: 607A-102

Table 1 (Continued)

Various Types of Tissue Present in F1 Samples Upon Receipt

Sample ID (607A-102-)	Test Concentration (µg/L)	G.I. Tract[1]	Spleen[1]	Gills[1]	Heart[1]	Other[2]
1149	0.0	✓	✓	--	--	--
1150	0.0	✓	--	--	--	--
1151/1152A[3]	0.0	✓	--	--	--	--
1151/1152B[3]	0.0	✓	--	--	--	gall bladder
1153	0.0	--	--	--	--	--
1154	0.0	--	--	--	--	tissue type not discernible[4]
1155	0.0	✓	✓	--	--	--
1156	0.0	✓	--	--	--	--
1157	6.3	✓	--	--	--	--
1158	6.3	--	--	--	--	tissue type not discernible[4]
1159	6.3	✓	--	✓	--	fin, muscle
1160	6.3	✓	--	✓	--	--
1161	6.3	--	--	✓	--	muscle
1162	6.3	✓	--	✓	--	--
1163	6.3	✓	✓	--	--	--
1164	6.3	--	--	✓	--	muscle, no discernible liver
1165	6.3	✓	✓	--	--	--
1166	6.3	--	--	--	--	--
1167	6.3	--	--	--	--	--
1168	6.3	✓	✓	--	--	gall bladder
1169	6.3	✓	--	--	--	G.I. tract is only tissue type present
1170	6.3	--	--	--	--	--
1171	6.3	--	--	--	--	--
1172	6.3	✓	--	--	--	--
1173	6.3	✓	✓	--	--	--
1174	6.3	✓	--	--	--	--
1175	6.3	✓	--	--	--	--
1176	6.3	✓	--	✓	--	muscle
1177	6.3	--	--	--	--	--
1178	6.3	--	--	✓	--	muscle, no discernible liver
1179	6.3	✓	--	--	--	--
1180	6.3	✓	✓	--	--	--

[1] A ✓ indicates that tissue type was present within the sample. "--" indicates that tissue type was not present in sample.

[2] Unless noted otherwise, liver tissue was present in sample.

[3] Liver samples 1151 and 1152 were found outside of their respective tube upon receipt. Since both samples were from the same treatment level and of the same genetic sex, the samples were placed back into a tube and renamed for further processing.

[4] Sample was in a crystalline structure of RNA*later*®; not able to determine tissue type.

EAG LABORATORIES

PROJECT NO.: 607A-102

Table 1 (Continued)

Various Types of Tissue Present in F1 Samples Upon Receipt

Sample ID (607A-102-)	Test Concentration (µg/L)	G.I. Tract[1]	Spleen[1]	Gills[1]	Heart[1]	Other[2]
1181	6.3	--	--	✓	--	muscle, no discernible liver
1182	6.3	✓	--	--	--	--
1183	6.3	✓	--	--	--	--
1184	6.3	✓	--	--	--	--
1185	6.3	✓	--	--	--	--
1186	6.3	✓	--	--	--	other tissue type not discernible[3]
1187	6.3	✓	--	--	✓	skin/scales
1188	6.3	✓	--	--	--	--
1189	6.3	--	--	--	--	--
1190	6.3	✓	✓	--	--	--
1191	6.3	NA[4]	NA[4]	NA[4]	NA[4]	NA[4]
1192	6.3	✓	--	✓	--	muscle
1193	12.5	--	--	✓	--	muscle
1194	12.5	✓	--	--	--	--
1195	12.5	✓	--	--	--	--
1196	12.5	✓	--	✓	--	muscle, fin, skin/scales
1197	12.5	✓	--	✓	--	muscle, fin, skin/scales
1198	12.5	✓	--	✓	--	muscle
1199	12.5	✓	--	--	--	--
1200	12.5	✓	--	--	✓	--
1201	12.5	✓	--	--	--	gall bladder
1202	12.5	--	--	✓	--	muscle, no discernible liver
1203	12.5	✓	✓	--	--	--
1204	12.5	✓	--	--	--	gall bladder
1205	12.5	✓	--	--	--	fin, muscle
1206	12.5	✓	✓	✓	--	muscle
1207	12.5	✓	--	--	--	--
1208	12.5	✓	--	--	--	other tissue type not discernible[3]
1209	12.5	✓	--	✓	--	muscle, other tissue type not discernible[3]
1210	12.5	✓	--	✓	--	muscle
1211	12.5	✓	--	✓	--	muscle
1212	12.5	✓	--	--	--	--

[1] A ✓ indicates that tissue type was present within the sample. "--" indicates that tissue type was not present in sample.
[2] Unless noted otherwise, liver tissue was present in sample.
[3] Sample was in a crystalline structure of RNA*later*®; not able to determine tissue type other than those noted.
[4] Observations of tissue type were not made on sample.

EAG LABORATORIES

PROJECT NO.: 607A-102

Table 1 (Continued)

Various Types of Tissue Present in F1 Samples Upon Receipt

Sample ID (607A-102-)	Test Concentration (µg/L)	G.I. Tract[1]	Spleen[1]	Gills[1]	Heart[1]	Other[2]
1213	12.5	✓	--	✓	--	fin, muscle
1214	12.5	✓	--	✓	--	muscle
1215	12.5	✓	--	--	--	--
1216	12.5	✓	--	--	--	fin, muscle
1217	12.5	--	--	✓	✓	--
1218	12.5	✓	--	--	--	--
1219	12.5	✓	--	--	--	tissue type not discernible[3]
1220	12.5	✓	--	--	--	--
1221	12.5	✓	--	--	--	gall bladder
1222	12.5	✓	✓	--	--	--
1223	12.5	--	--	✓	--	skin/scales
1224	12.5	✓	✓	✓	--	muscle
1225	12.5	--	--	✓	--	muscle, skin/scales
1226	12.5	✓	--	--	--	tissue type not discernible[3]
1227	12.5	✓	--	✓	--	tissue type not discernible[3]
1228	12.5	✓	--	--	--	tissue type not discernible[3]
1229	25	✓	--	✓	--	--
1230	25	--	--	✓	--	--
1231	25	✓	--	--	--	--
1232	25	✓	--	--	✓	--
1233	25	✓	--	✓	✓	gall bladder
1234	25	✓	--	--	--	--
1235	25	✓	--	✓	--	muscle
1236	25	--	--	--	--	--
1237	25	✓	--	--	--	--
1238	25	--	--	✓	--	muscle, tissue type not discernible[3]
1239	25	✓	--	✓	--	muscle, gall bladder
1240	25	✓	--	--	--	--
1241	25	✓	--	--	--	--
1242	25	✓	--	--	--	--
1243	25	✓	--	--	--	--
1244	25	✓	✓	--	--	--

[1] A ✓ indicates that tissue type was present within the sample. "--" indicates that tissue type was not present in sample.
[2] Unless noted otherwise, liver tissue was present in sample.
[3] Sample was in a crystalline structure of RNA*later*®; not able to determine tissue type other than those noted.

Table 1 (Continued)

Various Types of Tissue Present in F1 Samples Upon Receipt

Sample ID (607A-102-)	Test Concentration (µg/L)	G.I. Tract[1]	Spleen[1]	Gills[1]	Heart[1]	Other[2]
1245	25	✓	✓	--	--	--
1246	25	--	--	✓	--	muscle
1247	25	✓	--	--	✓	gall bladder
1248	25	✓	--	--	--	--
1249	25	✓	--	✓	--	muscle
1250	25	✓	--	--	--	--
1251	25	✓	✓	✓	--	muscle
1252	25	✓	✓	✓	--	muscle, gall bladder
1253	25	✓	--	--	--	--
1254	25	✓	--	✓	--	--
1255	25	✓	--	--	--	--
1256	25	✓	--	✓	--	muscle
1257	25	✓	--	--	--	tissue type not discernible[3]
1258	25	✓	✓	--	--	--
1259	25	✓	--	✓	--	--
1260	25	✓	--	--	--	--
1261	25	✓	--	✓	--	muscle
1262	25	✓	--	--	--	tissue type not discernible[3]
1263	25	✓	--	--	--	--
1264	25	✓	--	✓	--	muscle, tissue type not discernible[3]
1265	50	✓	--	✓	--	--
1266	50	✓	--	--	✓	--
1267	50	✓	--	--	--	--
1268	50	✓	--	--	--	gall bladder
1269	50	✓	--	✓	--	muscle
1270	50	--	--	--	--	tissue type not discernible[3]
1271	50	✓	--	✓	--	muscle, fin, tissue type not discernible[3]
1272	50	✓	--	--	--	--
1273/1275A[4]	50	--	--	--	--	--
1273/1275B[4]	50	✓	--	--	--	--
1274	50	✓	--	--	--	--
1276	50	✓	--	--	--	--

[1] A ✓ indicates that tissue type was present within the sample. "--" indicates that tissue type was not present in sample.
[2] Unless noted otherwise, liver tissue was present in sample.
[3] Sample was in a crystalline structure of RNA*later*®; not able to determine tissue type other than those noted.
[4] Liver samples 1273 and 1275 were found outside of their respective tube upon receipt. Since both samples were from the same treatment level and of the same genetic sex, the samples were placed back into a tube and renamed for further processing.

EAG LABORATORIES

PROJECT NO.: 607A-102

Table 1 (Continued)

Various Types of Tissue Present in F1 Samples Upon Receipt

Sample ID (607A-102-)	Test Concentration (µg/L)	G.I. Tract[1]	Spleen[1]	Gills[1]	Heart[1]	Other[2]
1277	50	--	--	✓	✓	--
1278	50	--	--	✓	--	--
1279	50	--	--	--	--	--
1280	50	--	--	--	--	--
1281	50	--	--	--	--	--
1282	50	✓	--	--	--	--
1283	50	✓	--	--	--	skin/scales
1284	50	✓	--	--	--	--
1285	50	✓	--	--	--	fin, muscle, skin/scales
1286	50	✓	--	--	--	--
1287	50	✓	--	--	--	tissue type not discernible[3]
1288	50	--	--	✓	--	muscle
1289	50	--	--	--	--	--
1290	50	✓	--	--	--	fin, muscle
1291	50	✓	--	--	--	--
1292	50	--	--	✓	--	fin, muscle
1293	50	✓	--	✓	--	muscle, tissue type not discernible[3]
1294	50	--	--	--	--	tissue type not discernible[3]
1295	50	✓	--	--	--	--
1296	50	--	--	--	--	--
1297	50	✓	--	✓	--	skin/scales
1298	50	✓	--	✓	--	skin/scales, muscle
1299	50	--	--	--	--	--
1300	50	--	--	--	--	fin clip, muscle
1301	100	✓	✓	--	--	--
1302	100	✓	--	--	✓	fin/muscle
1303	100	✓	--	✓	--	--
1304	100	✓	--	--	--	gall bladder
1305	100	✓	--	--	--	--
1306	100	--	--	--	--	--
1307	100	✓	--	--	--	--
1308	100	✓	--	--	--	fin, muscle

[1] A ✓ indicates that tissue type was present within the sample. "--" indicates that tissue type was not present in sample.
[2] Unless noted otherwise, liver tissue was present in sample.
[3] Sample was in a crystalline structure of RNA*later*®; not able to determine tissue type other than those noted.

Table 1 (Continued)

Various Types of Tissue Present in F1 Samples Upon Receipt

Sample ID (607A-102-)	Test Concentration (µg/L)	G.I. Tract[1]	Spleen[1]	Gills[1]	Heart[1]	Other[2]
1309	100	✓	--	✓	--	muscle
1310	100	✓	✓	--	--	--
1311	100	--	--	--	--	tissue type not discernible[3]
1312	100	✓	--	--	--	--
1313	100	--	--	--	✓	--
1314	100	✓	--	--	✓	--
1315	100	✓	--	--	--	tissue type not discernible[3]
1316	100	✓	--	--	--	--
1317	100	✓	--	--	--	--
1318	100	✓	--	--	--	tissue type not discernible[3]
1319	100	✓	--	✓	--	--
1320	100	--	--	--	--	--
1321	100	✓	--	--	--	--
1322	100	✓	--	--	--	--
1323	100	✓	--	--	--	tissue type not discernible[3]
1324	100	--	--	✓	--	muscle, tissue type not discernible[3]
1325	100	✓	--	--	--	--
1326	100	✓	--	✓	--	--
1327	100	✓	--	--	--	--
1328	100	✓	--	--	--	--
1329	100	--	--	✓	--	muscle
1330	100	✓	--	--	--	--
1331	100	✓	✓	--	--	gonad
1332	100	✓	--	--	--	--
1333	100	--	--	--	--	--
1334	100	✓	✓	--	--	--
1335	100	✓	--	--	--	--
1336	100	✓	--	--	--	tissue type not discernible[3]

[1] A ✓ indicates that tissue type was present within the sample. "--" indicates that tissue type was not present in sample.
[2] Unless noted otherwise, liver tissue was present in sample.
[3] Sample was in a crystalline structure of RNA*later*®; not able to determine tissue type other than those noted.

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Appendix 1

Preparation of mRNA Standards

Appendix 1.1

Method Outline for Extraction of Total RNA from Liver Tissue

Transfer liver tissue (typically ≤ 30 mg) into a micro-centrifuge tube containing 600 µL of Buffer RLT and a small amount of glass beads

↓

Vortex sample in tube for ≥5 minutes

↓

Centrifuge sample at 17,000 x *g* for 3 minutes and transfer 550 µL of supernatant to a new, clean 2.0 mL micro-centrifuge tube

↓

Add 550 µL of 70% ethanol and mix by inversion or pipetting

↓

Transfer 700 µL to an RNeasy® Mini spin column, fitted in a 2 mL collection tube and centrifuge at 8,000 x *g* for 30 seconds to 1 minute

↓

Discard flow-through; add 700 µL of Buffer RW1 to spin column and centrifuge at 8,000 x *g* for 30 seconds to 1 minute

↓

Discard flow-through; add 500 µL of Buffer RPE to spin column and centrifuge at 8,000 x *g* for 30 seconds to 1 minute

↓

Discard flow-through, add 500 µL volume of Buffer RPE to spin column and centrifuge at 8,000 x *g* for 2 minutes

↓

Discard flow-through and collection tube, place spin column into a 2.0 mL collection tube and centrifuge at 17,000 x *g* for 1 minute

↓

Discard flow-through and collection tube, place spin column in a new 1.5 mL micro-centrifuge tube, add 50 µL of RNase-free water to center of spin column membrane, incubate at room temperature for ~1 minute and centrifuge at 8,000 x *g* for 1 minute

↓

Discard spin column and analyze immediately by NanoDrop or store eluate at -80˚C for later analysis

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Appendix 1.2

Method Outline for Preparation of mRNA Standards

Extract total RNA from the livers of medaka

↓

Adjust concentration of extracted RNA to 200 ng total RNA/µL using RNase/DNase-free water

↓

Create cDNA from extracted RNA via SuperScript™ II Reverse Transcription kit

↓

Selectively amplify vitellogenin cDNA via PCR using AmpliTaq® Gold DNA Polymerase Kit

↓

Convert amplified vitellogenin cDNA into RNA via MEGAscript® kit

↓

Treat newly transcribed vitellogenin RNA with DNase I

↓

Clean vitellogenin RNA samples with MEGAclear™ kit

↓

Determine the number of vitellogenin copies per µL in standards using concentration given by the NanoDrop 2000

↓

Dilute the standard with the highest purity and concentration to $2.7x10^9$ copies/µL

Appendix 1.3

SuperScript™ II Reverse Transcription Preparation

Component	Volume (µL)/Sample[1]	Process
RNase/DNase-Free Water[2]	6	Combine these components. Pipette 8 µL of this mixture into six clean strip tubes.
dNTP mix (10 mM)[3]	1	
Oligo d(T) primer[4]	1	
Template RNA sample @ 200 ng/µL	4	Add 4.0 µL of RNA template sample to each microfuge tube. Incubate microfuge tubes at 65˚C for 5 minutes and immediately chill on ice.
SuperScript™ II 0.1M DTT[5]	2	Combine these components into one clean microfuge tube. Pipette 7 µL of this mixture to each sample tube. Mix gently by pipetting. Incubate microfuge tubes at 42˚C for 2 minutes.
SuperScript™ II 5X Buffer[5]	4	
RNasin[6]	1	
SuperScript™ II RT[5]	1	Add 1 µL to each microfuge tube and mix by pipetting. Incubate microfuge tubes at 42˚C for 50 minutes.
Inactivate reaction by heating at 70˚C for 15 minutes		

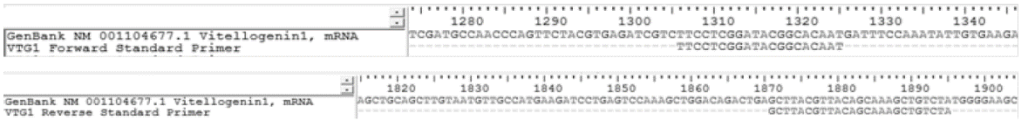
1 Component volumes were scaled up to accommodate 6 samples, plus additional samples to account for any losses during processing.
2 Supplied by Ambion, Frederick, MD
3 Supplied by Promega, Madison, WI
4 Supplied by Promega, Madison, WI
5 Supplied by Invitrogen, Carlsbad, CA
6 Supplied by Promega, Madison, WI

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Appendix 1.4

Nucleotide Sequence Positions of Forward and Reverse Primer for mRNA Standards



Sequence NM_001104677.1 Vitellogenin1, mRNA downloaded from National Center for Biotechnology Information (NCBI).
Forward and reverse primer sequences for mRNA standard preparation provided by the U.S. EPA OCSPP 890.2200 guideline (1).

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Appendix 1.5

Primers Used for Amplification of Standards

Primer	Sequence (5' to 3')
Vtg 1 Standard Forward	TAA TAC GAC TCA CTA TAG GGA GAT CCC TCG GAT ACG GCA CAA T
Vtg 1 Standard Reverse	TAG ACA GCT TTG CTG TAA CGT AAG C

Note: Underlined nucleotides are the T7 promoter sequence.

Appendix 1.6

Master Mix Preparation for Amplification of cDNA per Sample

Master Mix Component[1,2]	**Volume Required Per Sample (µL)**
RNase/DNase-free water[3]	15.4
AmpliTaq Gold® Buffer[4]	2.5
AmpliTaq Gold® $MgCl_2$[4]	1.5
dNTP mix (10 mM)[5]	0.5
Vtg 1 Standard Forward Primer @ 10 µM[6]	0.5
Vtg 1 Standard Reverse Primer @ 10 µM[6]	0.5
AmpliTaq Gold® DNA Polymerase[4]	0.14
Template cDNA	4.0

1 Component volumes were scaled up to accommodate samples, plus additional samples to account for any losses during processing. Components were mixed and 21 µL was aliquoted to individual microfuge tubes followed by the addition of 4 µL of template cDNA
2 Primer sequences given in EPA methodology (1) are listed in Appendix 1.5
3 Supplied by Ambion, Frederick, MD
4 Supplied by Supplied by Applied Biosystems, Austin, TX
5 Supplied by Promega, Madison, WI
6 Supplied by Integrated DNA Technologies, Coralville, IA

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Appendix 1.7

Cycling Parameters for Amplification of cDNA

Step	Temperature (˚C)	Time (s)	Number of Cycles
1 (Initial Denaturation)	95	600	1
2 (Denaturation)	94	30	35
3 (Anneal)	58	60	
4 (Extension)	72	60	

Appendix 1.8

Reaction Preparation for Transcription of Amplified cDNA

Component[1]	Required Volume (µL)
RNase/DNase-free water[2]	4.0
MEGAScript® 10mM ATP[3]	2.0
MEGAScript® 10mM CTP[3]	2.0
MEGAScript® 10mM GTP[3]	2.0
MEGAScript® 10mM UTP[3]	2.0
MEGAScript® 10X Buffer[3]	2.0
cDNA Template	4.0
MEGAScript® RNA Polymerase[2]	2.0

[1] Components were added individually to tubes in the order listed above. Once all tubes contained all components the tubes were incubated at 37°C overnight.
[2] Supplied by Ambion, Frederick, MD
[3] Supplied by Ambion, Vilnius, Lithuania

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Appendix 1.9

Method Outline for Clean-up of DNase I Treated Standards

Add 80 µL of Elution Solution to sample and mix gently by pipetting in a 200 µL tube

↓

Transfer up to 100 µL of the mixture to a new, clean 1.5 mL micro-centrifuge tube and add 350 µL Binding Solution and 250 µL 100% Ethanol, mixing thoroughly by pipetting after each addition

↓

Pipette up to 700 µL of the mixture onto a filter cartridge fitted in a collection tube and centrifuge at 10,000 x *g* for 1 minute

↓

Discard flow-through, add 500 µL Wash Solution to the filter cartridge and centrifuge at 10,000 x *g* for 1 minute

↓

Discard flow-through; add a second 500 µL volume of Wash Solution to the filter cartridge and centrifuge at 10,000 x *g* for 1 minute

↓

Discard flow-through; centrifuge at 10,000 x *g* for 1 minute to dry the filter and place filter cartridge into a new micro-centrifuge tube

↓

Add 50 µL of Elution Solution to the center of the membrane, incubate at ~ 70˚C for 10 minutes and centrifuge at 10,000 x *g* for 1 minute

↓

Add a second 50 µL volume of Elution Solution to the center of the membrane; incubate at ~ 70˚C for 10 minutes and centrifuge at 10,000 x *g* for 1 minute

↓

Discard filter cartridge, analyze on NanoDrop and store samples at -80˚C

Appendix 1.10

Example Calculation of Copy Number per µL in Standards

$$\frac{\frac{6x10^{23}\,copies}{mol}\;x\;Concentration\,(\frac{g}{\mu L})}{Molecular\;weight\left(\frac{g}{mol}\right)} = amount\frac{copies}{\mu L}$$

Molecular weight (g/mol) of ssRNA[1] = $640\frac{Daltons}{bp} \times \#\;of\;base\;pairs$

Vtg 1 standard RNA[1] = 612bp

Sample RNA has a concentration of $\frac{150ng}{\mu L}$

$$\frac{\frac{6x10^{23}\,copies}{mol}\;x\;1.5x10^{-7}\,(\frac{g}{\mu L})}{3.92x10^{5}\left(\frac{g}{mol}\right)} = \frac{2.3x10^{11}\;copies}{\mu L}$$

[1] Values provided by the U.S. EPA (1)

Appendix 1.11

Dilution of Standards Used in RT-qPCR Assay

Initial Standard Concentration (copies/µL)	Standard Volume (µL)	RNase/DNase-free Water Volume (µL)	Final Volume (µL)[1]	Final Standard Concentration (copies/µL)	Final Standard Identification
$2.7x10^9$	20	180	180	$2.7x10^8$	STD9
$2.7x10^8$	20	180	180	$2.7x10^7$	STD8
$2.7x10^7$	20	180	180	$2.7x10^6$	STD7
$2.7x10^6$	20	180	180	$2.7x10^5$	STD6[2]
$2.7x10^5$	20	180	180	$2.7x10^4$	STD5
$2.7x10^4$	20	180	180	$2.7x10^3$	STD4
$2.7x10^3$	20	180	200	$2.7x10^2$	STD3

[1] Serial dilutions were performed from highest standard (STD10) resulting in a reduced final volume.
[2] Standard was used for the positive control sample during sample analysis.

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Appendix 2

The Analysis of Vitellogenin (*Vtg* 1) by RT-qPCR Analysis

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Appendix 2.1

Nucleotide Sequence Positions of Primer and Probe for Study Samples

Parameter Set: RT-qPCR (Primers with Probe)
Sequence Name: EAG Primers/Probe Sequence
Amplicon Length: 106

		Start	Stop	Length	Tm	GC%
Forward	TCTAAGGGCGAAACAGAAGAC (Sense)	1460	1481	21	62	47.6
Probe	TTGGGAAATGCAGGACACCCTAGT (Sense)	1502	1526	24	68	50
Reverse	TGCCGTGAATGGGCATAA (AntiSense)	1548	1566	18	62	50

Base	Sequence
1	TAAAAGGCCAGCACAAATGTGAGCACAGCCCCATTTAACCATGAGAGCAGTTGTGCTCGCTCTGTCTCTAGCCCTAGTGGCTGGACAAGCTTCCAACCAT
101	GGTGCAACTGTGTTTCCTGAATTTTCTGCTGGCAAAACGTATGTGTATATGTATGAGATGTCCGTCATTAACGGTCTACCCGAGGAGGGTTTGGCAAGAG
201	CTAAGATGAACGCCAGCTGCAAATTTCTCATAAGTGCATTTGACAAAAACACATACATGTTAAAGGTTGAGGATGTGATGATGCAAGAGTTCACTGGCTT
301	TTGGCCAAAGGAACATGCAGAATCAATTGGGAATATTCCTAAAGCATTTACACCAGAGTTCAATATTCCCATCAAGTTTGAATACAGCAATGGTGTTGTA
401	GGAAAAGTTATGCCCCCGAAGGAGTCTCAGATTTGGTCCTGAACTTCTACAGAGCCGTCCTTAACATCATTCAGCTTAACATCAAGAAGACACACAACG
501	TTTATGATCTCCAGGAGACTGGAATTCAAGGCGTGTGCAAGACCCTCTACTCTGTTAATGAAGATGTAAAGGCTGAACGCATTCACCTGACTAAAACCAG
601	GGACATGAACCACTGTCAGGAAAGGGTCTATAGAGACATGGGTTTGGCATACACAGAGAAATGCGACAAGTGCCAGCAGGAATCCAAGAATTTAAGAGGT
701	TCAACATCATACAGATACACCCTGAAACCAGTTCTTAGTGGTGTTATGATCCTGGAGGCAGATGTAAATGAGCTTATCCAGTTCTCACCGTTCCTGAGA
801	GTTATGGGGCTGCTCAAACAGAGACCAAACAAACCTTCGTCTTCCAAGAGATTCAGGATTCCTCCATTGCACCAATTTCTGCTGAGTATCATCACCGTGG
901	ATCTCTCAAGTATGAGTTCACTAATGACTTTGAGTGGACACCACTTCAGCTTGTCAATGTCACTGATGAACAGGCACAGACAGAGGAGCTTCTGAATCAT
1001	CTAGTTACCCATAATGCAGAGAAAGTCACTGATCATGCTCCTCTGAAATATTTGGAATTGGTTGAGTTTTTACGTCTTGCCCGCTATGAAGACCTGGAAG
1101	CATTCTGGAGCAAGTACAGAGATACGCCTTCTCACAGACTCTGGCTCTTGGAAGCTATTCCAGCCACAGGAACGTCTGCTGCTCTCAGATTCATCAAGGA
1201	GAAATTTACATCTGAAGACTTAAGTGTTACTGAGGCAGTTAGAACCTTGGTTGCAGCTGTTCACATGGTTACAGCAAACCCTGAATCCATCAAGCTGTTT
1301	GAGACCCTGACAGAAGACAGCAAACTCAACGCCAACCCAGTTCTACGTGAGATCGTCTTCCTCGGATACGGCACAATGATTTCCAAATATTGTGCAGAGT
1401	CAGATGTCTGTCCTGTCGAATATATAAAACCAATTCAGAAGCGTCTCCTCAGAGGCAGTTTCTAAGGGCGAAACAGAAGACATCATTTTGTATGTGAAGGT
1501	TTTGGGAAATGCAGGACACCCTAGTAGCCTCAAGTCAATCACAAAGATTATGCCCATTCACGGCACTGCTGCTGCTTCTCTGCCAATCACAGTCCATATT
1601	GAAGCCATCATGGCTCTGAGGAACATTGCAAAGAAAGAACCAAGAATGGTTCAGGAACTGGCTCTTCAGCTCTACATGGACAAGGCTCTTTGACCCAGAGC
1701	TTCGTATGCTTTCATGCATTGTGCTGTTTGAGACCAATCCTCAATGGCGCTGATTTCCACCCTTGCCAATGCTGTTAAGTCAGAGGAGAATTTGCAGGT
1801	TGCCAGCTTCACATACTCTCACATGAAGTCCCTGAGCAGGAGCGCTTCCATGATTCATCCATCAGTAGCTGCAGCTTGTAATGTTGCCATGAAGATCCTG
1901	AGTCCAAAGCTGGACAGACTGAGCTTACGTTACAGCAAAGCTGTCTATGGGGAAGCCTATAGCAGCTCTTTTATGCTTGGTGCTGCTGCTACCGCTTCT
2001	ACATCAACGATGCTGCTACATCCCTGCCAAGATCCTGTTGTTGCCAAGACCAAAGCCTTCTTTGTTGGAGCTGCTGCTGATGTTCTGGAGATTGGAGTAAG
2101	AACTGATGGACTTCAAGAGACCCTTCTGAAAAACCCTTCAGTTCTAAAAAGTGGTGACAGGATCACCAAGATGAAACGTGTTATCAAGGCCCTTTCTCAG
2201	TGGAGGTCCTTGCCCAACAACAAACCCTTAGCTTCTTTCTATATCAAGCTTTTTGGACAAGAGATTGCCTTTGCGAACATCGATAAACCCATGGTTGAGC
2301	AGGCAATTGCGCTAGCCAGTGGTCCCTCCTGTTCAGGCTTTTGGTGTAAAAGCTCTGAAGACTCTTTTACTCCCTGGTGTCAGTTTCAACTATACAATGCC
2401	TGTGATGTATACTGAGATGCGACGCGCAATACCTACTGCTACTGGTATTTCAGTGCAGCTCAGTCTTTTTTCTGCTGCTGTGGCTGGAGCTGTCGTTAAA
2501	ATCGAACCAACCTCTGTTGCCACATCTGCCTGAAGACTTTCCTCTCTCTGCCTTCTGGAGACAGACATCAAGCTTGAGACTGAAATCAGACCCAGTTTTG
2601	CTATGGACACCTATGCTGTGATGGGAATTAACAATCCTTTCTACCATGCAATCATTGTGTCAAGAGCTAAATTTAACTCAACTCTGCCCTCCAAAATCTC
2701	CGCAAGACTTGACATTAAAGAGGGTGACTTCAAGATAGAAGTAAGATGTCCCACTTAGATTTTATCAGAAATGACAGTTTATCAAATGACCAGCTCTTCA
2801	CTTCTTTTACTTTATATGCTCTTGTCCCTGTTGCCTCTGCATTGCCACATCCTCAAAACCACACTTTCCCATTTTCTGTAACTCATTCCCTGTTCTT
2901	TTTTACTATATCATCCTCCTTGTCCATTTAGGTGATATGATCTCCTCAAATTTTCCATATCTTCCACAAACTGATTAACATCCTCTTTATAAGATCTGAC
3001	ACCTTCTTTGCTTTGCCTTTCCCCATTTCAGTTATTTATGATAACAATTTCAAATACTCTTGATTATGATGAATCAAACAACAGAAACGCCAGTCATTCG
3101	CTTCTCATTCAGACATTCACAGCGGTGCATTTCATTCACAACAATCCACCAGTCACACAACGCTTGCGCTTTGTCCGGAGATAAAAATAAAAATAAAATGA
3201	AGGTCTTTAAGGAAACCAGTCAGGAAACCACATCTGACATGTGCGTATTGATCCTTAGGTCGCGAAGCACAACAATGCCAGAACACATCTGACAAATTTC
3301	CACAACCACCTAGAAAAATACCACGGTACCTGATAGAGTCTAGAA

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Appendix 2.2

Primers and Probe Used for Amplification of Study Samples

Primer/Probe	Sequence (5' to 3')
Vtg 1 Forward Primer	TCT AAG GGC GAA ACA GAA GAC
Vtg 1 Reverse Primer	TGC CGT GAA TGG GCA TAA
Vtg 1 Probe	/56-FAM/TTG GGA AAT/ZEN/GCA GGA CAC CCT AGT /3IABkFQ/

Appendix 2.3

Cycling Parameters for RT-qPCR Assay

Step	Temperature (˚C)	Time (s)	Number of Cycles
Hold 1 (Reverse Transcription)	50	600	1
Hold 2 (Initial Denaturation)	95	300	
Step 1 (Denaturation)	95	15	35
Step 2 (Anneal/Extension)	60	45	

Appendix 2.4

Target RT-qPCR Master Mix Preparation per Sample

Master Mix Component[1,2]	Starting Concentration	Final Concentration In Reaction	Volume Required (µL)
Nuclease-Free Water			6.75
TaqMan® Fast Virus 1-step PCR Master Mix	4 X	1 X	6.25
Vtg 1 Forward Primer	10 µM	0.90 µM	2.25
Vtg 1 Reverse Primer	10 µM	0.50 µM	1.25
Vtg 1 Probe	1.25 µM	0.20 µM	4.00

[1] Volumes listed are for a single sample. Actual volumes used for assay were typically scaled up for 72 samples plus extra to account for any loss.
[2] Primer and Probe sequences are listed in Appendix 2.2

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Appendix 2.5

Typical Place Assignment of Standards, Samples and Controls

Tube #	Sample	**Tube #**	Sample	**Tube #**	Sample
1	STD8	**25**	Unknown5	**49**	Unknown17
2	STD8	**26**	Unknown5	**50**	Unknown17
3	STD8	**27**	Unknown6	**51**	Unknown18
4	STD7	**28**	Unknown6	**52**	Unknown18
5	STD7	**29**	Unknown7	**53**	Unknown19
6	STD7	**30**	Unknown7	**54**	Unknown19
7	STD5	**31**	Unknown8	**55**	Unknown20
8	STD5	**32**	Unknown8	**56**	Unknown20
9	STD5	**33**	Unknown9	**57**	Unknown21
10	STD4	**34**	Unknown9	**58**	Unknown21
11	STD4	**35**	Unknown10	**59**	Unknown22
12	STD4	**36**	Unknown10	**60**	Unknown22
13	STD3	**37**	Unknown11	**61**	Unknown23
14	STD3	**38**	Unknown11	**62**	Unknown23
15	STD3	**39**	Unknown12	**63**	Unknown24
16	Blank[1]	**40**	Unknown12	**64**	Unknown24
17	Unknown1	**41**	Unknown13	**65**	Unknown25
18	Unknown1	**42**	Unknown13	**66**	Unknown25
19	Unknown2	**43**	Unknown14	**67**	Unknown26
20	Unknown2	**44**	Unknown14	**68**	Unknown26
21	Unknown3	**45**	Unknown15	**69**	Positive Control[2]
22	Unknown3	**46**	Unknown15	**70**	Positive Control[2]
23	Unknown4	**47**	Unknown16	**71**	NTC[3]
24	Unknown4	**48**	Unknown16	**72**	NTC[3]

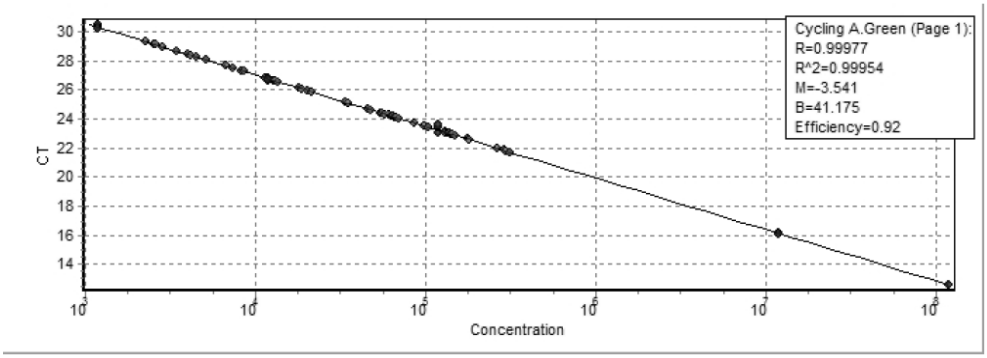
[1] Empty tube
[2] Positive control = Standard 6 (STD6)
[3] NTC = No-Template Control

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Appendix 2.6

Typical Standard Curve for Vitellogenin mRNA Analysis



Standard Curve from 607A-102 Assay 1.1

Appendix 2.7

Calculation Used to Determine copies *Vtg* 1 mRNA/ng Total RNA in Samples

$$\frac{\left(\frac{(Sample\ value\ replicate\ 1 + Sample\ value\ replicate\ 2)}{2}\right)}{\left(\frac{ng\ Total\ RNA\ of\ Sample}{\mu L} \times 4.5\ \mu L\right)} = \frac{Copies\ Vtg1\ mRNA}{ng\ Total\ RNA}$$

Appendix 2.8

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1085	0.0	F	45.0	4.5	202.5	1.43E+05	7.06E+02	2.85
RNA1086	0.0	F	45.0	4.5	202.5	3.02E+05	1.49E+03	3.17
RNA1087	0.0	F	45.0	4.5	202.5	8.84E+04	4.37E+02	2.64
RNA1088	0.0	F	45.0	4.5	202.5	3.31E+06	1.63E+04	4.21
RNA1089	0.0	F	45.0	4.5	202.5	1.68E+04	8.30E+01	1.92
RNA1090	0.0	F	45.0	4.5	202.5	6.12E+06	3.02E+04	4.48
RNA1091	0.0	M	45.0	4.5	202.5	1.20E+04	5.93E+01	1.77
RNA1092	0.0	M	23.9	4.5	107.3	1.94E+06	1.81E+04	4.26
RNA1093	0.0	M	47.7	4.5	214.4	2.75E+04	1.28E+02	2.11
RNA1094	0.0	F	45.0	4.5	202.5	1.21E+04	5.98E+01	1.78
RNA1095	0.0	M	45.0	4.5	202.5	1.15E+04	5.68E+01	1.75
RNA1096	0.0	F	45.0	4.5	202.5	4.34E+06	2.14E+04	4.33
RNA1097	0.0	M	45.0	4.5	202.5	5.70E+04	2.81E+02	2.45
RNA1098	0.0	M	45.0	4.5	202.5	8.50E+04	4.20E+02	2.62
RNA1099	0.0	M	45.0	4.5	202.5	9.71E+03	4.80E+01	1.68
RNA1100	0.0	F	45.0	4.5	202.5	2.53E+04	1.25E+02	2.10

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1101	0.0	F	45.0	4.5	202.5	5.94E+06	2.93E+04	4.47
RNA1102	0.0	F	45.0	4.5	202.5	2.13E+06	1.05E+04	4.02
RNA1103	0.0	M	45.0	4.5	202.5	3.32E+05	1.64E+03	3.21
RNA1104	0.0	F	45.0	4.5	202.5	1.14E+05	5.63E+02	2.75
RNA1105	0.0	M	45.0	4.5	202.5	3.26E+04	1.61E+02	2.21
RNA1106	0.0	F	45.0	4.5	202.5	1.23E+04	6.07E+01	1.78
RNA1107	0.0	F	45.0	4.5	202.5	1.75E+06	8.64E+03	3.94
RNA1108	0.0	F	45.0	4.5	202.5	2.74E+05	1.35E+03	3.13
RNA1109	0.0	M	45.0	4.5	202.5	1.38E+05	6.81E+02	2.83
RNA1110	0.0	M	45.0	4.5	202.5	2.74E+05	1.35E+03	3.13
RNA1111	0.0	M	45.0	4.5	202.5	2.64E+04	1.30E+02	2.12
RNA1112	0.0	F	45.0	4.5	202.5	1.27E+04	6.27E+01	1.80
RNA1113	0.0	F	45.0	4.5	202.5	1.49E+04	7.36E+01	1.87
RNA1114	0.0	F	45.0	4.5	202.5	5.97E+04	2.95E+02	2.47
RNA1115	0.0	M	45.0	4.5	202.5	7.00E+03	3.46E+01	1.54
RNA1116	0.0	F	45.0	4.5	202.5	9.77E+04	4.82E+02	2.68

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1117	0.0	M	45.0	4.5	202.5	1.20E+05	5.93E+02	2.77
RNA1118	0.0	F	45.0	4.5	202.5	3.21E+04	1.59E+02	2.20
RNA1119	0.0	M	45.0	4.5	202.5	4.72E+04	2.33E+02	2.37
RNA1120	0.0	F	45.0	4.5	202.5	5.82E+03	2.87E+01	1.46
RNA1121	0.0	M	45.0	4.5	202.5	2.89E+03	1.43E+01	1.15
RNA1122	0.0	M	45.0	4.5	202.5	2.40E+03	1.19E+01	1.07
RNA1123	0.0	F	45.0	4.5	202.5	6.52E+06	3.22E+04	4.51
RNA1124	0.0	F	45.0	4.5	202.5	1.63E+06	8.05E+03	3.91
RNA1125	0.0	F	45.0	4.5	202.5	8.87E+06	4.38E+04	4.64
RNA1126	0.0	F	45.0	4.5	202.5	6.78E+06	3.35E+04	4.52
RNA1127	0.0	M	45.0	4.5	202.5	1.42E+05	7.01E+02	2.85
RNA1128	0.0	M	45.0	4.5	202.5	1.29E+05	6.37E+02	2.80
RNA1129	0.0	M	45.0	4.5	202.5	2.07E+04	1.02E+02	2.01
RNA1130	0.0	F	45.0	4.5	202.5	6.64E+05	3.28E+03	3.52
RNA1131	0.0	F	45.0	4.5	202.5	2.74E+05	1.35E+03	3.13
RNA1132	0.0	F	45.0	4.5	202.5	4.86E+03	2.40E+01	1.38

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1133	0.0	M	45.0	4.5	202.5	4.03E+03	1.99E+01	1.30
RNA1134	0.0	F	45.0	4.5	202.5	6.24E+03	3.08E+01	1.49
RNA1135	0.0	F	45.0	4.5	202.5	3.70E+06	1.83E+04	4.26
RNA1136	0.0	F	45.0	4.5	202.5	1.99E+05	9.83E+02	2.99
RNA1137	0.0	F	45.0	4.5	202.5	3.15E+04	1.56E+02	2.19
RNA1138	0.0	F	45.0	4.5	202.5	8.49E+03	4.19E+01	1.62
RNA1139	0.0	M	45.0	4.5	202.5	6.20E+04	3.06E+02	2.49
RNA1140	0.0	M	45.0	4.5	202.5	8.37E+03	4.13E+01	1.62
RNA1141	0.0	F	45.0	4.5	202.5	3.85E+04	1.90E+02	2.28
RNA1142	0.0	F	45.0	4.5	202.5	6.00E+05	2.96E+03	3.47
RNA1143	0.0	F	45.0	4.5	202.5	9.25E+04	4.57E+02	2.66
RNA1144	0.0	F	45.0	4.5	202.5	1.98E+05	9.78E+02	2.99
RNA1145	0.0	M	45.0	4.5	202.5	5.03E+03	2.48E+01	1.40
RNA1146	0.0	F	45.0	4.5	202.5	2.70E+06	1.33E+04	4.12
RNA1147	0.0	M	45.0	4.5	202.5	2.20E+05	1.09E+03	3.04
RNA1148	0.0	F	45.0	4.5	202.5	1.05E+06	5.19E+03	3.71

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1149	0.0	F	45.0	4.5	202.5	6.70E+07	3.31E+05	5.52
RNA1150	0.0	F	45.0	4.5	202.5	1.33E+06	6.57E+03	3.82
RNA1151/1152A[4]	0.0	F	45.0	4.5	202.5	4.09E+06	2.02E+04	4.31
RNA1151/1152B[4]	0.0	F	45.0	4.5	202.5	3.89E+05	1.92E+03	3.28
RNA1153	0.0	F	45.0	4.5	202.5	3.71E+05	1.83E+03	3.26
RNA1154	0.0	F	45.0	4.5	202.5	1.25E+05	6.17E+02	2.79
RNA1155	0.0	F	45.0	4.5	202.5	4.56E+03	2.25E+01	1.35
RNA1156	0.0	M	7.0	4.5	31.5	9.64E+02	3.06E+01	1.49
RNA1157	6.3	F	45.0	4.5	202.5	8.28E+04	4.09E+02	2.61
RNA1158	6.3	F	45.0	4.5	202.5	1.55E+04	7.65E+01	1.88
RNA1159	6.3	F	45.0	4.5	202.5	5.90E+04	2.91E+02	2.46
RNA1160	6.3	F	45.0	4.5	202.5	1.02E+06	5.04E+03	3.70
RNA1161	6.3	F	45.0	4.5	202.5	6.09E+06	3.01E+04	4.48
RNA1162	6.3	F	45.0	4.5	202.5	6.71E+06	3.31E+04	4.52
RNA1163	6.3	M	45.0	4.5	202.5	7.07E+03	3.49E+01	1.54
RNA1164	6.3	F	45.0	4.5	202.5	1.98E+04	9.78E+01	1.99

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

[4] Liver samples 1151 and 1152 were found outside of their respective tubes upon receipt. Since both samples were from the same treatment level and of the same genetic sex, the samples were placed back into individual tubes and renamed for further processing.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1165	6.3	F	45.0	4.5	202.5	7.95E+04	3.93E+02	2.59
RNA1166	6.3	F	45.0	4.5	202.5	7.13E+04	3.52E+02	2.55
RNA1167	6.3	M	45.0	4.5	202.5	1.86E+07	9.19E+04	4.96
RNA1168	6.3	F	45.0	4.5	202.5	6.84E+04	3.38E+02	2.53
RNA1169	6.3	M	45.0	4.5	202.5	1.76E+05	8.69E+02	2.94
RNA1170	6.3	M	45.0	4.5	202.5	1.82E+04	8.99E+01	1.95
RNA1171	6.3	F	45.0	4.5	202.5	2.85E+03	1.41E+01	1.15
RNA1172	6.3	F	45.0	4.5	202.5	1.76E+06	8.69E+03	3.94
RNA1173	6.3	M	35.35	4.5	159.1	1.03E+06	6.47E+03	3.81
RNA1174	6.3	F	45.0	4.5	202.5	2.62E+04	1.29E+02	2.11
RNA1175	6.3	M	45.0	4.5	202.5	3.55E+03	1.75E+01	1.24
RNA1176	6.3	M	45.0	4.5	202.5	1.69E+05	8.35E+02	2.92
RNA1177	6.3	M	45.0	4.5	202.5	1.32E+05	6.52E+02	2.81
RNA1178	6.3	F	45.0	4.5	202.5	9.48E+04	4.68E+02	2.67
RNA1179	6.3	F	45.0	4.5	202.5	1.24E+05	6.12E+02	2.79
RNA1180	6.3	M	45.0	4.5	202.5	8.59E+04	4.24E+02	2.63

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1181	6.3	F	45.0	4.5	202.5	1.71E+04	8.44E+01	1.93
RNA1182	6.3	M	45.0	4.5	202.5	1.22E+04	6.02E+01	1.78
RNA1183	6.3	M	45.0	4.5	202.5	3.90E+03	1.93E+01	1.28
RNA1184	6.3	F	45.0	4.5	202.5	5.25E+03	2.59E+01	1.41
RNA1185	6.3	M	45.0	4.5	202.5	8.99E+03	4.44E+01	1.65
RNA1186	6.3	F	45.0	4.5	202.5	2.99E+03	1.48E+01	1.17
RNA1187	6.3	M	45.0	4.5	202.5	2.68E+03	1.32E+01	1.12
RNA1188	6.3	M	45.0	4.5	202.5	4.66E+04	2.30E+02	2.36
RNA1189	6.3	F	45.0	4.5	202.5	2.04E+04	1.01E+02	2.00
RNA1190	6.3	F	45.0	4.5	202.5	4.64E+04	2.29E+02	2.36
RNA1191	6.3	M	45.0	4.5	202.5	5.29E+04	2.61E+02	2.42
RNA1192	6.3	F	45.0	4.5	202.5	6.67E+04	3.29E+02	2.52
RNA1193	12.5	F	45.0	4.5	202.5	2.03E+05	1.00E+03	3.00
RNA1194	12.5	M	45.0	4.5	202.5	5.79E+06	2.86E+04	4.46
RNA1195	12.5	F	45.0	4.5	202.5	7.91E+06	3.91E+04	4.59
RNA1196	12.5	F	45.0	4.5	202.5	3.09E+05	1.53E+03	3.18

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1197	12.5	F	45.0	4.5	202.5	2.86E+06	1.41E+04	4.15
RNA1198	12.5	F	45.0	4.5	202.5	2.19E+06	1.08E+04	4.03
RNA1199	12.5	M	45.0	4.5	202.5	6.77E+04	3.34E+02	2.52
RNA1200	12.5	F	45.0	4.5	202.5	6.40E+04	3.16E+02	2.50
RNA1201	12.5	F	45.0	4.5	202.5	1.31E+08	6.47E+05	5.81
RNA1202	12.5	F	45.0	4.5	202.5	1.44E+05	7.11E+02	2.85
RNA1203	12.5	F	45.0	4.5	202.5	1.48E+06	7.31E+03	3.86
RNA1204	12.5	M	45.0	4.5	202.5	4.16E+04	2.05E+02	2.31
RNA1205	12.5	F	45.0	4.5	202.5	6.30E+05	3.11E+03	3.49
RNA1206	12.5	F	45.0	4.5	202.5	7.92E+06	3.91E+04	4.59
RNA1207	12.5	F	45.0	4.5	202.5	1.82E+05	8.99E+02	2.95
RNA1208	12.5	F	45.0	4.5	202.5	6.97E+06	3.44E+04	4.54
RNA1209	12.5	F	45.0	4.5	202.5	3.69E+06	1.82E+04	4.26
RNA1210	12.5	F	45.0	4.5	202.5	1.91E+05	9.43E+02	2.97
RNA1211	12.5	F	45.0	4.5	202.5	1.66E+05	8.20E+02	2.91
RNA1212	12.5	F	45.0	4.5	202.5	4.69E+05	2.32E+03	3.36

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1213	12.5	F	45.0	4.5	202.5	6.10E+06	3.01E+04	4.48
RNA1214	12.5	M	45.0	4.5	202.5	2.41E+05	1.19E+03	3.08
RNA1215	12.5	F	45.0	4.5	202.5	5.90E+04	2.91E+02	2.46
RNA1216	12.5	F	45.0	4.5	202.5	1.91E+06	9.43E+03	3.97
RNA1217	12.5	M	45.0	4.5	202.5	3.44E+04	1.70E+02	2.23
RNA1218	12.5	M	45.0	4.5	202.5	1.32E+04	6.52E+01	1.81
RNA1219	12.5	F	45.0	4.5	202.5	2.30E+07	1.14E+05	5.06
RNA1220	12.5	M	45.0	4.5	202.5	4.47E+05	2.21E+03	3.34
RNA1221	12.5	M	45.0	4.5	202.5	5.08E+05	2.51E+03	3.40
RNA1222	12.5	F	45.0	4.5	202.5	2.33E+04	1.15E+02	2.06
RNA1223	12.5	M	45.0	4.5	202.5	5.46E+04	2.70E+02	2.43
RNA1224	12.5	F	45.0	4.5	202.5	2.92E+05	1.44E+03	3.16
RNA1225	12.5	F	45.0	4.5	202.5	1.18E+08	5.83E+05	5.77
RNA1226	12.5	F	45.0	4.5	202.5	1.36E+04	6.72E+01	1.83
RNA1227	12.5	F	45.0	4.5	202.5	6.60E+06	3.26E+04	4.51
RNA1228	12.5	F	45.0	4.5	202.5	1.12E+08	5.53E+05	5.74

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1229	25	M	45.0	4.5	202.5	3.91E+04	1.93E+02	2.29
RNA1230	25	M	45.0	4.5	202.5	8.97E+03	4.43E+01	1.65
RNA1231	25	M	45.0	4.5	202.5	5.67E+03	2.80E+01	1.45
RNA1232	25	M	45.0	4.5	202.5	3.41E+03	1.68E+01	1.23
RNA1233	25	M	45.0	4.5	202.5	2.53E+04	1.25E+02	2.10
RNA1234	25	F	45.0	4.5	202.5	2.50E+07	1.23E+05	5.09
RNA1235	25	F	45.0	4.5	202.5	1.55E+05	7.65E+02	2.88
RNA1236	25	M	45.0	4.5	202.5	2.19E+04	1.08E+02	2.03
RNA1237	25	M	45.0	4.5	202.5	1.30E+05	6.42E+02	2.81
RNA1238	25	M	45.0	4.5	202.5	3.43E+05	1.69E+03	3.23
RNA1239	25	F	45.0	4.5	202.5	1.61E+04	7.95E+01	1.90
RNA1240	25	F	45.0	4.5	202.5	1.12E+08	5.53E+05	5.74
RNA1241	25	M	45.0	4.5	202.5	7.14E+03	3.53E+01	1.55
RNA1242	25	F	45.0	4.5	202.5	3.34E+05	1.65E+03	3.22
RNA1243	25	M	45.0	4.5	202.5	1.47E+04	7.26E+01	1.86
RNA1244	25	M	45.0	4.5	202.5	2.23E+07	1.10E+05	5.04

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1245	25	M	45.0	4.5	202.5	4.55E+07	2.25E+05	5.35
RNA1246	25	M	45.0	4.5	202.5	1.92E+05	9.48E+02	2.98
RNA1247	25	M	45.0	4.5	202.5	8.56E+03	4.23E+01	1.63
RNA1248	25	M	45.0	4.5	202.5	5.29E+04	2.61E+02	2.42
RNA1249	25	M	45.0	4.5	202.5	1.94E+04	9.58E+01	1.98
RNA1250	25	M	45.0	4.5	202.5	7.33E+06	3.62E+04	4.56
RNA1251	25	F	45.0	4.5	202.5	1.50E+05	7.41E+02	2.87
RNA1252	25	F	45.0	4.5	202.5	2.35E+08	1.16E+06	6.06
RNA1253	25	M	45.0	4.5	202.5	5.70E+03	2.81E+01	1.45
RNA1254	25	M	45.0	4.5	202.5	5.91E+03	2.92E+01	1.47
RNA1255	25	F	45.0	4.5	202.5	2.12E+05	1.05E+03	3.02
RNA1256	25	M	45.0	4.5	202.5	3.35E+04	1.65E+02	2.22
RNA1257	25	M	45.0	4.5	202.5	3.71E+06	1.83E+04	4.26
RNA1258	25	M	45.0	4.5	202.5	4.20E+06	2.07E+04	4.32
RNA1259	25	M	45.0	4.5	202.5	4.22E+04	2.08E+02	2.32
RNA1260	25	F	45.0	4.5	202.5	2.65E+04	1.31E+02	2.12

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1261	25	F	45.0	4.5	202.5	2.59E+07	1.28E+05	5.11
RNA1262	25	F	45.0	4.5	202.5	1.55E+08	7.65E+05	5.88
RNA1263	25	F	45.0	4.5	202.5	3.55E+05	1.75E+03	3.24
RNA1264	25	M	45.0	4.5	202.5	4.86E+06	2.40E+04	4.38
RNA1265	50	M	45.0	4.5	202.5	3.32E+03	1.64E+01	1.21
RNA1266	50	M	45.0	4.5	202.5	3.61E+03	1.78E+01	1.25
RNA1267	50	F	42.9	4.5	193.1	4.20E+06	2.18E+04	4.34
RNA1268	50	F	45.0	4.5	202.5	3.48E+05	1.72E+03	3.24
RNA1269	50	M	45.0	4.5	202.5	2.41E+04	1.19E+02	2.08
RNA1270	50	M	45.0	4.5	202.5	1.08E+06	5.33E+03	3.73
RNA1271	50	F	45.0	4.5	202.5	6.32E+05	3.12E+03	3.49
RNA1272	50	F	45.0	4.5	202.5	4.90E+05	2.42E+03	3.38
RNA1273/1275A[4]	50	F	2.25	4.5	10.1	5.06E+04	5.00E+03	3.70
RNA1273/1275B[4]	50	F	39.3	4.5	176.9	7.80E+04	4.41E+02	2.64
RNA1274	50	M	7.1	4.5	32.0	7.00E+05	2.19E+04	4.34
RNA1276	50	F	46.1	4.5	207.5	2.79E+04	1.34E+02	2.13

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

[4] Liver samples 1273 and 1275 were found outside of their respective tubes upon receipt. Since both samples were from the same treatment level and of the same genetic sex, the samples were placed back into individual tubes and renamed for further processing.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1277	50	M	45.0	4.5	202.5	5.01E+05	2.47E+03	3.39
RNA1278	50	M	45.0	4.5	202.5	5.20E+04	2.57E+02	2.41
RNA1279	50	F	44.05	4.5	198.2	6.01E+05	3.03E+03	3.48
RNA1280	50	M	45.0	4.5	202.5	1.07E+07	5.28E+04	4.72
RNA1281	50	M	45.0	4.5	202.5	7.60E+06	3.75E+04	4.57
RNA1282	50	F	45.0	4.5	202.5	4.63E+07	2.29E+05	5.36
RNA1283	50	F	45.0	4.5	202.5	7.47E+04	3.69E+02	2.57
RNA1284	50	F	45.0	4.5	202.5	2.93E+05	1.45E+03	3.16
RNA1285	50	F	45.0	4.5	202.5	1.88E+05	9.28E+02	2.97
RNA1286	50	F	45.0	4.5	202.5	2.85E+05	1.41E+03	3.15
RNA1287	50	F	45.0	4.5	202.5	4.29E+06	2.12E+04	4.33
RNA1288	50	F	45.0	4.5	202.5	2.14E+05	1.06E+03	3.02
RNA1289	50	F	45.0	4.5	202.5	3.59E+04	1.77E+02	2.25
RNA1290	50	F	45.0	4.5	202.5	6.55E+04	3.23E+02	2.51
RNA1291	50	F	45.0	4.5	202.5	2.71E+04	1.34E+02	2.13
RNA1292	50	F	45.0	4.5	202.5	9.51E+04	4.70E+02	2.67

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1293	50	F	45.0	4.5	202.5	1.22E+05	6.02E+02	2.78
RNA1294	50	F	45.0	4.5	202.5	8.02E+03	3.96E+01	1.60
RNA1295	50	M	45.0	4.5	202.5	5.05E+04	2.49E+02	2.40
RNA1296	50	M	45.0	4.5	202.5	7.39E+04	3.65E+02	2.56
RNA1297	50	M	45.0	4.5	202.5	2.86E+04	1.41E+02	2.15
RNA1298	50	M	45.0	4.5	202.5	5.59E+04	2.76E+02	2.44
RNA1299	50	F	45.0	4.5	202.5	1.90E+05	9.38E+02	2.97
RNA1300	50	F	45.0	4.5	202.5	1.84E+04	9.09E+01	1.96
RNA1301	100	M	45.0	4.5	202.5	1.44E+04	7.11E+01	1.85
RNA1302	100	M	45.0	4.5	202.5	4.18E+04	2.06E+02	2.31
RNA1303	100	M	45.0	4.5	202.5	2.35E+06	1.16E+04	4.06
RNA1304	100	M	45.0	4.5	202.5	1.27E+05	6.27E+02	2.80
RNA1305	100	F	45.0	4.5	202.5	9.11E+04	4.50E+02	2.65
RNA1306	100	F	45.0	4.5	202.5	3.30E+05	1.63E+03	3.21
RNA1307	100	F	45.0	4.5	202.5	1.06E+06	5.23E+03	3.72
RNA1308	100	M	45.0	4.5	202.5	2.66E+05	1.31E+03	3.12

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1309	100	M	45.0	4.5	202.5	4.29E+05	2.12E+03	3.33
RNA1310	100	F	45.0	4.5	202.5	2.97E+04	1.47E+02	2.17
RNA1311	100	F	45.0	4.5	202.5	4.20E+05	2.07E+03	3.32
RNA1312	100	M	45.0	4.5	202.5	2.29E+05	1.13E+03	3.05
RNA1313	100	M	45.0	4.5	202.5	8.84E+04	4.37E+02	2.64
RNA1314	100	M	45.0	4.5	202.5	7.14E+04	3.53E+02	2.55
RNA1315	100	M	45.0	4.5	202.5	1.96E+05	9.68E+02	2.99
RNA1316	100	F	45.0	4.5	202.5	9.84E+04	4.86E+02	2.69
RNA1317	100	F	45.0	4.5	202.5	1.17E+07	5.78E+04	4.76
RNA1318	100	M	45.0	4.5	202.5	3.73E+07	1.84E+05	5.27
RNA1319	100	M	45.0	4.5	202.5	6.92E+04	3.42E+02	2.53
RNA1320	100	F	45.0	4.5	202.5	1.27E+06	6.27E+03	3.80
RNA1321	100	M	45.0	4.5	202.5	3.05E+04	1.51E+02	2.18
RNA1322	100	M	45.0	4.5	202.5	2.32E+05	1.15E+03	3.06
RNA1323	100	M	45.0	4.5	202.5	5.03E+04	2.48E+02	2.40
RNA1324	100	F	45.0	4.5	202.5	4.89E+04	2.41E+02	2.38

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.8 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F1 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA1325	100	M	45.0	4.5	202.5	6.48E+04	3.20E+02	2.51
RNA1326	100	M	45.0	4.5	202.5	5.34E+07	2.64E+05	5.42
RNA1327	100	F	45.0	4.5	202.5	1.38E+07	6.81E+04	4.83
RNA1328	100	F	45.0	4.5	202.5	4.04E+04	2.00E+02	2.30
RNA1329	100	F	45.0	4.5	202.5	3.07E+04	1.52E+02	2.18
RNA1330	100	F	45.0	4.5	202.5	1.81E+05	8.94E+02	2.95
RNA1331	100	M	45.0	4.5	202.5	5.52E+04	2.73E+02	2.44
RNA1332	100	F	45.0	4.5	202.5	1.10E+05	5.43E+02	2.73
RNA1333	100	F	45.0	4.5	202.5	6.68E+04	3.30E+02	2.52
RNA1334	100	F	45.0	4.5	202.5	2.81E+04	1.39E+02	2.14
RNA1335	100	F	45.0	4.5	202.5	4.28E+05	2.11E+03	3.33
RNA1336	100	M	45.0	4.5	202.5	7.36E+07	3.63E+05	5.56

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.9

Summary of *Vtg* 1 No-Template Control (NTC) and Positive Control Results for F1 Generation Assays

Sample Type	F1 Assay No.	Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)			
		Sample 1	Percent of Nominal[1]	Sample 2	Percent of Nominal[1]
Positive Control[1]	1.1	9.68E+04	8.27%	1.03E+05	8.80%
	2.1	7.43E+04	6.35%	8.13E+04	6.95%
	3.1	8.53E+04	7.29%	9.06E+04	7.74%
	4.1	7.29E+04	6.23%	7.08E+04	6.05%
	5.1	1.80E+05	15.38%	1.30E+05	11.11%
	6.1	8.57E+04	7.32%	1.04E+05	8.89%
	7.1	8.36E+04	7.15%	8.13E+04	6.95%
	8.1	1.66E+05	14.19%	6.95E+04	5.94%
	9.1	6.14E+04	5.25%	6.39E+04	5.46%
	10.1	4.16E+04	3.56%	4.42E+04	3.78%
	11.1	1.19E+06	101.71%	1.21E+06	103.42%
	12.1	1.45E+06	123.93%	1.48E+06	126.50%
No-Template Control	1.1	<Threshold	NA	<Threshold	NA
	2.1	<Threshold	NA	<Threshold	NA
	3.1	<Threshold	NA	<Threshold	NA
	4.1	<Threshold	NA	<Threshold	NA
	5.1	<Threshold	NA	<Threshold	NA
	6.1	<Threshold	NA	<Threshold	NA
	7.1	<Threshold	NA	<Threshold	NA
	8.1	<Threshold	NA	<Threshold	NA
	9.1	<Threshold	NA	<Threshold	NA
	10.1	<Threshold	NA	<Threshold	NA
	11.1	<Threshold	NA	<Threshold	NA
	12.1	<Threshold	NA	<Threshold	NA

[1] Positive Control is STD 6 (nominal concentration of 1.17×10^6 copies *Vtg* 1 mRNA/reaction).
<Threshold = Below the level at which fluorescent signal is appropriately above background for gene expression quantification. Threshold values were determined using "auto-detection" approach in Rotor-Gene Q software.

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Appendix 2.10

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2154	0.0	F	23.9	4.5	107.7	1.31E+05	1.22E+03	3.09
RNA2155	0.0	M	12.35	4.5	55.6	1.79E+05	3.22E+03	3.51
RNA2156	0.0	F	41.1	4.5	185.0	3.45E+07	1.87E+05	5.27
RNA2157	0.0	F	21.9	4.5	98.3	2.10E+05	2.14E+03	3.33
RNA2158	0.0	F	48.5	4.5	218.3	1.35E+08	6.19E+05	5.79
RNA2159	0.0	F	33.4	4.5	150.3	6.11E+04	4.07E+02	2.61
RNA2160	0.0	M	10.35	4.5	46.6	7.37E+04	1.58E+03	3.20
RNA2161	0.0	F	50.2	4.5	225.9	7.30E+04	3.23E+02	2.51
RNA2162	0.0	M	45.0	4.5	202.5	1.99E+04	9.83E+01	1.99
RNA2163	0.0	F	16.4	4.5	73.6	9.71E+03	1.32E+02	2.12
RNA2164	0.0	F	26.5	4.5	119.3	6.42E+04	5.38E+02	2.73
RNA2165	0.0	F	27.2	4.5	122.2	2.03E+04	1.66E+02	2.22
RNA2166	0.0	F	41.6	4.5	187.2	1.38E+04	7.37E+01	1.87
RNA2167	0.0	F	31.6	4.5	142.0	1.02E+05	7.18E+02	2.86
RNA2168	0.0	M	22.2	4.5	99.9	1.24E+04	1.24E+02	2.09
RNA2169	0.0	M	50.2	4.5	225.9	4.53E+06	2.01E+04	4.30

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2170	0.0	M	33.15	4.5	149.2	2.14E+06	1.43E+04	4.16
RNA2171	0.0	M	14.4	4.5	64.8	1.74E+04	2.69E+02	2.43
RNA2172	0.0	F	16.7	4.5	75.2	1.94E+04	2.58E+02	2.41
RNA2173	0.0	F	24.1	4.5	108.2	1.29E+04	1.19E+02	2.08
RNA2174	0.0	M	39.45	4.5	177.5	5.12E+04	2.88E+02	2.46
RNA2175	0.0	F	45.0	4.5	202.5	1.33E+04	6.57E+01	1.82
RNA2176	0.0	F	47.1	4.5	211.7	2.28E+06	1.08E+04	4.03
RNA2177	0.0	F	44.6	4.5	200.5	1.69E+05	8.43E+02	2.93
RNA2178	0.0	M	37.85	4.5	170.3	1.68E+05	9.86E+02	2.99
RNA2179	0.0	M	48.55	4.5	218.5	4.89E+05	2.24E+03	3.35
RNA2180	0.0	M	41.65	4.5	187.4	1.82E+05	9.71E+02	2.99
RNA2181	0.0	M	36.65	4.5	164.9	1.46E+04	8.85E+01	1.95
RNA2182	0.0	F	30.3	4.5	136.4	1.44E+05	1.06E+03	3.02
RNA2183	0.0	F	30.2	4.5	135.9	1.24E+04	9.12E+01	1.96
RNA2184	0.0	F	37.3	4.5	167.6	8.88E+04	5.30E+02	2.72
RNA2185	0.0	F	45.0	4.5	202.5	3.73E+04	1.84E+02	2.27

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2186	0.0	M	45.0	4.5	202.5	1.30E+04	6.42E+01	1.81
RNA2187	0.0	F	15.7	4.5	70.7	1.09E+06	1.54E+04	4.19
RNA2188	0.0	F	45.0	4.5	202.5	1.41E+06	6.96E+03	3.84
RNA2189	0.0	M	47.7	4.5	214.7	4.56E+06	2.12E+04	4.33
RNA2190	0.0	M	45.0	4.5	202.5	2.66E+04	1.31E+02	2.12
RNA2191	0.0	F	10.8	4.5	48.6	5.29E+04	1.09E+03	3.04
RNA2192	0.0	F	12.4	4.5	55.6	1.41E+05	2.54E+03	3.40
RNA2193	0.0	M	15.25	4.5	68.6	5.64E+04	8.22E+02	2.91
RNA2194	0.0	M	37.4	4.5	168.3	6.89E+05	4.09E+03	3.61
RNA2195	0.0	M	45.0	4.5	202.5	2.64E+04	1.30E+02	2.12
RNA2196	0.0	F	50.4	4.5	226.6	2.29E+04	1.01E+02	2.00
RNA2197	0.0	M	45.0	4.5	202.5	1.62E+07	8.00E+04	4.90
RNA2198	0.0	M	25	4.5	112.5	5.37E+05	4.77E+03	3.68
RNA2199	0.0	F	4.5	4.5	20.3	3.12E+04	1.54E+03	3.19
RNA2200	0.0	F	37.1	4.5	167.0	1.47E+04	8.81E+01	1.94
RNA2201	0.0	F	37.0	4.5	166.5	5.02E+04	3.02E+02	2.48

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2202	0.0	M	45.0	4.5	202.5	1.94E+04	9.58E+01	1.98
RNA2203	0.0	F	38.1	4.5	171.5	1.42E+05	8.28E+02	2.92
RNA2204	0.0	M	13.65	4.5	61.4	2.70E+04	4.40E+02	2.64
RNA2205	0.0	M	45.0	4.5	202.5	7.01E+04	3.46E+02	2.54
RNA2206	0.0	M	20.15	4.5	90.7	7.58E+05	8.36E+03	3.92
RNA2207	0.0	F	45.0	4.5	202.5	5.54E+05	2.74E+03	3.44
RNA2208	0.0	F	37.5	4.5	168.8	8.59E+05	5.09E+03	3.71
RNA2209	0.0	M	43.45	4.5	195.5	3.08E+06	1.58E+04	4.20
RNA2210	0.0	F	45.0	4.5	202.5	4.38E+03	2.16E+01	1.34
RNA2211	0.0	M	45.0	4.5	202.5	2.47E+04	1.22E+02	2.09
RNA2212	0.0	M	45.0	4.5	202.5	1.49E+04	7.36E+01	1.87
RNA2213	0.0	F	3.5	4.5	15.8	4.20E+03	2.67E+02	2.43
RNA2214	0.0	F	45.0	4.5	202.5	1.53E+04	7.56E+01	1.88
RNA2215	0.0	M	45.0	4.5	202.5	8.42E+05	4.16E+03	3.62
RNA2216	0.0	M	45.0	4.5	202.5	3.72E+04	1.84E+02	2.26
RNA2217	0.0	F	49.5	4.5	222.8	6.35E+03	2.85E+01	1.45

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2218	0.0	M	45.0	4.5	202.5	6.92E+04	3.42E+02	2.53
RNA2219	0.0	M	45.0	4.5	202.5	2.67E+07	1.32E+05	5.12
RNA2220	0.0	M	30	4.5	135.0	2.41E+06	1.79E+04	4.25
RNA2221	0.0	M	45.0	4.5	202.5	2.39E+07	1.18E+05	5.07
RNA2222	0.0	F	22.5	4.5	101.0	1.46E+06	1.45E+04	4.16
RNA2223	0.0	F	41.6	4.5	187.0	2.36E+05	1.26E+03	3.10
RNA2224	0.0	F	50.3	4.5	226.1	2.48E+04	1.10E+02	2.04
RNA2225	0.0	F	14.2	4.5	63.7	7.31E+04	1.15E+03	3.06
RNA2226	0.0	F	33.1	4.5	149.0	1.31E+04	8.79E+01	1.94
RNA2227	0.0	F	50.9	4.5	229.1	1.99E+05	8.69E+02	2.94
RNA2228	0.0	M	43.85	4.5	197.3	2.70E+04	1.37E+02	2.14
RNA2229	0.0	F	45.0	4.5	202.5	8.48E+06	4.19E+04	4.62
RNA2230	0.0	F	45.0	4.5	202.5	1.93E+07	9.53E+04	4.98
RNA2231	0.0	F	45.0	4.5	202.5	4.36E+04	2.15E+02	2.33
RNA2232	0.0	F	45.0	4.5	202.5	1.23E+07	6.07E+04	4.78
RNA2233	0.0	F	45.0	4.5	202.5	4.88E+05	2.41E+03	3.38

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2234	0.0	M	45.0	4.5	202.5	2.65E+08	1.31E+06	6.12
RNA2235	0.0	M	45.0	4.5	202.5	1.27E+06	6.27E+03	3.80
RNA2236	0.0	F	45.0	4.5	202.5	1.02E+05	5.04E+02	2.70
RNA2237	0.0	F	30.0	4.5	135.0	1.29E+05	9.56E+02	2.98
RNA2238	0.0	F	20.7	4.5	92.9	1.17E+05	1.26E+03	3.10
RNA2239	0.0	F	5.0	4.5	22.3	6.35E+03	2.85E+02	2.45
RNA2240	0.0	F	45.0	4.5	202.5	5.42E+04	2.68E+02	2.43
RNA2241	0.0	M	45.0	4.5	202.5	9.30E+04	4.59E+02	2.66
RNA2242	0.0	M	45.0	4.5	202.5	3.22E+04	1.59E+02	2.20
RNA2243	0.0	M	10.25	4.5	46.1	9.85E+04	2.14E+03	3.33
RNA2244	0.0	F	19.7	4.5	88.4	7.87E+04	8.90E+02	2.95
RNA2245	0.0	F	39.6	4.5	178.2	1.05E+05	5.89E+02	2.77
RNA2246	0.0	F	17.1	4.5	77.0	2.00E+05	2.60E+03	3.41
RNA2247	0.0	M	45.0	4.5	202.5	1.13E+05	5.58E+02	2.75
RNA2248	0.0	F	7.8	4.5	34.9	8.58E+04	2.46E+03	3.39
RNA2249	0.0	F	16.0	4.5	71.8	4.69E+04	6.53E+02	2.82

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2250	6.3	F	45.0	4.5	202.5	1.32E+05	6.52E+02	2.81
RNA2251	6.3	M	50.25	4.5	226.1	7.02E+07	3.10E+05	5.49
RNA2252	6.3	F	45.0	4.5	202.5	4.00E+04	1.98E+02	2.30
RNA2253	6.3	F	45.0	4.5	202.5	8.49E+03	4.19E+01	1.62
RNA2254	6.3	F	44.3	4.5	199.4	1.23E+05	6.17E+02	2.79
RNA2255	6.3	F	45.0	4.5	202.5	9.64E+03	4.76E+01	1.68
RNA2256	6.3	F	45.0	4.5	202.5	3.82E+04	1.89E+02	2.28
RNA2257	6.3	F	17.3	4.5	77.6	1.50E+04	1.93E+02	2.29
RNA2258	6.3	M	43.85	4.5	197.3	2.53E+05	1.28E+03	3.11
RNA2259	6.3	M	45.0	4.5	202.5	9.11E+03	4.50E+01	1.65
RNA2260	6.3	M	45.0	4.5	202.5	9.87E+04	4.87E+02	2.69
RNA2261	6.3	M	32.3	4.5	145.4	1.45E+05	9.98E+02	3.00
RNA2262	6.3	F	45.0	4.5	202.5	5.57E+04	2.75E+02	2.44
RNA2263	6.3	F	45.0	4.5	202.5	9.97E+04	4.92E+02	2.69
RNA2264	6.3	M	45.0	4.5	202.5	1.39E+05	6.86E+02	2.84
RNA2265	6.3	F	45.0	4.5	202.5	4.30E+03	2.12E+01	1.33

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2266	6.3	M	45.0	4.5	202.5	1.64E+05	8.10E+02	2.91
RNA2267	6.3	M	34.45	4.5	155.0	2.42E+04	1.56E+02	2.19
RNA2268	6.3	M	45.0	4.5	202.5	6.98E+04	3.45E+02	2.54
RNA2269	6.3	M	44.9	4.5	202.1	3.50E+04	1.73E+02	2.24
RNA2270	6.3	F	45.0	4.5	202.5	3.20E+06	1.58E+04	4.20
RNA2271	6.3	F	45.0	4.5	202.5	4.21E+04	2.08E+02	2.32
RNA2272	6.3	F	45.0	4.5	202.5	3.58E+06	1.77E+04	4.25
RNA2273	6.3	F	45.0	4.5	202.5	4.39E+05	2.17E+03	3.34
RNA2274	6.3	M	45.0	4.5	202.5	1.96E+05	9.68E+02	2.99
RNA2275	6.3	F	45.0	4.5	202.5	4.75E+07	2.35E+05	5.37
RNA2276	6.3	M	45.0	4.5	202.5	2.10E+08	1.04E+06	6.02
RNA2277	6.3	M	23.8	4.5	107.1	4.96E+05	4.63E+03	3.67
RNA2278	6.3	F	45.0	4.5	202.5	3.44E+04	1.70E+02	2.23
RNA2279	6.3	F	45.0	4.5	202.5	1.06E+05	5.23E+02	2.72
RNA2280	6.3	F	45.0	4.5	202.5	1.17E+05	5.78E+02	2.76
RNA2281	6.3	F	20.7	4.5	93.2	5.34E+04	5.73E+02	2.76

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2282	6.3	M	6.7	4.5	30.2	1.07E+06	3.55E+04	4.55
RNA2283	6.3	M	45.0	4.5	202.5	3.68E+07	1.82E+05	5.26
RNA2284	6.3	F	48.9	4.5	220.1	8.70E+04	3.95E+02	2.60
RNA2285	6.3	F	45.0	4.5	202.5	3.62E+07	1.79E+05	5.25
RNA2286	6.3	F	45.0	4.5	202.5	5.27E+04	2.60E+02	2.42
RNA2287	6.3	F	45.0	4.5	202.5	1.06E+07	5.23E+04	4.72
RNA2288	6.3	M	41.0	4.5	184.5	5.93E+04	3.21E+02	2.51
RNA2289	6.3	M	45.0	4.5	202.5	1.01E+05	4.99E+02	2.70
RNA2290	6.3	M	18.4	4.5	82.8	1.49E+05	1.80E+03	3.26
RNA2291	6.3	F	45.0	4.5	202.5	1.17E+06	5.78E+03	3.76
RNA2292	6.3	F	45.0	4.5	202.5	3.72E+07	1.84E+05	5.26
RNA2293	6.3	F	22.7	4.5	102.2	2.29E+06	2.24E+04	4.35
RNA2294	6.3	M	36.3	4.5	163.4	1.86E+05	1.14E+03	3.06
RNA2295	6.3	F	45.0	4.5	202.5	9.16E+03	4.52E+01	1.66
RNA2296	6.3	F	50.9	4.5	228.8	5.37E+06	2.35E+04	4.37
RNA2297	6.3	F	45.0	4.5	202.5	1.12E+05	5.53E+02	2.74

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2298	12.5	F	20.2	4.5	90.7	1.53E+05	1.69E+03	3.23
RNA2299	12.5	F	45.0	4.5	202.5	5.40E+04	2.67E+02	2.43
RNA2300	12.5	M	45.0	4.5	202.5	1.67E+05	8.25E+02	2.92
RNA2301	12.5	F	45.0	4.5	202.5	9.38E+06	4.63E+04	4.67
RNA2302	12.5	F	45.0	4.5	202.5	2.27E+05	1.12E+03	3.05
RNA2303	12.5	F	45.0	4.5	202.5	1.48E+08	7.31E+05	5.86
RNA2304	12.5	F	45.0	4.5	202.5	3.25E+05	1.60E+03	3.21
RNA2305	12.5	F	26.0	4.5	116.8	5.50E+04	4.71E+02	2.67
RNA2306	12.5	M	45.0	4.5	202.5	2.94E+06	1.45E+04	4.16
RNA2307	12.5	F	45.0	4.5	202.5	3.57E+04	1.76E+02	2.25
RNA2308	12.5	F	45.0	4.5	202.5	1.60E+06	7.90E+03	3.90
RNA2309	12.5	F	45.0	4.5	202.5	5.85E+06	2.89E+04	4.46
RNA2310	12.5	F	45.0	4.5	202.5	1.90E+07	9.38E+04	4.97
RNA2311	12.5	F	45.0	4.5	202.5	2.83E+06	1.40E+04	4.15
RNA2312	12.5	F	45.0	4.5	202.5	4.16E+06	2.05E+04	4.31
RNA2313	12.5	F	45.0	4.5	202.5	7.69E+07	3.80E+05	5.58

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2314	12.5	M	45.0	4.5	202.5	2.32E+05	1.15E+03	3.06
RNA2315	12.5	F	45.0	4.5	202.5	1.06E+04	5.23E+01	1.72
RNA2316	12.5	M	45.0	4.5	202.5	2.26E+04	1.12E+02	2.05
RNA2317	12.5	F	45.0	4.5	202.5	1.75E+04	8.64E+01	1.94
RNA2318	12.5	F	45.0	4.5	202.5	2.51E+07	1.24E+05	5.09
RNA2319	12.5	F	45.0	4.5	202.5	5.56E+07	2.75E+05	5.44
RNA2320	12.5	F	45.0	4.5	202.5	3.09E+05	1.53E+03	3.18
RNA2321	12.5	F	38.4	4.5	172.6	5.94E+06	3.44E+04	4.54
RNA2322	12.5	M	45.0	4.5	202.5	7.74E+04	3.82E+02	2.58
RNA2323	12.5	F	45.0	4.5	202.5	8.74E+04	4.32E+02	2.64
RNA2324	12.5	F	45.0	4.5	202.5	1.06E+04	5.23E+01	1.72
RNA2325	12.5	M	45.0	4.5	202.5	1.45E+05	7.16E+02	2.85
RNA2326	12.5	M	45.0	4.5	202.5	1.40E+05	6.91E+02	2.84
RNA2327	12.5	F	45.0	4.5	202.5	5.70E+04	2.81E+02	2.45
RNA2328	12.5	M	45.0	4.5	202.5	4.54E+07	2.24E+05	5.35
RNA2329	12.5	F	45.0	4.5	202.5	8.25E+04	4.07E+02	2.61

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2330	12.5	M	49.35	4.5	222.1	5.17E+05	2.33E+03	3.37
RNA2331	12.5	M	45.0	4.5	202.5	5.72E+04	2.82E+02	2.45
RNA2332	12.5	F	45.0	4.5	202.5	2.20E+04	1.09E+02	2.04
RNA2333	12.5	M	45.0	4.5	202.5	2.95E+06	1.46E+04	4.16
RNA2334	12.5	M	45.0	4.5	202.5	2.89E+05	1.43E+03	3.15
RNA2335	12.5	F	45.0	4.5	202.5	3.87E+07	1.91E+05	5.28
RNA2336	12.5	F	45.0	4.5	202.5	5.57E+05	2.75E+03	3.44
RNA2337	12.5	F	45.0	4.5	202.5	1.25E+05	6.17E+02	2.79
RNA2338	12.5	M	45.0	4.5	202.5	9.85E+04	4.86E+02	2.69
RNA2339	12.5	M	45.0	4.5	202.5	6.60E+04	3.26E+02	2.51
RNA2340	12.5	F	45.0	4.5	202.5	4.86E+04	2.40E+02	2.38
RNA2341	12.5	F	45.0	4.5	202.5	2.13E+07	1.05E+05	5.02
RNA2342	12.5	F	45.0	4.5	202.5	5.22E+06	2.58E+04	4.41
RNA2343	12.5	F	45.0	4.5	202.5	2.19E+07	1.08E+05	5.03
RNA2344	12.5	F	45.0	4.5	202.5	7.48E+05	3.69E+03	3.57
RNA2345	12.5	F	45.0	4.5	202.5	1.95E+07	9.63E+04	4.98

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2346	25	M	45.0	4.5	202.5	1.70E+04	8.40E+01	1.92
RNA2347	25	M	45.0	4.5	202.5	2.74E+04	1.35E+02	2.13
RNA2348	25	F	45.0	4.5	202.5	9.13E+04	4.51E+02	2.65
RNA2349	25	F	45.0	4.5	202.5	9.34E+04	4.61E+02	2.66
RNA2350	25	F	45.0	4.5	202.5	9.36E+04	4.62E+02	2.66
RNA2351	25	F	45.0	4.5	202.5	4.42E+04	2.18E+02	2.34
RNA2352	25	F	38.05	4.5	171.2	5.45E+04	3.18E+02	2.50
RNA2353	25	F	45.0	4.5	202.5	1.52E+04	7.51E+01	1.88
RNA2354	25	F	45.0	4.5	202.5	1.56E+05	7.70E+02	2.89
RNA2355	25	F	31.25	4.5	140.6	1.91E+04	1.36E+02	2.13
RNA2356	25	F	45.0	4.5	202.5	5.26E+06	2.60E+04	4.41
RNA2357	25	F	34.75	4.5	156.4	1.91E+05	1.22E+03	3.09
RNA2358	25	F	45.0	4.5	202.5	4.09E+04	2.02E+02	2.31
RNA2359	25	F	45.0	4.5	202.5	1.44E+05	7.11E+02	2.85
RNA2360	25	F	37.05	4.5	166.7	1.10E+04	6.60E+01	1.82
RNA2361	25	F	41.95	4.5	188.8	5.59E+04	2.96E+02	2.47

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2362	25	M	45.0	4.5	202.5	2.72E+04	1.34E+02	2.13
RNA2363	25	F	45.0	4.5	202.5	5.02E+03	2.48E+01	1.39
RNA2364	25	F	45.0	4.5	202.5	5.50E+04	2.72E+02	2.43
RNA2365	25	M	45.0	4.5	202.5	4.41E+05	2.18E+03	3.34
RNA2366	25	F	45.0	4.5	202.5	2.44E+03	1.20E+01	1.08
RNA2367	25	F	45.0	4.5	202.5	4.55E+03	2.25E+01	1.35
RNA2368	25	F	45.0	4.5	202.5	4.27E+06	2.11E+04	4.32
RNA2369	25	F	45.0	4.5	202.5	4.72E+04	2.33E+02	2.37
RNA2370	25	F	45.0	4.5	202.5	2.75E+04	1.36E+02	2.13
RNA2371	25	M	45.0	4.5	202.5	2.32E+04	1.15E+02	2.06
RNA2372	25	F	45.0	4.5	202.5	2.95E+04	1.46E+02	2.16
RNA2373	25	F	22.3	4.5	100.4	3.80E+03	3.79E+01	1.58
RNA2374	25	M	45.0	4.5	202.5	1.92E+05	9.48E+02	2.98
RNA2375	25	F	45.0	4.5	202.5	6.57E+03	3.24E+01	1.51
RNA2376	25	F	45.0	4.5	202.5	3.14E+04	1.55E+02	2.19
RNA2377	25	F	45.0	4.5	202.5	5.11E+03	2.52E+01	1.40

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2378	25	F	45.0	4.5	202.5	5.45E+04	2.69E+02	2.43
RNA2379	25	M	33.1	4.5	149.0	3.94E+05	2.65E+03	3.42
RNA2380	25	F	45.0	4.5	202.5	2.48E+03	1.22E+01	1.09
RNA2381	25	M	45.0	4.5	202.5	1.23E+04	6.07E+01	1.78
RNA2382	25	F	45.0	4.5	202.5	5.71E+03	2.82E+01	1.45
RNA2383	25	M	45.0	4.5	202.5	2.40E+05	1.19E+03	3.07
RNA2384	25	F	45.0	4.5	202.5	7.13E+03	3.52E+01	1.55
RNA2385	25	F	45.0	4.5	202.5	2.11E+05	1.04E+03	3.02
RNA2386	25	M	45.0	4.5	202.5	1.42E+04	7.01E+01	1.85
RNA2387	25	M	45.0	4.5	202.5	2.01E+04	9.93E+01	2.00
RNA2388	25	M	45.0	4.5	202.5	1.54E+04	7.60E+01	1.88
RNA2389	25	F	45.0	4.5	202.5	6.39E+06	3.16E+04	4.50
RNA2390	25	F	45.0	4.5	202.5	2.78E+06	1.37E+04	4.14
RNA2391	25	F	45.0	4.5	202.5	5.29E+03	2.61E+01	1.42
RNA2392	25	M	45.0	4.5	202.5	1.40E+04	6.91E+01	1.84
RNA2393	25	M	45.0	4.5	202.5	1.20E+07	5.93E+04	4.77

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2394	50	M	45.0	4.5	202.5	1.40E+05	6.91E+02	2.84
RNA2395	50	M	46.0	4.5	207.0	4.22E+05	2.04E+03	3.31
RNA2396	50	M	45.0	4.5	202.5	8.70E+04	4.30E+02	2.63
RNA2397	50	F	45.0	4.5	202.5	2.83E+04	1.40E+02	2.15
RNA2398	50	F	45.0	4.5	202.5	1.35E+07	6.67E+04	4.82
RNA2399	50	M	45.0	4.5	202.5	2.86E+05	1.41E+03	3.15
RNA2400	50	M	50.05	4.5	225.2	1.08E+05	4.80E+02	2.68
RNA2401	50	M	45.0	4.5	202.5	4.11E+05	2.03E+03	3.31
RNA2402	50	M	45.0	4.5	202.5	4.74E+04	2.34E+02	2.37
RNA2403	50	M	45.0	4.5	202.5	8.52E+03	4.21E+01	1.62
RNA2404	50	F	45.0	4.5	202.5	6.04E+06	2.98E+04	4.47
RNA2405	50	F	45.0	4.5	202.5	2.48E+06	1.22E+04	4.09
RNA2406	50	M	45.0	4.5	202.5	3.00E+05	1.48E+03	3.17
RNA2407	50	F	49.05	4.5	220.7	7.33E+05	3.32E+03	3.52
RNA2408	50	F	45.0	4.5	202.5	1.71E+07	8.44E+04	4.93
RNA2409	50	F	45.0	4.5	202.5	2.30E+06	1.14E+04	4.06

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2410	50	M	45.0	4.5	202.5	2.04E+05	1.01E+03	3.00
RNA2411	50	F	45.0	4.5	202.5	1.61E+07	7.83E+04	4.89
RNA2412	50	F	45.0	4.5	202.5	7.80E+06	3.80E+04	4.58
RNA2413	50	M	45.0	4.5	117.9	3.60E+05	3.05E+03	3.48
RNA2414	50	F	45.0	4.5	202.5	5.99E+04	2.96E+02	2.47
RNA2415	50	F	45.0	4.5	202.5	1.84E+07	9.09E+04	4.96
RNA2416	50	F	45.0	4.5	202.5	6.03E+06	2.98E+04	4.47
RNA2417	50	F	45.0	4.5	202.5	6.07E+06	3.00E+04	4.48
RNA2418	50	M	45.0	4.5	202.5	2.80E+05	1.38E+03	3.14
RNA2419	50	M	45.0	4.5	202.5	2.47E+05	1.22E+03	3.09
RNA2420	50	F	45.0	4.5	202.5	7.20E+05	3.56E+03	3.55
RNA2421	50	M	45.0	4.5	202.5	4.15E+05	2.05E+03	3.31
RNA2422	50	F	45.0	4.5	202.5	1.85E+05	9.14E+02	2.96
RNA2423	50	M	45.0	4.5	202.5	5.10E+05	2.52E+03	3.40
RNA2424	50	F	45.0	4.5	202.5	1.92E+04	9.48E+01	1.98
RNA2425	50	F	45.0	4.5	202.5	2.29E+07	1.13E+05	5.05

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2426	50	M	45.0	4.5	202.5	3.34E+04	1.65E+02	2.22
RNA2427	50	M	29.2	4.5	131.4	1.72E+07	1.31E+05	5.12
RNA2428	50	M	45.0	4.5	202.5	2.17E+05	1.07E+03	3.03
RNA2429	50	F	45.0	4.5	202.5	6.08E+05	3.00E+03	3.48
RNA2430	50	F	38.4	4.5	172.8	1.52E+06	8.80E+03	3.94
RNA2431	50	F	45.0	4.5	202.5	6.77E+05	3.34E+03	3.52
RNA2432	50	F	45.0	4.5	202.5	6.01E+04	2.97E+02	2.47
RNA2433	50	F	45.0	4.5	202.5	9.61E+04	4.75E+02	2.68
RNA2434	50	M	48.65	4.5	218.9	1.19E+04	5.44E+01	1.74
RNA2435	50	M	45.0	4.5	202.5	6.81E+04	3.36E+02	2.53
RNA2436	50	F	45.0	4.5	202.5	1.65E+06	8.15E+03	3.91
RNA2437	50	F	45.0	4.5	202.5	3.77E+03	1.86E+01	1.27
RNA2438	50	F	45.0	4.5	202.5	6.50E+06	3.21E+04	4.51
RNA2439	50	F	45.0	4.5	202.5	4.66E+04	2.30E+02	2.36
RNA2440	50	F	45.0	4.5	202.5	5.68E+03	2.80E+01	1.45
RNA2441	50	F	45.55	4.5	205.0	3.17E+05	1.55E+03	3.19

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2442	100	M	45.0	4.5	202.5	6.10E+04	3.01E+02	2.48
RNA2443	100	M	45.0	4.5	202.5	5.31E+04	2.62E+02	2.42
RNA2444	100	F	45.0	4.5	202.5	6.87E+05	3.39E+03	3.53
RNA2445[4]	100	F	19.7	4.5	88.7	8.00E+04	9.02E+02	2.96
RNA2446	100	M	11.55	4.5	52.0	9.97E+04	1.92E+03	3.28
RNA2447	100	F	45.0	4.5	202.5	9.79E+04	4.83E+02	2.68
RNA2448	100	F	27.15	4.5	122.2	4.36E+04	3.57E+02	2.55
RNA2449	100	F	42.9	4.5	193.1	1.01E+05	5.23E+02	2.72
RNA2450	100	F	45.0	4.5	202.5	3.67E+03	1.81E+01	1.26
RNA2451	100	M	45.0	4.5	202.5	4.53E+04	2.24E+02	2.35
RNA2452	100	F	45.0	4.5	202.5	8.93E+04	4.41E+02	2.64
RNA2453	100	F	45.0	4.5	202.5	3.80E+03	1.88E+01	1.27
RNA2454	100	F	47.7	4.5	214.7	1.13E+05	5.26E+02	2.72
RNA2455	100	F	45.0	4.5	202.5	2.09E+07	1.03E+05	5.01
RNA2456	100	F	41.75	4.5	187.9	5.86E+06	3.12E+04	4.49
RNA2457	100	F	45.0	4.5	202.5	3.40E+05	1.68E+03	3.23

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

[4] Sample did not appear to contain liver tissue.

BATT01-00393

FEL

Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2458	100	M	48.4	4.5	217.8	1.18E+05	5.42E+02	2.73
RNA2459	100	M	6.6	4.5	29.7	4.44E+04	1.49E+03	3.17
RNA2460	100	M	19.8	4.5	89.1	7.67E+05	8.61E+03	3.93
RNA2461	100	M	18.5	4.5	83.3	1.07E+04	1.29E+02	2.11
RNA2462	100	F	45.0	4.5	202.5	1.03E+05	5.09E+02	2.71
RNA2463	100	F	45.0	4.5	202.5	8.36E+03	4.13E+01	1.62
RNA2464	100	M	45.0	4.5	202.5	2.09E+06	1.03E+04	4.01
RNA2465	100	M	45.0	4.5	202.5	1.19E+05	5.88E+02	2.77
RNA2466	100	M	48.8	4.5	219.6	1.13E+05	5.15E+02	2.71
RNA2467	100	M	42.95	4.5	193.3	1.01E+04	5.23E+01	1.72
RNA2468	100	M	45.0	4.5	202.5	1.31E+05	6.47E+02	2.81
RNA2469	100	M	45.0	4.5	202.5	1.17E+06	5.78E+03	3.76
RNA2470	100	F	45.0	4.5	202.5	2.91E+04	1.44E+02	2.16
RNA2471	100	M	31.9	4.5	143.6	2.51E+04	1.75E+02	2.24
RNA2472	100	M	45.0	4.5	202.5	3.00E+06	1.48E+04	4.17
RNA2473	100	M	45.0	4.5	202.5	2.35E+06	1.16E+04	4.06

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

BATT01-00393

FEL

Appendix 2.10 (Continued)

Summary of *Vtg* 1 mRNA copies/ng Total RNA for F2 Generation Liver Samples

Sample ID (607A-102-)	Test Concentration (µg/L)	Phenotypic Sex	Normalized Concentration of Total RNA (ng/µL)[1]	Volume of Total RNA Sample Added per Reaction (µL)	ng Total RNA per Reaction[2]	Average Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)[3]	Copies *Vtg* 1 mRNA/ng Total RNA[3]	Log_{10} of (copies *Vtg* 1 mRNA/ng total RNA)[3]
RNA2474	100	M	45.0	4.5	202.5	5.14E+03	2.54E+01	1.40
RNA2475	100	M	16.25	4.5	73.1	7.86E+04	1.07E+03	3.03
RNA2476	100	M	45.0	4.5	202.5	2.11E+04	1.04E+02	2.02
RNA2477	100	F	45.0	4.5	202.5	4.84E+05	2.39E+03	3.38
RNA2478	100	F	45.0	4.5	202.5	2.47E+06	1.22E+04	4.09
RNA2479	100	F	45.0	4.5	202.5	2.29E+06	1.13E+04	4.05
RNA2480	100	F	45.0	4.5	202.5	6.94E+04	3.43E+02	2.53
RNA2481	100	F	45.0	4.5	202.5	7.30E+05	3.60E+03	3.56
RNA2482	100	F	45.0	4.5	202.5	4.60E+04	2.27E+02	2.36
RNA2483	100	M	45.0	4.5	202.5	5.57E+03	2.75E+01	1.44
RNA2484	100	F	45.0	4.5	202.5	1.08E+05	5.33E+02	2.73
RNA2485	100	F	45.0	4.5	202.5	4.94E+05	2.44E+03	3.39
RNA2486	100	F	20.1	4.5	90.5	3.70E+04	4.09E+02	2.61
RNA2487	100	F	45.0	4.5	202.5	2.25E+04	1.11E+02	2.05
RNA2488	100	M	45.0	4.5	202.5	3.52E+04	1.74E+02	2.24
RNA2489	100	F	45.0	4.5	202.5	4.92E+04	2.43E+02	2.39

[1] If less than 5 µL of nuclease-free water was required for the dilution, or if the concentration of total RNA in the study sample was less than 45.0 ng/µL, the normalization step was not performed and the total RNA concentration as determined by the NanoDrop 2000 Spectrophotometer was used in the final calculation of copies of *Vtg* 1 mRNA/ng total RNA.

[2] ng total RNA per reaction = normalized concentration of total RNA (ng/µL) X volume of total RNA sample added to reaction (µL).

[3] Results generated using Excel 2010 in Full Precision mode. Manual calculations may differ slightly.

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FEL

Appendix 2.11

Summary of *Vtg* 1 No-Template Control (NTC) and Positive Control Results for F2 Generation Assays

Sample Type	F2 Assay No.	Rotor-Gene Q Output (copies *Vtg* 1 mRNA/reaction)			
		Sample 1	Percent of Nominal[1]	Sample 2	Percent of Nominal[1]
Positive Control[1]	13.1	1.37E+06	117.09%	1.36E+06	116.24%
	14.1	1.75E+06	149.57%	1.75E+06	149.57%
	15.1	1.68E+06	143.59%	1.81E+06	154.70%
	16.1	1.94E+06	165.81%	1.81E+06	154.70%
	17.1	1.48E+06	126.50%	1.59E+06	135.90%
	18.1	1.31E+06	111.97%	1.32E+06	112.82%
	19.1	1.15E+06	98.29%	1.22E+06	104.27%
	20.1	1.17E+06	100.00%	1.02E+06	87.18%
	21.1	1.36E+06	116.24%	1.40E+06	119.66%
	22.1	1.51E+06	129.06%	1.53E+06	130.77%
	23.1	1.00E+06	85.47%	1.13E+06	96.58%
	24.1	1.10E+06	94.02%	1.02E+06	87.18%
	25.1	1.07E+06	91.45%	1.09E+06	93.16%
No-Template Control	13.1	<Threshold	NA	<Threshold	NA
	14.1	<Threshold	NA	<Threshold	NA
	15.1	<Threshold	NA	<Threshold	NA
	16.1	<Threshold	NA	<Threshold	NA
	17.1	<Threshold	NA	<Threshold	NA
	18.1	<Threshold	NA	<Threshold	NA
	19.1	<Threshold	NA	<Threshold	NA
	20.1	<Threshold	NA	<Threshold	NA
	21.1	<Threshold	NA	<Threshold	NA
	22.1	<Threshold	NA	<Threshold	NA
	23.1	<Threshold	NA	<Threshold	NA
	24.1	<Threshold	NA	<Threshold	NA
	25.1	<Threshold	NA	<Threshold	NA

[1] Positive Control is STD 6 (nominal concentration of 1.17×10^6 copies *Vtg* 1 mRNA/reaction).
<Threshold = Below the level at which fluorescent signal is appropriately above background for gene expression quantification. Threshold values were determined using "auto-detection" approach in Rotor-Gene Q software.

EAG LABORATORIES

PROJECT NO.: 607A-102

Appendix 3

Personnel Involved in the Study

The following key EAG Laboratories personnel were involved in the conduct or management of this study:

1. Henry O. Krueger, Ph.D., VP, Aquatic, Plant and Insect Toxicology
2. Sean P. Gallagher, B.S., Scientific Advisor - Ecotoxicology
3. Suzanne Z. Schneider, Ph.D., Manager of Study Directors
4. Timothy L. Ross, B.S., Senior Scientist
5. Jeremy M. Claude, B.S., Senior Scientist
6. Amanda L. Milligan, B.S., Senior Biologist
7. Matthew R. Rhodes, B.S., Biologist
8. Brittany R. Heffelfinger, B.S., Biologist

Appendix F. DESTs

DEST BATT01-00393 Pre-test Body Weight

Sex (M or F)	Pre-Test Animal ID	Initial Body Weight (mg)	Initial Body Weight (g)	Tank ID
M	1	400	0.4000	N/A
M	2	400	0.4000	N/A
M	3	420	0.4200	N/A
M	4	400	0.4000	N/A
M	5	360	0.3600	N/A
M	6	420	0.4200	N/A
M	7	380	0.3800	N/A
M	8	370	0.3700	N/A
M	9	440	0.4400	N/A
M	10	360	0.3600	N/A
M	11	360	0.3600	N/A
M	12	390	0.3900	N/A
M	13	430	0.4300	N/A
M	14	400	0.4000	N/A
M	15	410	0.4100	N/A
M	16	370	0.3700	N/A
M	17	400	0.4000	N/A
M	18	420	0.4200	N/A
M	19	370	0.3700	N/A
M	20	380	0.3800	N/A
M	21	360	0.3600	N/A
M	22	360	0.3600	N/A
M	23	380	0.3800	N/A
M	24	390	0.3900	N/A
M	25	380	0.3800	N/A
M	26	360	0.3600	N/A
M	27	360	0.3600	N/A
M	28	400	0.4000	N/A
M	29	360	0.3600	N/A
M	30	370	0.3700	N/A
M	31	440	0.4400	N/A
M	32	360	0.3600	N/A
M	33	370	0.3700	N/A
M	34	380	0.3800	N/A
M	35	410	0.4100	N/A
M	36	360	0.3600	N/A
M	37	360	0.3600	N/A
M	38	400	0.4000	N/A
M	39	410	0.4100	N/A
M	40	390	0.3900	N/A
M	41	420	0.4200	N/A
M	42	360	0.3600	N/A
F	1	450	0.4500	N/A
F	2	500	0.5000	N/A
F	3	530	0.5300	N/A
F	4	460	0.4600	N/A
F	5	550	0.5500	N/A

Sex (M or F)	Mean Initial Body Weight (g)	Max Initial Body Weight (g)	Min Initial Body Weight (g)
M	0.3871	0.4400	0.3600
F	0.4845	0.5500	0.4500

DEST BATT01-00393 Pre-test Body Weight

F	6	550	0.5500	N/A
F	7	490	0.4900	N/A
F	8	450	0.4500	N/A
F	9	550	0.5500	N/A
F	10	460	0.4600	N/A
F	11	450	0.4500	N/A
F	12	450	0.4500	N/A
F	13	470	0.4700	N/A
F	14	460	0.4600	N/A
F	15	480	0.4800	N/A
F	16	490	0.4900	N/A
F	17	500	0.5000	N/A
F	18	520	0.5200	N/A
F	19	460	0.4600	N/A
F	20	480	0.4800	N/A
F	21	530	0.5300	N/A
F	22	450	0.4500	N/A
F	23	510	0.5100	N/A
F	24	490	0.4900	N/A
F	25	530	0.5300	N/A
F	26	450	0.4500	N/A
F	27	450	0.4500	N/A
F	28	450	0.4500	N/A
F	29	500	0.5000	N/A
F	30	450	0.4500	N/A
F	31	450	0.4500	N/A
F	32	460	0.4600	N/A
F	33	450	0.4500	N/A
F	34	510	0.5100	N/A
F	35	520	0.5200	N/A
F	36	490	0.4900	N/A
F	37	480	0.4800	N/A
F	38	520	0.5200	N/A
F	39	530	0.5300	N/A
F	40	470	0.4700	N/A
F	41	450	0.4500	N/A
F	42	460	0.4600	N/A

FEL

Substance: 2-Fluoroethanol
Study: BATT01-00393

Measured Concentration (ug/L)

Treatment and Target Conc.	Nominal Conc.	Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	Week 32	Mean	% Nominal
0.0 ug/L A	<MDL	<MDL	0.104	<MDL																															0.104	
0.0 ug/L B	<MDL	<MDL	0.104	<MDL																															0.104	
0.0 ug/L C	<MDL	<MDL		3.28																															1.64	
0.0 ug/L D	<MDL	<MDL	0.104																																0.104	
0.0 ug/L E	<MDL	<MDL				<DL		0.104																											0.577	
0.0 ug/L F	<MDL	<MDL																																	0.104	
0.0 ug/L G	<MDL	<MDL					0.104		0.104																					0.104	0.104				0.104	
0.0 ug/L H	<MDL	<MDL						0.104		0.104																									0.104	
0.0 ug/L I	<MDL	<MDL							0.104		0.104																								0.104	
0.0 ug/L J	<MDL	<MDL								0.104																									0.104	
0.0 ug/L K	<MDL	<MDL																																	0.104	
0.0 ug/L L	<MDL	<MDL																																	0.104	
0.0 ug/L M	<MDL	<MDL																																	0.104	
0.0 ug/L N	<MDL	<MDL																																	0.104	
0.0 ug/L O	<MDL	<MDL																																	0.104	
0.0 ug/L P	<MDL	<MDL																																	0.104	
0.0 ug/L Q	<MDL	<MDL																																	0.104	
0.0 ug/L R	<MDL	<MDL																																	0.104	
0.0 ug/L S	<MDL	<MDL																																	0.104	
0.0 ug/L T	<MDL	<MDL																																	0.104	
0.0 ug/L U	<MDL	<MDL																																	0.104	
0.0 ug/L V	<MDL	<MDL																																	0.104	
0.0 ug/L W	<MDL	<MDL																																	0.104	
0.0 ug/L X	<MDL	<MDL																																	######	
0.0 ug/L Y	<MDL	<MDL																																	######	
0.0 ug/L Z	<MDL	<MDL																																	######	
6.3 ug/L A	6.30	<MDL	0.918																																6.51	84
6.3 ug/L B	6.30	3.03		1.62		1.43																													4.69	
6.3 ug/L C	6.30		1.98				2.47																												4.88	
6.3 ug/L D	6.30			1.78				3.84																											3.77	
6.3 ug/L E	6.30				0.913		0.916		4.36																											3.20	
6.3 ug/L F	6.30									1.07																										2.79	
6.3 ug/L G	6.30										2.44																									3.22	
6.3 ug/L H	6.30											7.16																								6.45	
6.3 ug/L I	6.30												2.06																							4.97	
6.3 ug/L J	6.30													2.83																						5.26	
6.3 ug/L K	6.30														7.38																					7.38	
6.3 ug/L L	6.30															12.8																				12.6	
125 ug/L A	125																28.0																			28.0	
125 ug/L B	125				3.97		5.58											14.7			18.0															10.0	
125 ug/L C	125					3.81		1.75											17.5			1.28														31.0	
125 ug/L D	125				4.13				2.38											22.6			15.7													17.5	
125 ug/L E	125			5.60				2.38		9.62											34.5			15.5												20.6	
125 ug/L F	125										2.82		8.31									34.7														7.58	
125 ug/L G	125													7.25																						8.44	
125 ug/L H	125														10.6																					8.27	
125 ug/L I	125															11.0																				11.0	
125 ug/L J	125																17.5																			17.5	
125 ug/L K	125																	22.6																		22.6	
125 ug/L L	125																		34.5																	34.5	
250 ug/L A	250																			34.7																34.7	96
250 ug/L B	250																				27.1															27.1	
250 ug/L C	250																					29.9														29.9	
250 ug/L D	250				3.91				14.6		24.5												20.8													20.8	
250 ug/L E	250						15.6						11.8											26.8												26.8	
250 ug/L F	250					3.69								18.9											30.4											30.4	
250 ug/L G	250				15.0										19.9																					19.0	
250 ug/L H	250															23.0																				18.1	
250 ug/L I	250																28.4																			19.1	
250 ug/L J	250																	34.1																		34.1	
250 ug/L K	250																		43.8																	43.8	
500 ug/L A	500				4.33		47.1		60.8											58.3																40.5	
500 ug/L B	500									37.1											9.46															47.5	
500 ug/L C	500			48.5							55.0											51.1														47.5	
500 ug/L D	500				37.0		30.3					51.8											48.2													44.1	
500 ug/L E	500												40.4											52.3												47.0	
500 ug/L F	500					38.9			48.7					42.9											53.6											43.8	98
500 ug/L G	500														40.3																					37.6	
500 ug/L H	500															48.3																				34.8	
500 ug/L I	500																67.0																			46.0	
500 ug/L J	500																	61.9																		67.0	
500 ug/L K	500																		59.8																	58.2	
500 ug/L L	500																			108																110	
1000 ug/L A	1000						1.34														101															106	
1000 ug/L B	1000					106			127													93.9														100.0	
1000 ug/L C	1000							118			113												103													101	
1000 ug/L D	1000				82.0							125												84.8												98.5	
1000 ug/L E	1000					88.7							117											102												101	101
1000 ug/L F	1000				118									62.6																						78.5	
1000 ug/L G	1000														93.2																					80.1	
1000 ug/L H	1000															64.4																				84.4	
1000 ug/L I	1000																108																			115	
1000 ug/L J	1000																	115																		114	

Concentration analysis

Outlier, most significant value available since value was within 20% of nominal concentrations, reported as measured.

NOTE: <MDL reported as 1/2 of MDL (0.104)

Overall treatment significance: Statistics

Dissolved Oxygen (mg/L)

Mean Measured Conc. (ug/L)

% Nominal

FEL

DUKE KATTE
Statistical results, Outlier Labs, and Means
Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
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Sheet 17
Sheet 18
Sheet 19
Sheet 20
Sheet

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Study Day	Measured Treatment Concentration (µg/L)	Light Intensity at Water Surface (lux)	Water Temperature (°C)	Dissolved Oxygen (mg/L)	pH	Total Hardness (mg/L; as $CaCO_3$)	Alkalinity (mg/L; as $CaCO_3$)	Conductivity (µS/cm)	Iodide (µg/L)	Comments
BATT01-00393	Facility Dilution Water			0									7.9	
BATT01-00393	(Ctrl) 0.0µg/L	0.0	A	0	0.104	453	24.3	7.4	7.2	140	48	527		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	(Ctrl) 0.0µg/L	0.0	B	0		491	24.2	7.5	7.2					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	C	0		473	24.5	7.5	7.4					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	D	0		476	25.6	6.8	7.5					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	E	0		409	24.0	7.2	7.5					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	F	0		367	24.2	7.2	7.6					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	G	0		482	25.0	7.6	7.6					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	H	0		412	24.5	7.7	7.6					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	I	0		437	24.5	7.8	7.6					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	J	0		455	24.7	7.7	7.5					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	K	0		402	25.3	7.7	7.5					
BATT01-00393	(Ctrl) 0.0µg/L	0.0	L	0		429	24.9	7.8	7.5					
BATT01-00393	6.3µg/L	6.3	A	0	2.13	417	24.2	6.8	7.4					**Measured Treatment Concentration** - Based on mean of original (0.714µg/L) and duplicate (3.55µg/L) sample
BATT01-00393	6.3µg/L	6.3	B	0		412	24.5	6.6	7.5					
BATT01-00393	6.3µg/L	6.3	C	0		419	24.7	6.7	7.6					
BATT01-00393	6.3µg/L	6.3	D	0		443	25.3	7.2	7.6					
BATT01-00393	6.3µg/L	6.3	E	0		421	24.3	6.9	7.7					
BATT01-00393	6.3µg/L	6.3	F	0		452	24.0	7.0	7.7					
BATT01-00393	12.5µg/L	12.5	A	0	5.61	468	24.1	7.3	7.7					**Measured Treatment Concentration** - Based on mean of original (2.40µg/L) and duplicate (8.81µg/L) sample
BATT01-00393	12.5µg/L	12.5	B	0		435	24.1	7.5	7.6					
BATT01-00393	12.5µg/L	12.5	C	0		468	25.7	7.0	7.6					
BATT01-00393	12.5µg/L	12.5	D	0		430	24.9	7.0	7.6					
BATT01-00393	12.5µg/L	12.5	E	0		435	24.4	7.5	7.6					
BATT01-00393	12.5µg/L	12.5	F	0		474	24.2	7.0	7.6					
BATT01-00393	25µg/L	25	A	0	12.2	487	24.3	6.8	7.6					**Measured Treatment Concentration** - Based on mean of original (5.43µg/L) and duplicate (19.0µg/L) sample
BATT01-00393	25µg/L	25	B	0		395	24.6	7.1	7.6					
BATT01-00393	25µg/L	25	C	0		392	25.5	7.1	7.6					
BATT01-00393	25µg/L	25	D	0		485	24.8	7.2	7.6					
BATT01-00393	25µg/L	25	E	0		392	24.1	6.5	7.6					
BATT01-00393	25µg/L	25	F	0		428	24.4	6.6	7.6					
BATT01-00393	50µg/L	50	A	0	43.3	402	24.3	7.1	7.6					**Measured Treatment Concentration** - Week 0 50µg/L A - 12.4µg/L identified as outlier as determined by Q1-(IQR*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00393	50µg/L	50	B	0		459	24.4	7.2	7.6					
BATT01-00393	50µg/L	50	C	0		429	25.2	7.0	7.6					
BATT01-00393	50µg/L	50	D	0		416	24.7	7.1	7.6					
BATT01-00393	50µg/L	50	E	0		395	24.0	7.0	7.6					
BATT01-00393	50µg/L	50	F	0		465	24.5	7.1	7.6					
BATT01-00393	100µg/L	100	A	0	109	418	24.4	6.9	7.6	132	52	561		**Measured Treatment Concentration** - Week 0 100µg/L A - 32.4µg/L identified as outlier as determined by Q1-(IQR*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00393	100µg/L	100	B	0		413	24.5	7.0	7.6					
BATT01-00393	100µg/L	100	C	0		494	25.0	6.8	7.7					
BATT01-00393	100µg/L	100	D	0		406	24.5	7.0	7.6					
BATT01-00393	100µg/L	100	E	0		481	24.7	7.1	7.6					
BATT01-00393	100µg/L	100	F	0		448	25.0	7.2	7.6					

FEL

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Study Day	Measured Treatment Concentration (µg/L)	Light Intensity at Water Surface (lux)	Water Temperature (°C)	Dissolved Oxygen (mg/L)	pH	Total Hardness (mg/L; as $CaCO_3$)	Alkalinity (mg/L; as $CaCO_3$)	Conductivity (µS/cm)	Iodide (µg/L)	Comments
BATT01-00393	(Ctrl) 0.0µg/L	0.0	B	7	0.104	402	24.8	7.4	7.4	124	40	513		**Measured Treatment Concentration -** Based on mean of original (.104µg/L) and duplicate (.104µg/L) sample
BATT01-00393	6.3µg/L	6.3	B	7	1.57	487	25.9	6.3	7.5					**Measured Treatment Concentration -** Week 1 6.3µg/L A - 85.3µg/L identified as outlier as determined by Q3+(IQR*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00393	12.5µg/L	12.5	B	7	3.81	430	24.7	7.4	7.6					**Measured Treatment Concentration -** Week 1 12.5µg/L A - 52.8µg/L identified as outlier as determined by Q3+(IQR*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00393	25µg/L	25	B	7	14.0	483	25.0	6.1	7.6					**Measured Treatment Concentration -** Week 1 25µg/L A - 52.4µg/L identified as outlier as determined by Q3+(IQR*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00393	50µg/L	50	B	7	49.3	454	25.1	7.3	7.6					**Measured Treatment Concentration -** Based on mean of original (60.9µg/L) and duplicate (37.7µg/L) sample
BATT01-00393	100µg/L	100	B	7	105	457	25.5	7.5	7.7	120	40	564		**Measured Treatment Concentration -** Based on mean of original (135µg/L) and duplicate (75.4µg/L) sample
BATT01-00393	(Ctrl) 0.0µg/L	0.0	C	14	1.71	491	25.2	7.2	7.5	128	48	593		**Measured Treatment Concentration -** Based on mean of original (0.433µg/L) and duplicate (2.97µg/L) sample
BATT01-00393	6.3µg/L	6.3	C	14	1.66	389	25.0	7.3	7.7					**Measured Treatment Concentration -** Week 2 6.3µg/L - 0.104µg/L Sampling Error resulting in no detection
BATT01-00393	12.5µg/L	12.5	C	14	4.12	228	25.1	6.9	7.8					**Measured Treatment Concentration -** Week 2 12.5µg/L - 0.104µg/L Sampling Error resulting in no detection
BATT01-00393	25µg/L	25	C	14	13.4	242	25.3	6.8	7.8					**Measured Treatment Concentration -** Week 2 25µg/L - 0.104µg/L Sampling Error resulting in no detection
BATT01-00393	50µg/L	50	C	14	37.0	322	25.2	7.0	7.9					**Measured Treatment Concentration -** Week 2 50µg/L - 0.104µg/L Sampling Error resulting in no detection
BATT01-00393	100µg/L	100	C	14	80.4	305	25.0	6.8	8.0	128	52	625		**Measured Treatment Concentration -** Week 2 100µg/L - 0.104µg/L Sampling Error resulting in no detection
BATT01-00393	(Ctrl) 0.0µg/L	0.0	D	21	0.104	432	25.3	8.3	7.7	128	40	656		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	D	21	1.58	327	25.4	8.0	7.8					
BATT01-00393	12.5µg/L	12.5	D	21	5.60	394	25.6	8.0	7.8					
BATT01-00393	25µg/L	25	D	21	15.7	282	25.5	7.9	7.8					
BATT01-00393	50µg/L	50	D	21	30.1	496	25.5	8.0	7.9					
BATT01-00393	100µg/L	100	D	21	62.0	183	25.6	8.0	7.9	132	44	637		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	E	28	0.551	321	25.3	7.0	7.3	128	44	622		**Measured Treatment Concentration -** Based on mean of original (0.602µg/L) and duplicate (0.499µg/L) sample. Both original sample and duplicate sample valued as outliers, resulted in averaging.
BATT01-00393	6.3µg/L	6.3	E	28	0.712	315	25.4	6.8	7.4					**Measured Treatment Concentration -** Based on mean of original (0.457µg/L) and duplicate (0.967µg/L) sample
BATT01-00393	12.5µg/L	12.5	E	28	3.19	482	25.3	6.5	7.4					**Measured Treatment Concentration -** Based on mean of original (2.38µg/L) and duplicate (3.99µg/L) sample
BATT01-00393	25µg/L	25	E	28	10.9	277	25.4	7.1	7.6					**Measured Treatment Concentration -** Based on mean of original (10.8µg/L) and duplicate (11.0µg/L) sample
BATT01-00393	50µg/L	50	E	28	36.9	260	25.1	7.3	7.5					**Measured Treatment Concentration -** Based on mean of original (33.3µg/L) and duplicate (40.5µg/L) sample
BATT01-00393	100µg/L	100	E	28	89.7	138	25.0	7.0	7.6	132	44	653		**Measured Treatment Concentration -** Based on mean of original (84.0µg/L) and duplicate (95.4µg/L) sample

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Study Day	Measured Treatment Concentration (µg/L)	Light Intensity at Water Surface (lux)	Water Temperature (°C)	Dissolved Oxygen (mg/L)	pH	Total Hardness (mg/L; as $CaCO_3$)	Alkalinity (mg/L; as $CaCO_3$)	Conductivity (µS/cm)	Iodide (µg/L)	Comments
BATT01-00393	(Ctrl) 0.0µg/L	0.0	F	35	0.104	238	26.4	6.5	7.7	120	36	363		**Measured Treatment Concentration -** Week 5 0.0µg/L F - 0.226µg/L identified as outlier as determined by Q3+(IQR*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00393	6.3µg/L	6.3	F	35	0.796	248	26.8	6.6	7.8					
BATT01-00393	12.5µg/L	12.5	F	35	3.28	363	26.1	7.0	7.9					
BATT01-00393	25µg/L	25	F	35	13.0	324	26.3	6.1	7.8					
BATT01-00393	50µg/L	50	F	35	46.3	424	26.0	6.7	7.9					
BATT01-00393	100µg/L	100	F	35	118	280	26.4	6.7	7.9	120	32	366		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	G	42	0.104	271	25.7	7.6	7.7	120	32	672		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	A	42	0.919	345	25.9	7.4	7.8					
BATT01-00393	12.5µg/L	12.5	A	42	2.93	382	24.5	7.4	7.9					
BATT01-00393	25µg/L	25	A	42	10.6	361	25.8	6.9	7.8					
BATT01-00393	50µg/L	50	A	42	47.1	319	25.0	7.3	8.0					
BATT01-00393	100µg/L	100	A	42	124	265	24.7	7.1	8.0	108	63	604		
BATT01-00393		Facility Dilution Water		44									8.3	
BATT01-00393	(Ctrl) 0.0µg/L	0.0	H	49	0.104	415	24.2	7.3	7.3	112	36	653		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	B	49	4.43	321	24.4	6.9	7.4					
BATT01-00393	12.5µg/L	12.5	B	49	6.56	367	24.2	7.2	7.5					
BATT01-00393	25µg/L	25	B	49	13.8	244	25.1	6.8	7.5					
BATT01-00393	50µg/L	50	B	49	40.8	328	25.3	7.3	7.6					
BATT01-00393	100µg/L	100	B	49	127	375	24.5	7.2	7.6	120	32	691		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	I	56	0.256	348	24.8	7.2	7.4	120	28	744		**Measured Treatment Concentration -** Week 8 0.0µg/L I - 302µg/L identified as outlier as determined by Q3+(IQR*1.5) and extraneous data point. Duplicate sample accepted as data point based on proximity to IQR.
BATT01-00393	6.3µg/L	6.3	C	56	2.47	324	24.9	7.0	7.5					
BATT01-00393	12.5µg/L	12.5	C	56	3.35	352	24.7	7.1	7.5					
BATT01-00393	25µg/L	25	C	56	13.6	306	24.8	7.1	7.5					
BATT01-00393	50µg/L	50	C	56	37.1	310	24.7	7.2	7.6					
BATT01-00393	100µg/L	100	C	56	118	358	24.9	7.2	7.6	120	24	745		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	J	63	6.34	336	24.2	8.3	7.5	132	40	768		**Measured Treatment Concentration -** Based on mean of original (6.56µg/L) and duplicate (6.12µg/L) sample. Both original sample and duplicate sample valued as outliers, resulted in averaging.
BATT01-00393	6.3µg/L	6.3	D	63	3.18	321	24.6	7.6	7.6					**Measured Treatment Concentration -** Based on mean of original (6.02µg/L) and duplicate (0.342µg/L) sample
BATT01-00393	12.5µg/L	12.5	D	63	2.28	396	24.4	7.4	7.7					**Measured Treatment Concentration -** Based on mean of original (3.03µg/L) and duplicate (1.53µg/L) sample
BATT01-00393	25µg/L	25	D	63	14.6	327	24.5	7.2	7.6					
BATT01-00393	50µg/L	50	D	63	50.0	401	24.4	7.4	7.7					
BATT01-00393	100µg/L	100	D	63	113	425	24.5	7.4	7.7	124	35	764		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	K	70	0.104	478	25.0	6.5	7.3	124	32	781		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	E	70	4.19	463	24.9	6.0	7.5					
BATT01-00393	12.5µg/L	12.5	E	70	9.62	451	25.0	6.4	7.5					
BATT01-00393	25µg/L	25	E	70	24.5	485	24.8	6.6	7.3					
BATT01-00393	50µg/L	50	E	70	51.8	491	24.9	6.4	7.6					
BATT01-00393	100µg/L	100	E	70	125	475	24.9	6.6	7.6	132	36	781		

FEL

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Study Day	Measured Treatment Concentration (µg/L)	Light Intensity at Water Surface (lux)	Water Temperature (°C)	Dissolved Oxygen (mg/L)	pH	Total Hardness (mg/L; as $CaCO_3$)	Alkalinity (mg/L; as $CaCO_3$)	Conductivity (µS/cm)	Iodide (µg/L)	Comments
BATT01-00393		Facility Dilution Water		77									8.6	
BATT01-00393	(Ctrl) 0.0µg/L	0.0	L	77	0.104	485	25.0	7.0	7.1	132	36	756		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	F	77	1.07	479	25.1	6.9	7.3					
BATT01-00393	12.5µg/L	12.5	F	77	2.82	451	25.1	6.8	7.4					
BATT01-00393	25µg/L	25	F	77	11.8	424	25.1	6.5	7.4					
BATT01-00393	50µg/L	50	F	77	40.4	471	25.0	6.9	7.4					
BATT01-00393	100µg/L	100	F	77	117	464	25.1	6.7	7.4	108	28	756		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	M	84	0.104	418	24.6	7.4	7.3	104	20	777		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	G	84	2.44	435	25.2	7.2	7.3					
BATT01-00393	12.5µg/L	12.5	G	84	8.11	426	25.3	7.2	7.4					
BATT01-00393	25µg/L	25	G	84	18.9	471	25.0	7.0	7.4					
BATT01-00393	50µg/L	50	G	84	42.9	490	25.1	7.1	7.5					
BATT01-00393	100µg/L	100	G	84	92.6	488	25.3	7.1	7.5	112	28	780		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	N	91		435	25.2	6.9	7.4	116	28	555		
BATT01-00393	6.3µg/L	6.3	H	91		443	25.3	7.0	7.4					
BATT01-00393	12.5µg/L	12.5	H	91		451	25.3	7.1	7.5					
BATT01-00393	25µg/L	25	H	91		432	25.4	7.0	7.5					
BATT01-00393	50µg/L	50	H	91		465	25.3	7.2	7.5					
BATT01-00393	100µg/L	100	H	91		473	25.3	6.9	7.1	100	32	596		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	N	93	0.104									**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	H	93	3.14									
BATT01-00393	12.5µg/L	12.5	H	93	7.23									
BATT01-00393	25µg/L	25	H	93	18.9									
BATT01-00393	50µg/L	50	H	93	40.3									
BATT01-00393	100µg/L	100	H	93	93.2									
BATT01-00393	(Ctrl) 0.0µg/L	0.0	O	98	0.228	421	25.2	6.4	7.3	116	28	458		**Measured Treatment Concentration** - Outlier, no duplicate value available since value was within 20% of nominal concentration, reported as measured.
BATT01-00393	6.3µg/L	6.3	I	98	5.01	463	25.4	6.3	7.3					
BATT01-00393	12.5µg/L	12.5	I	98	10.6	434	25.9	6.7	7.4					
BATT01-00393	25µg/L	25	I	98	23.0	459	24.9	7.0	7.3					
BATT01-00393	50µg/L	50	I	98	46.3	412	25.0	6.9	7.4					
BATT01-00393	100µg/L	100	I	98	94.4	418	25.3	6.2	7.4	120	28	460		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	P	105	0.104	315	26.0	6.2	7.7	112	40	354		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	J	105	2.63	450	25.8	6.3	7.5					
BATT01-00393	12.5µg/L	12.5	J	105	11.0	359	25.5	6.0	7.7					
BATT01-00393	25µg/L	25	J	105	28.4	468	25.7	6.5	7.7					
BATT01-00393	50µg/L	50	J	105	67.0	463	25.8	6.3	7.8					
BATT01-00393	100µg/L	100	J	105	119	451	25.4	6.3	7.7	116	40	350		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	Q	112	0.104	427	25.9	6.8	7.4	104	32	350		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	K	112	7.18	448	25.7	6.7	7.8					
BATT01-00393	12.5µg/L	12.5	K	112	17.5	409	25.7	7.0	7.8					
BATT01-00393	25µg/L	25	K	112	34.1	458	25.8	6.5	7.8					

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Study Day	Measured Treatment Concentration (µg/L)	Light Intensity at Water Surface (lux)	Water Temperature (°C)	Dissolved Oxygen (mg/L)	pH	Total Hardness (mg/L; as $CaCO_3$)	Alkalinity (mg/L; as $CaCO_3$)	Conductivity (µS/cm)	Iodide (µg/L)	Comments
BATT01-00393	50µg/L	50	K	112	61.9	392	25.6	6.6	7.9					
BATT01-00393	100µg/L	100	K	112	115	477	25.8	6.7	7.9	116	36	350		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	R	119	0.104	473	25.8	5.3	7.4	100	32	369		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	L	119	12.6	446	25.6	4.6	7.4					
BATT01-00393	12.5µg/L	12.5	L	119	22.6	462	25.4	5.3	7.4					
BATT01-00393	25µg/L	25	L	119	43.8	485	25.7	5.6	7.5					
BATT01-00393	50µg/L	50	L	119	58.8	383	25.7	5.6	7.5					
BATT01-00393	100µg/L	100	L	119	114	441	25.4	5.4	7.6	100	32	368		
BATT01-00393	Facility Dilution Water			123									6.6	
BATT01-00393	(Ctrl) 0.0µg/L	0.0	S	127	0.104	488	26.0	5.6	7.2	92	24	404		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	A	127	12.5	448	25.9	4.8	7.2					
BATT01-00393	12.5µg/L	12.5	A	127	21.0	453	25.6	5.5	7.3					
BATT01-00393	25µg/L	25	A	127	34.5	357	25.6	4.9	7.3					
BATT01-00393	50µg/L	50	A	127	58.3	437	25.7	5.6	7.3					
BATT01-00393	100µg/L	100	A	127	106	454	25.8	5.4	7.4	96	28	404		
BATT01-00393	Facility Dilution Water			129									6.2	
BATT01-00393	(Ctrl) 0.0µg/L	0.0	T	133	0.104	427	25.5	5.3	7.7	108	32	368		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	B	133	10.2	439	25.7	5.2	7.6					
BATT01-00393	12.5µg/L	12.5	B	133	16.7	471	25.4	5.3	7.8					
BATT01-00393	25µg/L	25	B	133	34.7	455	25.3	5.4	7.6					
BATT01-00393	50µg/L	50	B	133	56.4	436	25.3	5.2	7.7					
BATT01-00393	100µg/L	100	B	133	101	401	25.6	5.1	7.7	104	32	374		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	I	140	0.104	265	25.6	5.9	7.4	112	32	431		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	C	140	10.6	363	26.0	5.7	7.5					
BATT01-00393	12.5µg/L	12.5	C	140	18.0	313	24.8	5.8	7.6					
BATT01-00393	25µg/L	25	C	140	27.1	488	26.0	5.3	7.6					
BATT01-00393	50µg/L	50	C	140	51.1	283	26.0	5.7	7.6					
BATT01-00393	100µg/L	100	C	140	92.8	365	25.9	5.7	7.7	108	32	431		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	J	147	0.104	410	25.9	5.5	7.4	112	28	394		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	D	147	6.50	301	25.7	5.5	7.7					
BATT01-00393	12.5µg/L	12.5	D	147	12.8	476	25.7	5.5	7.8					
BATT01-00393	25µg/L	25	D	147	22.9	336	25.9	5.6	7.8					
BATT01-00393	50µg/L	50	D	147	48.2	464	25.8	5.5	7.8					
BATT01-00393	100µg/L	100	D	147	103	358	25.9	5.4	7.8	116	32	396		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	K	154	0.104	482	25.7	5.9	7.5	128	48	444		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	E	154	8.36	404	25.8	5.9	7.7					
BATT01-00393	12.5µg/L	12.5	E	154	15.3	453	25.8	5.6	7.7					
BATT01-00393	25µg/L	25	E	154	26.6	390	25.7	5.7	7.7					
BATT01-00393	50µg/L	50	E	154	52.1	415	25.8	5.7	7.8					
BATT01-00393	100µg/L	100	E	154	94.8	379	25.9	5.8	7.8	112	48	443		

FEL

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Study Day	Measured Treatment Concentration (µg/L)	Light Intensity at Water Surface (lux)	Water Temperature (°C)	Dissolved Oxygen (mg/L)	pH	Total Hardness (mg/L; as $CaCO_3$)	Alkalinity (mg/L; as $CaCO_3$)	Conductivity (µS/cm)	Iodide (µg/L)	Comments
BATT01-00393	(Ctrl) 0.0µg/L	0.0	L	161	0.104	489	26.0	5.6	7.6	112	48	455		Measured Treatment Concentration - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	F	161	7.51	396	25.7	5.4	7.7					
BATT01-00393	12.5µg/L	12.5	F	161	15.5	347	25.6	5.2	7.8					
BATT01-00393	25µg/L	25	F	161	30.4	426	25.3	5.5	7.8					
BATT01-00393	50µg/L	50	F	161	53.6	269	26.0	5.5	7.8					
BATT01-00393	100µg/L	100	F	161	102	435	25.9	5.5	7.9	112	44	456		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	A	168	0.104	488	25.8	6.0	7.2	104	36	511		Measured Treatment Concentration - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	A	168	6.49	461	25.9	5.8	7.2					
BATT01-00393	12.5µg/L	12.5	A	168	12.9	470	25.9	5.9	7.3					
BATT01-00393	25µg/L	25	A	168	25.0	459	25.8	5.8	7.3					
BATT01-00393	50µg/L	50	A	168	47.5	484	25.9	5.7	7.4					
BATT01-00393	100µg/L	100	A	168	102	475	25.8	5.6	7.4	112	40	511		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	B	175	0.104									Measured Treatment Concentration - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	B	175	7.80									
BATT01-00393	12.5µg/L	12.5	B	175	15.4									
BATT01-00393	25µg/L	25	B	175	28.1									
BATT01-00393	50µg/L	50	B	175	43.6									
BATT01-00393	100µg/L	100	B	175	98.6									
BATT01-00393	(Ctrl) 0.0µg/L	0.0	B	176		463	25.7	5.6	7.9	100	40	524		
BATT01-00393	6.3µg/L	6.3	B	176		489	25.7	5.8	7.8					
BATT01-00393	12.5µg/L	12.5	B	176		471	25.8	5.7	7.8					
BATT01-00393	25µg/L	25	B	176		497	25.8	5.6	7.7					
BATT01-00393	50µg/L	50	B	176		447	25.7	5.5	7.6					
BATT01-00393	100µg/L	100	B	176		436	25.7	5.4	7.5	108	40	527		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	C	182	0.104	475	25.8	6.0	7.6	96	44	509		Measured Treatment Concentration - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	C	182	4.78	487	25.8	6.1	7.6					
BATT01-00393	12.5µg/L	12.5	C	182	10.3	460	25.8	5.9	7.7					
BATT01-00393	25µg/L	25	C	182	20.8	472	25.7	6.0	7.8					
BATT01-00393	50µg/L	50	C	182	52.2	463	25.8	5.9	7.8					
BATT01-00393	100µg/L	100	C	182	96.8	459	25.8	5.8	7.8	100	40	511		
BATT01-00393	Facility Dilution Water			183									7.0	
BATT01-00393	(Ctrl) 0.0µg/L	0.0	D	189		435	25.7	5.8	7.5	100	40	512		
BATT01-00393	6.3µg/L	6.3	D	189		478	25.7	5.4	7.5					
BATT01-00393	12.5µg/L	12.5	D	189		416	25.5	5.3	7.4					
BATT01-00393	25µg/L	25	D	189		410	25.6	5.2	7.4					
BATT01-00393	50µg/L	50	D	189		405	25.6	5.1	7.5					
BATT01-00393	100µg/L	100	D	189		400	25.4	5.1	7.4	96	44	511		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	D	191	0.104									Measured Treatment Concentration - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	D	191	3.63									
BATT01-00393	12.5µg/L	12.5	D	191	9.33									
BATT01-00393	25µg/L	25	D	191	20.9									
BATT01-00393	50µg/L	50	D	191	40.8									
BATT01-00393	100µg/L	100	D	191	86.2									

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Study Day	Measured Treatment Concentration (µg/L)	Light Intensity at Water Surface (lux)	Water Temperature (°C)	Dissolved Oxygen (mg/L)	pH	Total Hardness (mg/L; as $CaCO_3$)	Alkalinity (mg/L; as $CaCO_3$)	Conductivity (µS/cm)	Iodide (µg/L)	Comments
BATT01-00393	(Ctrl) 0.0µg/L	0.0	E	196	0.104	438	25.6	5.6	7.5	100	40	499		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	E	196	7.13	415	25.6	5.5	7.5					
BATT01-00393	12.5µg/L	12.5	E	196	14.1	460	25.7	5.4	7.5					
BATT01-00393	25µg/L	25	E	196	23.9	471	25.5	5.2	7.5					
BATT01-00393	50µg/L	50	E	196	47.0	431	25.7	5.3	7.5					
BATT01-00393	100µg/L	100	E	196	84.3	456	25.8	5.3	7.6	100	48	498		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	F	203	0.104	468	25.4	5.5	7.4	116	48	412		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	F	203	3.61	467	25.5	5.5	7.4					
BATT01-00393	12.5µg/L	12.5	F	203	8.71	425	25.5	5.5	7.4					
BATT01-00393	25µg/L	25	F	203	19.0	413	25.6	5.4	7.4					
BATT01-00393	50µg/L	50	F	203	34.9	452	25.5	5.2	7.4					
BATT01-00393	100µg/L	100	F	203	77.8	478	25.5	5.5	7.4	88	48	407		
BATT01-00393	(Ctrl) 0.0µg/L	0.0	G	210	0.104	460	25.7	5.4	7.6	116	44	349		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	A	210	4.02	286	25.9	5.2	7.6					
BATT01-00393	12.5µg/L	12.5	A	210	8.76	346	25.8	4.8	7.5					
BATT01-00393	25µg/L	25	A	210	18.1	259	25.8	5.2	7.6					
BATT01-00393	50µg/L	50	A	210	37.8	397	25.8	5.1	7.6					
BATT01-00393	100µg/L	100	A	210	65.9	413	25.5	4.8	7.6	116	44	349		
BATT01-00393	Facility Dilution Water			217									7.4	
BATT01-00393	(Ctrl) 0.0µg/L	0.0	H	217	0.104	428	25.7	5.6	7.4	120	48	368		**Measured Treatment Concentration** - MQL = 0.208µg/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00393	6.3µg/L	6.3	B	217	6.40	401	25.7	5.6	7.6					
BATT01-00393	12.5µg/L	12.5	B	217	11.3	387	25.8	5.1	7.8					
BATT01-00393	25µg/L	25	B	217	19.8	329	25.7	5.2	7.8					
BATT01-00393	50µg/L	50	B	217	34.8	376	25.8	5.3	7.7					
BATT01-00393	100µg/L	100	B	217	69.1	351	25.9	5.0	7.6	112	48	369		

FEL

Name of Treatment Group	Replicate ID	Study Day	Clinical Sign	Comments
0.0	A	0	None	None
0.0	B	0	None	None
0.0	C	0	None	None
0.0	D	0	None	None
0.0	E	0	None	None
0.0	F	0	None	None
0.0	G	0	None	None
0.0	H	0	None	None
0.0	I	0	None	None
0.0	J	0	None	None
0.0	K	0	None	None
0.0	L	0	None	None
6.3	A	0	None	None
6.3	B	0	None	None
6.3	C	0	None	None
6.3	D	0	None	None
6.3	E	0	None	None
6.3	F	0	None	None
12.5	A	0	None	None
12.5	B	0	None	None
12.5	C	0	None	None
12.5	D	0	None	None
12.5	E	0	None	None
12.5	F	0	None	None
25	A	0	None	None
25	B	0	None	None
25	C	0	None	None
25	D	0	None	None
25	E	0	None	None
25	F	0	None	None
50	A	0	None	None
50	B	0	None	None
50	C	0	None	None
50	D	0	None	None
50	E	0	None	None
50	F	0	None	None
100	A	0	None	None
100	B	0	None	None
100	C	0	None	None
100	D	0	None	None
100	E	0	None	None
100	F	0	None	None
0.0	A	1	None	None
0.0	B	1	None	None
0.0	C	1	None	None

DEST BATT01-00393 Clinical Signs

Name of Treatment Group	Replicate ID	Study Day	Clinical Sign	Comments
0.0	D	1	None	None
0.0	E	1	None	None
0.0	F	1	None	None
0.0	G	1	None	None
0.0	H	1	None	None
0.0	I	1	None	None
0.0	J	1	None	None
0.0	K	1	None	None

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	1	0	0			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	2	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	3	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	4	25	25			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	5	10	9			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	6	23	23			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	7	24	24			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	8	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	9	22	22			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	10	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	11	16	16			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	12	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	13	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	14	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	15	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	16	24	24			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	17	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	18	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	19	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	20	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	21	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	1-21			17.66666667	17.6190476	
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	1	0	0			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	2	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	3	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	4	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	5	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	6	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	7	6	6			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	8	6	6			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	9	0	0			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	10	18	18			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	11	25	25			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	12	14	14			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	13	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	14	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	15	16	16			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	16	14	14			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	17	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	18	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	19	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	20	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	21	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	1-21			15.04761905	15.047619	
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	1	0	0			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	2	22	22			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	3	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	4	26	25			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	5	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	6	22	22			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	7	22	22			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	8	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	9	4	4			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	10	19	19			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	11	26	26			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	12	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	13	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	14	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	15	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	16	23	23			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	17	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	18	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	19	16	16			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	20	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	21	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	1-21			16.61904762	16.5714286	
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	1	0	0			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	2	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	3	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	4	22	22			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	5	24	24			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	6	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	7	21	21			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	8	25	24			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	9	26	26			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	10	16	16			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	11	23	23			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	12	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	13	9	9			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	14	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	15	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	16	21	21			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	17	9	9			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	18	6	6			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	19	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	20	14	14			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	21	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	1-21			15.85714286	15.8095238	
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	1	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	2	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	3	23	23			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	4	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	5	30	30			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	6	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	7	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	8	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	9	3	3			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	10	19	19			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	11	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	12	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	13	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	14	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	15	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	16	26	26			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	17	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	18	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	19	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	20	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	21	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	1-21			18.47619048	18.4761905	
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	1	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	2	21	21			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	3	24	24			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	4	14	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	5	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	6	25	25			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	7	31	31			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	8	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	9	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	10	21	21			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	11	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	12	25	25			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	13	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	14	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	15	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	16	25	25			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	17	26	26			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	18	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	19	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	20	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	21	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	1-21			19.19047619	19.1428571	
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	1	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	2	20	20			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	3	26	26			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	4	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	5	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	6	30	30			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	7	22	22			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	8	38	38			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	9	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	10	14	14			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	11	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	12	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	13	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	14	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	15	16	16			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	16	30	30			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	17	17	17			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	18	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	19	14	14			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	20	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	21	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	1-21			18.71428571	18.7142857	
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	1	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	2	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	3	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	4	26	26			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	5	24	24			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	6	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	7	21	21			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	8	25	25			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	9	32	32			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	10	14	14			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	11	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	12	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	13	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	14	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	15	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	16	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	17	19	19			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	18	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	19	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	20	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	21	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	1-21			17.71428571	17.7142857	
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	1	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	2	26	26			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	3	30	30			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	4	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	5	31	31			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	6	27	26			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	7	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	8	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	9	38	38			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	10	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	11	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	12	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	13	37	37			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	14	36	36			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	15	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	16	37	34			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	17	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	18	16	16			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	19	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	20	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	21	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	1-21			21.19047619	21	
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	1	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	2	38	38			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	3	20	20			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	4	30	30			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	5	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	6	32	32			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	7	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	8	30	30			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	9	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	10	16	16			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	11	39	39			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	12	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	13	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	14	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	15	14	14			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	16	32	32			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	17	16	16			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	18	39	39			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	19	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	20	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	21	17	17			
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	1-21			23.14285714	23.1428571	
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	1	39	39			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	2	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	3	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	4	28	28			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	5	36	36			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	6	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	7	30	30			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	8	38	38			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	9	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	10	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	11	14	14			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	12	37	37			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	13	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	14	14	14			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	15	17	17			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	16	30	30			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	17	19	19			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	18	27	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	19	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	20	37	37			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	21	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	1-21			23.14285714	23.1428571	
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	1	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	2	32	32			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	3	21	21			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	4	38	38			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	5	30	30			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	6	29	27			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	7	32	32			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	8	20	20			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	9	33	33			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	10	17	17			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	11	12	12			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	12	10	10			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	13	15	15			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	14	38	38			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	15	29	29			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	16	25	25			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	17	11	11			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	18	13	13			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	19	36	36			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	20	39	39			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	21	16	16			
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	1-21			24.0952381	24	
BATT01-00393	F0	6.3µg/L	A	1	20	20			
BATT01-00393	F0	6.3µg/L	A	2	0	0			
BATT01-00393	F0	6.3µg/L	A	3	0	0			
BATT01-00393	F0	6.3µg/L	A	4	10	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	6.3µg/L	A	5	30	30			
BATT01-00393	F0	6.3µg/L	A	6	0	0			
BATT01-00393	F0	6.3µg/L	A	7	32	32			
BATT01-00393	F0	6.3µg/L	A	8	30	30			
BATT01-00393	F0	6.3µg/L	A	9	21	21			
BATT01-00393	F0	6.3µg/L	A	10	12	12			
BATT01-00393	F0	6.3µg/L	A	11	10	10			
BATT01-00393	F0	6.3µg/L	A	12	13	13			
BATT01-00393	F0	6.3µg/L	A	13	10	10			
BATT01-00393	F0	6.3µg/L	A	14	11	11			
BATT01-00393	F0	6.3µg/L	A	15	12	12			
BATT01-00393	F0	6.3µg/L	A	16	30	30			
BATT01-00393	F0	6.3µg/L	A	17	14	14			
BATT01-00393	F0	6.3µg/L	A	18	16	16			
BATT01-00393	F0	6.3µg/L	A	19	11	11			
BATT01-00393	F0	6.3µg/L	A	20	39	39			
BATT01-00393	F0	6.3µg/L	A	21	10	10			
BATT01-00393	F0	6.3µg/L	A	1-21			15.76190476	15.7619048	
BATT01-00393	F0	6.3µg/L	B	1	0	0			
BATT01-00393	F0	6.3µg/L	B	2	30	30			
BATT01-00393	F0	6.3µg/L	B	3	10	10			
BATT01-00393	F0	6.3µg/L	B	4	0	0			
BATT01-00393	F0	6.3µg/L	B	5	12	12			
BATT01-00393	F0	6.3µg/L	B	6	26	26			
BATT01-00393	F0	6.3µg/L	B	7	22	22			
BATT01-00393	F0	6.3µg/L	B	8	28	24			
BATT01-00393	F0	6.3µg/L	B	9	0	0			
BATT01-00393	F0	6.3µg/L	B	10	14	14			
BATT01-00393	F0	6.3µg/L	B	11	29	29			
BATT01-00393	F0	6.3µg/L	B	12	10	10			
BATT01-00393	F0	6.3µg/L	B	13	26	26			
BATT01-00393	F0	6.3µg/L	B	14	29	29			
BATT01-00393	F0	6.3µg/L	B	15	15	15			
BATT01-00393	F0	6.3µg/L	B	16	18	18			
BATT01-00393	F0	6.3µg/L	B	17	17	17			
BATT01-00393	F0	6.3µg/L	B	18	12	12			
BATT01-00393	F0	6.3µg/L	B	19	10	10			
BATT01-00393	F0	6.3µg/L	B	20	26	26			
BATT01-00393	F0	6.3µg/L	B	21	11	11			
BATT01-00393	F0	6.3µg/L	B	1-21			16.42857143	16.2380952	
BATT01-00393	F0	6.3µg/L	C	1	10	10			
BATT01-00393	F0	6.3µg/L	C	2	0	0			
BATT01-00393	F0	6.3µg/L	C	3	20	20			
BATT01-00393	F0	6.3µg/L	C	4	10	10			
BATT01-00393	F0	6.3µg/L	C	5	6	6			
BATT01-00393	F0	6.3µg/L	C	6	20	20			
BATT01-00393	F0	6.3µg/L	C	7	31	31			
BATT01-00393	F0	6.3µg/L	C	8	21	21			
BATT01-00393	F0	6.3µg/L	C	9	22	22			
BATT01-00393	F0	6.3µg/L	C	10	11	11			
BATT01-00393	F0	6.3µg/L	C	11	12	12			
BATT01-00393	F0	6.3µg/L	C	12	27	27			
BATT01-00393	F0	6.3µg/L	C	13	33	33			
BATT01-00393	F0	6.3µg/L	C	14	10	10			
BATT01-00393	F0	6.3µg/L	C	15	19	19			
BATT01-00393	F0	6.3µg/L	C	16	16	16			
BATT01-00393	F0	6.3µg/L	C	17	13	13			
BATT01-00393	F0	6.3µg/L	C	18	10	10			
BATT01-00393	F0	6.3µg/L	C	19	27	27			
BATT01-00393	F0	6.3µg/L	C	20	12	12			
BATT01-00393	F0	6.3µg/L	C	21	19	19			
BATT01-00393	F0	6.3µg/L	C	1-21			16.61904762	16.6190476	
BATT01-00393	F0	6.3µg/L	D	1	10	10			
BATT01-00393	F0	6.3µg/L	D	2	23	23			
BATT01-00393	F0	6.3µg/L	D	3	15	15			
BATT01-00393	F0	6.3µg/L	D	4	0	0			
BATT01-00393	F0	6.3µg/L	D	5	3	3			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	6.3µg/L	D	6	25	25			
BATT01-00393	F0	6.3µg/L	D	7	22	22			
BATT01-00393	F0	6.3µg/L	D	8	0	0			
BATT01-00393	F0	6.3µg/L	D	9	10	10			
BATT01-00393	F0	6.3µg/L	D	10	29	29			
BATT01-00393	F0	6.3µg/L	D	11	11	11			
BATT01-00393	F0	6.3µg/L	D	12	13	13			
BATT01-00393	F0	6.3µg/L	D	13	10	10			
BATT01-00393	F0	6.3µg/L	D	14	12	12			
BATT01-00393	F0	6.3µg/L	D	15	10	10			
BATT01-00393	F0	6.3µg/L	D	16	19	19			
BATT01-00393	F0	6.3µg/L	D	17	37	37			
BATT01-00393	F0	6.3µg/L	D	18	9	9			
BATT01-00393	F0	6.3µg/L	D	19	15	15			
BATT01-00393	F0	6.3µg/L	D	20	11	11			
BATT01-00393	F0	6.3µg/L	D	21	12	12			
BATT01-00393	F0	6.3µg/L	D	1-21			14.0952381	14.0952381	
BATT01-00393	F0	6.3µg/L	E	1	15	15			
BATT01-00393	F0	6.3µg/L	E	2	37	37			
BATT01-00393	F0	6.3µg/L	E	3	25	25			
BATT01-00393	F0	6.3µg/L	E	4	10	10			
BATT01-00393	F0	6.3µg/L	E	5	14	14			
BATT01-00393	F0	6.3µg/L	E	6	29	29			
BATT01-00393	F0	6.3µg/L	E	7	10	10			
BATT01-00393	F0	6.3µg/L	E	8	12	12			
BATT01-00393	F0	6.3µg/L	E	9	34	34			
BATT01-00393	F0	6.3µg/L	E	10	10	10			
BATT01-00393	F0	6.3µg/L	E	11	11	11			
BATT01-00393	F0	6.3µg/L	E	12	39	39			
BATT01-00393	F0	6.3µg/L	E	13	13	13			
BATT01-00393	F0	6.3µg/L	E	14	38	38			
BATT01-00393	F0	6.3µg/L	E	15	28	28			
BATT01-00393	F0	6.3µg/L	E	16	10	10			
BATT01-00393	F0	6.3µg/L	E	17	16	16			
BATT01-00393	F0	6.3µg/L	E	18	15	15			
BATT01-00393	F0	6.3µg/L	E	19	12	12			
BATT01-00393	F0	6.3µg/L	E	20	13	13			
BATT01-00393	F0	6.3µg/L	E	21	10	10			
BATT01-00393	F0	6.3µg/L	E	1-21			19.0952381	19.0952381	
BATT01-00393	F0	6.3µg/L	F	1	10	10			
BATT01-00393	F0	6.3µg/L	F	2	24	24			
BATT01-00393	F0	6.3µg/L	F	3	33	33			
BATT01-00393	F0	6.3µg/L	F	4	0	0			
BATT01-00393	F0	6.3µg/L	F	5	0	0			
BATT01-00393	F0	6.3µg/L	F	6	33	33			
BATT01-00393	F0	6.3µg/L	F	7	31	31			
BATT01-00393	F0	6.3µg/L	F	8	19	19			
BATT01-00393	F0	6.3µg/L	F	9	25	25			
BATT01-00393	F0	6.3µg/L	F	10	11	11			
BATT01-00393	F0	6.3µg/L	F	11	26	26			
BATT01-00393	F0	6.3µg/L	F	12	15	15			
BATT01-00393	F0	6.3µg/L	F	13	11	11			
BATT01-00393	F0	6.3µg/L	F	14	29	29			
BATT01-00393	F0	6.3µg/L	F	15	14	14			
BATT01-00393	F0	6.3µg/L	F	16	22	22			
BATT01-00393	F0	6.3µg/L	F	17	12	12			
BATT01-00393	F0	6.3µg/L	F	18	10	10			
BATT01-00393	F0	6.3µg/L	F	19	11	11			
BATT01-00393	F0	6.3µg/L	F	20	12	12			
BATT01-00393	F0	6.3µg/L	F	21	28	28			
BATT01-00393	F0	6.3µg/L	F	1-21			17.9047619	17.9047619	
BATT01-00393	F0	12.5µg/L	A	1	0	0			
BATT01-00393	F0	12.5µg/L	A	2	14	14			
BATT01-00393	F0	12.5µg/L	A	3	0	0			
BATT01-00393	F0	12.5µg/L	A	4	0	0			
BATT01-00393	F0	12.5µg/L	A	5	0	0			
BATT01-00393	F0	12.5µg/L	A	6	2	2			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	12.5µg/L	A	7	0	0			
BATT01-00393	F0	12.5µg/L	A	8	0	0			
BATT01-00393	F0	12.5µg/L	A	9	22	22			
BATT01-00393	F0	12.5µg/L	A	10	11	11			
BATT01-00393	F0	12.5µg/L	A	11	12	12			
BATT01-00393	F0	12.5µg/L	A	12	15	15			
BATT01-00393	F0	12.5µg/L	A	13	28	28			
BATT01-00393	F0	12.5µg/L	A	14	10	10			
BATT01-00393	F0	12.5µg/L	A	15	29	29			
BATT01-00393	F0	12.5µg/L	A	16	15	15			
BATT01-00393	F0	12.5µg/L	A	17	10	10			
BATT01-00393	F0	12.5µg/L	A	18	15	15			
BATT01-00393	F0	12.5µg/L	A	19	13	13			
BATT01-00393	F0	12.5µg/L	A	20	12	12			
BATT01-00393	F0	12.5µg/L	A	21	10	10			
BATT01-00393	F0	12.5µg/L	A	1-21			10.38095238	10.3809524	
BATT01-00393	F0	12.5µg/L	B	1	20	20			
BATT01-00393	F0	12.5µg/L	B	2	0	0			
BATT01-00393	F0	12.5µg/L	B	3	30	25			
BATT01-00393	F0	12.5µg/L	B	4	0	0			
BATT01-00393	F0	12.5µg/L	B	5	2	2			
BATT01-00393	F0	12.5µg/L	B	6	13	13			
BATT01-00393	F0	12.5µg/L	B	7	0	0			
BATT01-00393	F0	12.5µg/L	B	8	0	0			
BATT01-00393	F0	12.5µg/L	B	9	15	15			
BATT01-00393	F0	12.5µg/L	B	10	10	10			
BATT01-00393	F0	12.5µg/L	B	11	8	8			
BATT01-00393	F0	12.5µg/L	B	12	19	19			
BATT01-00393	F0	12.5µg/L	B	13	26	26			
BATT01-00393	F0	12.5µg/L	B	14	12	12			
BATT01-00393	F0	12.5µg/L	B	15	37	37			
BATT01-00393	F0	12.5µg/L	B	16	17	17			
BATT01-00393	F0	12.5µg/L	B	17	9	9			
BATT01-00393	F0	12.5µg/L	B	18	10	10			
BATT01-00393	F0	12.5µg/L	B	19	17	17			
BATT01-00393	F0	12.5µg/L	B	20	11	11			
BATT01-00393	F0	12.5µg/L	B	21	13	13			
BATT01-00393	F0	12.5µg/L	B	1-21			12.80952381	12.5714286	
BATT01-00393	F0	12.5µg/L	C	1	7	7			
BATT01-00393	F0	12.5µg/L	C	2	7	7			
BATT01-00393	F0	12.5µg/L	C	3	9	9			
BATT01-00393	F0	12.5µg/L	C	4	6	6			
BATT01-00393	F0	12.5µg/L	C	5	4	4			
BATT01-00393	F0	12.5µg/L	C	6	4	3			
BATT01-00393	F0	12.5µg/L	C	7	0	0			
BATT01-00393	F0	12.5µg/L	C	8	14	13			
BATT01-00393	F0	12.5µg/L	C	9	0	0			
BATT01-00393	F0	12.5µg/L	C	10	13	13			
BATT01-00393	F0	12.5µg/L	C	11	9	9			
BATT01-00393	F0	12.5µg/L	C	12	10	10			
BATT01-00393	F0	12.5µg/L	C	13	39	39			
BATT01-00393	F0	12.5µg/L	C	14	10	10			
BATT01-00393	F0	12.5µg/L	C	15	39	39			
BATT01-00393	F0	12.5µg/L	C	16	2	2			
BATT01-00393	F0	12.5µg/L	C	17	10	10			
BATT01-00393	F0	12.5µg/L	C	18	11	11			
BATT01-00393	F0	12.5µg/L	C	19	8	8			
BATT01-00393	F0	12.5µg/L	C	20	10	10			
BATT01-00393	F0	12.5µg/L	C	21	12	12			
BATT01-00393	F0	12.5µg/L	C	1-21			10.66666667	10.5714286	
BATT01-00393	F0	12.5µg/L	D	1	10	10			
BATT01-00393	F0	12.5µg/L	D	2	8	7			
BATT01-00393	F0	12.5µg/L	D	3	0	0			
BATT01-00393	F0	12.5µg/L	D	4	21	21			
BATT01-00393	F0	12.5µg/L	D	5	0	0			
BATT01-00393	F0	12.5µg/L	D	6	2	2			
BATT01-00393	F0	12.5µg/L	D	7	4	4			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	12.5µg/L	D	8	14	14			
BATT01-00393	F0	12.5µg/L	D	9	10	10			
BATT01-00393	F0	12.5µg/L	D	10	12	12			
BATT01-00393	F0	12.5µg/L	D	11	7	7			
BATT01-00393	F0	12.5µg/L	D	12	16	16			
BATT01-00393	F0	12.5µg/L	D	13	27	27			
BATT01-00393	F0	12.5µg/L	D	14	38	38			
BATT01-00393	F0	12.5µg/L	D	15	13	13			
BATT01-00393	F0	12.5µg/L	D	16	12	12			
BATT01-00393	F0	12.5µg/L	D	17	8	8			
BATT01-00393	F0	12.5µg/L	D	18	9	9			
BATT01-00393	F0	12.5µg/L	D	19	11	11			
BATT01-00393	F0	12.5µg/L	D	20	9	9			
BATT01-00393	F0	12.5µg/L	D	21	10	10			
BATT01-00393	F0	12.5µg/L	D	1-21			11.47619048	11.4285714	
BATT01-00393	F0	12.5µg/L	E	1	0	0			
BATT01-00393	F0	12.5µg/L	E	2	11	11			
BATT01-00393	F0	12.5µg/L	E	3	2	2			
BATT01-00393	F0	12.5µg/L	E	4	0	0			
BATT01-00393	F0	12.5µg/L	E	5	0	0			
BATT01-00393	F0	12.5µg/L	E	6	5	5			
BATT01-00393	F0	12.5µg/L	E	7	6	4			
BATT01-00393	F0	12.5µg/L	E	8	0	0			
BATT01-00393	F0	12.5µg/L	E	9	7	7			
BATT01-00393	F0	12.5µg/L	E	10	13	13			
BATT01-00393	F0	12.5µg/L	E	11	10	10			
BATT01-00393	F0	12.5µg/L	E	12	19	19			
BATT01-00393	F0	12.5µg/L	E	13	10	10			
BATT01-00393	F0	12.5µg/L	E	14	39	39			
BATT01-00393	F0	12.5µg/L	E	15	12	12			
BATT01-00393	F0	12.5µg/L	E	16	15	15			
BATT01-00393	F0	12.5µg/L	E	17	11	11			
BATT01-00393	F0	12.5µg/L	E	18	13	13			
BATT01-00393	F0	12.5µg/L	E	19	12	11			
BATT01-00393	F0	12.5µg/L	E	20	10	10			
BATT01-00393	F0	12.5µg/L	E	21	9	9			
BATT01-00393	F0	12.5µg/L	E	1-21			9.714285714	9.57142857	
BATT01-00393	F0	12.5µg/L	F	1	0	0			
BATT01-00393	F0	12.5µg/L	F	2	6	6			
BATT01-00393	F0	12.5µg/L	F	3	4	4			
BATT01-00393	F0	12.5µg/L	F	4	0	0			
BATT01-00393	F0	12.5µg/L	F	5	7	7			
BATT01-00393	F0	12.5µg/L	F	6	5	5			
BATT01-00393	F0	12.5µg/L	F	7	0	0			
BATT01-00393	F0	12.5µg/L	F	8	28	26			
BATT01-00393	F0	12.5µg/L	F	9	0	0			
BATT01-00393	F0	12.5µg/L	F	10	14	14			
BATT01-00393	F0	12.5µg/L	F	11	13	13			
BATT01-00393	F0	12.5µg/L	F	12	10	10			
BATT01-00393	F0	12.5µg/L	F	13	37	37			
BATT01-00393	F0	12.5µg/L	F	14	12	12			
BATT01-00393	F0	12.5µg/L	F	15	36	36			
BATT01-00393	F0	12.5µg/L	F	16	13	13			
BATT01-00393	F0	12.5µg/L	F	17	12	12			
BATT01-00393	F0	12.5µg/L	F	18	7	7			
BATT01-00393	F0	12.5µg/L	F	19	15	15			
BATT01-00393	F0	12.5µg/L	F	20	6	6			
BATT01-00393	F0	12.5µg/L	F	21	12	12			
BATT01-00393	F0	12.5µg/L	F	1-21			11.28571429	11.1904762	
BATT01-00393	F0	25µg/L	A	1	12	12			
BATT01-00393	F0	25µg/L	A	2	13	13			
BATT01-00393	F0	25µg/L	A	3	17	17			
BATT01-00393	F0	25µg/L	A	4	0	0			
BATT01-00393	F0	25µg/L	A	5	0	0			
BATT01-00393	F0	25µg/L	A	6	14	14			
BATT01-00393	F0	25µg/L	A	7	13	13			
BATT01-00393	F0	25µg/L	A	8	0	0			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	25µg/L	A	9	0	0			
BATT01-00393	F0	25µg/L	A	10	12	12			
BATT01-00393	F0	25µg/L	A	11	10	10			
BATT01-00393	F0	25µg/L	A	12	18	18			
BATT01-00393	F0	25µg/L	A	13	19	19			
BATT01-00393	F0	25µg/L	A	14	10	10			
BATT01-00393	F0	25µg/L	A	15	11	11			
BATT01-00393	F0	25µg/L	A	16	10	10			
BATT01-00393	F0	25µg/L	A	17	19	19			
BATT01-00393	F0	25µg/L	A	18	10	10			
BATT01-00393	F0	25µg/L	A	19	13	13			
BATT01-00393	F0	25µg/L	A	20	10	10			
BATT01-00393	F0	25µg/L	A	21	11	11			
BATT01-00393	F0	25µg/L	A	1-21			10.57142857	10.5714286	
BATT01-00393	F0	25µg/L	B	1	0	0			
BATT01-00393	F0	25µg/L	B	2	3	3			
BATT01-00393	F0	25µg/L	B	3	10	10			
BATT01-00393	F0	25µg/L	B	4	11	11			
BATT01-00393	F0	25µg/L	B	5	0	0			
BATT01-00393	F0	25µg/L	B	6	15	15			
BATT01-00393	F0	25µg/L	B	7	12	12			
BATT01-00393	F0	25µg/L	B	8	10	10			
BATT01-00393	F0	25µg/L	B	9	0	0			
BATT01-00393	F0	25µg/L	B	10	19	19			
BATT01-00393	F0	25µg/L	B	11	12	12			
BATT01-00393	F0	25µg/L	B	12	16	16			
BATT01-00393	F0	25µg/L	B	13	11	11			
BATT01-00393	F0	25µg/L	B	14	12	12			
BATT01-00393	F0	25µg/L	B	15	15	15			
BATT01-00393	F0	25µg/L	B	16	20	20			
BATT01-00393	F0	25µg/L	B	17	18	18			
BATT01-00393	F0	25µg/L	B	18	16	16			
BATT01-00393	F0	25µg/L	B	19	12	12			
BATT01-00393	F0	25µg/L	B	20	18	18			
BATT01-00393	F0	25µg/L	B	21	10	10			
BATT01-00393	F0	25µg/L	B	1-21			11.42857143	11.4285714	
BATT01-00393	F0	25µg/L	C	1	15	15			
BATT01-00393	F0	25µg/L	C	2	7	7			
BATT01-00393	F0	25µg/L	C	3	6	6			
BATT01-00393	F0	25µg/L	C	4	0	0			
BATT01-00393	F0	25µg/L	C	5	0	0			
BATT01-00393	F0	25µg/L	C	6	2	2			
BATT01-00393	F0	25µg/L	C	7	14	14			
BATT01-00393	F0	25µg/L	C	8	11	11			
BATT01-00393	F0	25µg/L	C	9	15	15			
BATT01-00393	F0	25µg/L	C	10	13	13			
BATT01-00393	F0	25µg/L	C	11	9	9			
BATT01-00393	F0	25µg/L	C	12	10	10			
BATT01-00393	F0	25µg/L	C	13	13	13			
BATT01-00393	F0	25µg/L	C	14	10	10			
BATT01-00393	F0	25µg/L	C	15	19	19			
BATT01-00393	F0	25µg/L	C	16	0	0			
BATT01-00393	F0	25µg/L	C	17	12	12			
BATT01-00393	F0	25µg/L	C	18	19	19			
BATT01-00393	F0	25µg/L	C	19	17	17			
BATT01-00393	F0	25µg/L	C	20	19	19			
BATT01-00393	F0	25µg/L	C	21	12	12			
BATT01-00393	F0	25µg/L	C	1-21			10.61904762	10.6190476	
BATT01-00393	F0	25µg/L	D	1	0	0			
BATT01-00393	F0	25µg/L	D	2	14	14			
BATT01-00393	F0	25µg/L	D	3	0	0			
BATT01-00393	F0	25µg/L	D	4	18	18			
BATT01-00393	F0	25µg/L	D	5	16	16			
BATT01-00393	F0	25µg/L	D	6	17	17			
BATT01-00393	F0	25µg/L	D	7	1	0			
BATT01-00393	F0	25µg/L	D	8	35	28			
BATT01-00393	F0	25µg/L	D	9	14	14			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	25µg/L	D	10	12	12			
BATT01-00393	F0	25µg/L	D	11	11	11			
BATT01-00393	F0	25µg/L	D	12	15	15			
BATT01-00393	F0	25µg/L	D	13	17	17			
BATT01-00393	F0	25µg/L	D	14	13	13			
BATT01-00393	F0	25µg/L	D	15	14	14			
BATT01-00393	F0	25µg/L	D	16	10	7			
BATT01-00393	F0	25µg/L	D	17	17	17			
BATT01-00393	F0	25µg/L	D	18	18	18			
BATT01-00393	F0	25µg/L	D	19	15	15			
BATT01-00393	F0	25µg/L	D	20	10	10			
BATT01-00393	F0	25µg/L	D	21	11	11			
BATT01-00393	F0	25µg/L	D	1-21			13.23809524	12.7142857	
BATT01-00393	F0	25µg/L	E	1	0	0			
BATT01-00393	F0	25µg/L	E	2	0	0			
BATT01-00393	F0	25µg/L	E	3	4	4			
BATT01-00393	F0	25µg/L	E	4	4	4			
BATT01-00393	F0	25µg/L	E	5	10	10			
BATT01-00393	F0	25µg/L	E	6	0	0			
BATT01-00393	F0	25µg/L	E	7	0	0			
BATT01-00393	F0	25µg/L	E	8	0	0			
BATT01-00393	F0	25µg/L	E	9	17	17			
BATT01-00393	F0	25µg/L	E	10	17	17			
BATT01-00393	F0	25µg/L	E	11	7	7			
BATT01-00393	F0	25µg/L	E	12	11	11			
BATT01-00393	F0	25µg/L	E	13	10	10			
BATT01-00393	F0	25µg/L	E	14	11	11			
BATT01-00393	F0	25µg/L	E	15	16	16			
BATT01-00393	F0	25µg/L	E	16	36	36			
BATT01-00393	F0	25µg/L	E	17	20	20			
BATT01-00393	F0	25µg/L	E	18	10	10			
BATT01-00393	F0	25µg/L	E	19	18	18			
BATT01-00393	F0	25µg/L	E	20	17	17			
BATT01-00393	F0	25µg/L	E	21	17	17			
BATT01-00393	F0	25µg/L	E	1-21			10.71428571	10.7142857	
BATT01-00393	F0	25µg/L	F	1	0	0			
BATT01-00393	F0	25µg/L	F	2	10	10			
BATT01-00393	F0	25µg/L	F	3	0	0			
BATT01-00393	F0	25µg/L	F	4	0	0			
BATT01-00393	F0	25µg/L	F	5	0	0			
BATT01-00393	F0	25µg/L	F	6	0	0			
BATT01-00393	F0	25µg/L	F	7	10	10			
BATT01-00393	F0	25µg/L	F	8	2	0			
BATT01-00393	F0	25µg/L	F	9	0	0			
BATT01-00393	F0	25µg/L	F	10	13	13			
BATT01-00393	F0	25µg/L	F	11	15	15			
BATT01-00393	F0	25µg/L	F	12	13	13			
BATT01-00393	F0	25µg/L	F	13	16	16			
BATT01-00393	F0	25µg/L	F	14	19	19			
BATT01-00393	F0	25µg/L	F	15	17	17			
BATT01-00393	F0	25µg/L	F	16	0	0			
BATT01-00393	F0	25µg/L	F	17	15	15			
BATT01-00393	F0	25µg/L	F	18	17	17			
BATT01-00393	F0	25µg/L	F	19	16	15			
BATT01-00393	F0	25µg/L	F	20	10	10			
BATT01-00393	F0	25µg/L	F	21	18	18			
BATT01-00393	F0	25µg/L	F	1-21			9.095238095	8.95238095	
BATT01-00393	F0	50µg/L	A	1	0	0			
BATT01-00393	F0	50µg/L	A	2	12	12			
BATT01-00393	F0	50µg/L	A	3	2	2			
BATT01-00393	F0	50µg/L	A	4	11	11			
BATT01-00393	F0	50µg/L	A	5	10	10			
BATT01-00393	F0	50µg/L	A	6	0	0			
BATT01-00393	F0	50µg/L	A	7	15	15			
BATT01-00393	F0	50µg/L	A	8	0	0			
BATT01-00393	F0	50µg/L	A	9	13	13			
BATT01-00393	F0	50µg/L	A	10	18	18			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	50µg/L	A	11	11	11			
BATT01-00393	F0	50µg/L	A	12	10	10			
BATT01-00393	F0	50µg/L	A	13	19	19			
BATT01-00393	F0	50µg/L	A	14	17	17			
BATT01-00393	F0	50µg/L	A	15	10	10			
BATT01-00393	F0	50µg/L	A	16	23	23			
BATT01-00393	F0	50µg/L	A	17	16	16			
BATT01-00393	F0	50µg/L	A	18	11	11			
BATT01-00393	F0	50µg/L	A	19	12	12			
BATT01-00393	F0	50µg/L	A	20	10	10			
BATT01-00393	F0	50µg/L	A	21	19	19			
BATT01-00393	F0	50µg/L	A	1-21			11.38095238	11.3809524	
BATT01-00393	F0	50µg/L	B	1	16	16			
BATT01-00393	F0	50µg/L	B	2	17	16			
BATT01-00393	F0	50µg/L	B	3	0	0			
BATT01-00393	F0	50µg/L	B	4	0	0			
BATT01-00393	F0	50µg/L	B	5	10	10			
BATT01-00393	F0	50µg/L	B	6	13	13			
BATT01-00393	F0	50µg/L	B	7	18	18			
BATT01-00393	F0	50µg/L	B	8	0	0			
BATT01-00393	F0	50µg/L	B	9	14	13			
BATT01-00393	F0	50µg/L	B	10	10	10			
BATT01-00393	F0	50µg/L	B	11	19	19			
BATT01-00393	F0	50µg/L	B	12	7	7			
BATT01-00393	F0	50µg/L	B	13	18	18			
BATT01-00393	F0	50µg/L	B	14	11	11			
BATT01-00393	F0	50µg/L	B	15	8	8			
BATT01-00393	F0	50µg/L	B	16	2	2			
BATT01-00393	F0	50µg/L	B	17	8	8			
BATT01-00393	F0	50µg/L	B	18	19	19			
BATT01-00393	F0	50µg/L	B	19	11	11			
BATT01-00393	F0	50µg/L	B	20	16	16			
BATT01-00393	F0	50µg/L	B	21	10	10			
BATT01-00393	F0	50µg/L	B	1-21			10.80952381	10.7142857	
BATT01-00393	F0	50µg/L	C	1	25	25			
BATT01-00393	F0	50µg/L	C	2	22	22			
BATT01-00393	F0	50µg/L	C	3	0	0			
BATT01-00393	F0	50µg/L	C	4	9	9			
BATT01-00393	F0	50µg/L	C	5	15	15			
BATT01-00393	F0	50µg/L	C	6	10	10			
BATT01-00393	F0	50µg/L	C	7	0	0			
BATT01-00393	F0	50µg/L	C	8	7	7			
BATT01-00393	F0	50µg/L	C	9	12	12			
BATT01-00393	F0	50µg/L	C	10	11	11			
BATT01-00393	F0	50µg/L	C	11	15	15			
BATT01-00393	F0	50µg/L	C	12	16	16			
BATT01-00393	F0	50µg/L	C	13	11	11			
BATT01-00393	F0	50µg/L	C	14	13	13			
BATT01-00393	F0	50µg/L	C	15	15	15			
BATT01-00393	F0	50µg/L	C	16	24	24			
BATT01-00393	F0	50µg/L	C	17	15	15			
BATT01-00393	F0	50µg/L	C	18	17	17			
BATT01-00393	F0	50µg/L	C	19	19	19			
BATT01-00393	F0	50µg/L	C	20	8	8			
BATT01-00393	F0	50µg/L	C	21	17	17			
BATT01-00393	F0	50µg/L	C	1-21			13.38095238	13.3809524	
BATT01-00393	F0	50µg/L	D	1	10	10			
BATT01-00393	F0	50µg/L	D	2	17	17			
BATT01-00393	F0	50µg/L	D	3	0	0			
BATT01-00393	F0	50µg/L	D	4	0	0			
BATT01-00393	F0	50µg/L	D	5	13	13			
BATT01-00393	F0	50µg/L	D	6	19	18			
BATT01-00393	F0	50µg/L	D	7	0	0			
BATT01-00393	F0	50µg/L	D	8	40	39			
BATT01-00393	F0	50µg/L	D	9	0	0			
BATT01-00393	F0	50µg/L	D	10	17	17			
BATT01-00393	F0	50µg/L	D	11	18	18			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	50µg/L	D	12	9	9			
BATT01-00393	F0	50µg/L	D	13	13	13			
BATT01-00393	F0	50µg/L	D	14	12	12			
BATT01-00393	F0	50µg/L	D	15	3	3			
BATT01-00393	F0	50µg/L	D	16	18	16			
BATT01-00393	F0	50µg/L	D	17	17	17			
BATT01-00393	F0	50µg/L	D	18	18	18			
BATT01-00393	F0	50µg/L	D	19	15	15			
BATT01-00393	F0	50µg/L	D	20	19	19			
BATT01-00393	F0	50µg/L	D	21	11	11			
BATT01-00393	F0	50µg/L	D	1-21			12.80952381	12.6190476	
BATT01-00393	F0	50µg/L	E	1	0	0			
BATT01-00393	F0	50µg/L	E	2	0	0			
BATT01-00393	F0	50µg/L	E	3	0	0			
BATT01-00393	F0	50µg/L	E	4	12	12			
BATT01-00393	F0	50µg/L	E	5	0	0			
BATT01-00393	F0	50µg/L	E	6	11	11			
BATT01-00393	F0	50µg/L	E	7	0	0			
BATT01-00393	F0	50µg/L	E	8	0	0			
BATT01-00393	F0	50µg/L	E	9	14	14			
BATT01-00393	F0	50µg/L	E	10	19	19			
BATT01-00393	F0	50µg/L	E	11	17	17			
BATT01-00393	F0	50µg/L	E	12	15	15			
BATT01-00393	F0	50µg/L	E	13	12	12			
BATT01-00393	F0	50µg/L	E	14	17	17			
BATT01-00393	F0	50µg/L	E	15	19	19			
BATT01-00393	F0	50µg/L	E	16	14	14			
BATT01-00393	F0	50µg/L	E	17	10	10			
BATT01-00393	F0	50µg/L	E	18	11	11			
BATT01-00393	F0	50µg/L	E	19	14	13			
BATT01-00393	F0	50µg/L	E	20	17	17			
BATT01-00393	F0	50µg/L	E	21	18	18			
BATT01-00393	F0	50µg/L	E	1-21			10.47619048	10.4285714	
BATT01-00393	F0	50µg/L	F	1	16	16			
BATT01-00393	F0	50µg/L	F	2	0	0			
BATT01-00393	F0	50µg/L	F	3	0	0			
BATT01-00393	F0	50µg/L	F	4	12	12			
BATT01-00393	F0	50µg/L	F	5	0	0			
BATT01-00393	F0	50µg/L	F	6	4	4			
BATT01-00393	F0	50µg/L	F	7	14	14			
BATT01-00393	F0	50µg/L	F	8	0	0			
BATT01-00393	F0	50µg/L	F	9	0	0			
BATT01-00393	F0	50µg/L	F	10	14	14			
BATT01-00393	F0	50µg/L	F	11	18	18			
BATT01-00393	F0	50µg/L	F	12	14	14			
BATT01-00393	F0	50µg/L	F	13	15	15			
BATT01-00393	F0	50µg/L	F	14	16	16			
BATT01-00393	F0	50µg/L	F	15	10	10			
BATT01-00393	F0	50µg/L	F	16	19	19			
BATT01-00393	F0	50µg/L	F	17	10	10			
BATT01-00393	F0	50µg/L	F	18	15	15			
BATT01-00393	F0	50µg/L	F	19	18	17			
BATT01-00393	F0	50µg/L	F	20	18	18			
BATT01-00393	F0	50µg/L	F	21	9	9			
BATT01-00393	F0	50µg/L	F	1-21			10.57142857	10.5238095	
BATT01-00393	F0	100µg/L	A	1	6	6			
BATT01-00393	F0	100µg/L	A	2	0	0			
BATT01-00393	F0	100µg/L	A	3	0	0			
BATT01-00393	F0	100µg/L	A	4	0	0			
BATT01-00393	F0	100µg/L	A	5	0	0			
BATT01-00393	F0	100µg/L	A	6	0	0			
BATT01-00393	F0	100µg/L	A	7	0	0			
BATT01-00393	F0	100µg/L	A	8	3	0			
BATT01-00393	F0	100µg/L	A	9	0	0			
BATT01-00393	F0	100µg/L	A	10	18	18			
BATT01-00393	F0	100µg/L	A	11	15	15			
BATT01-00393	F0	100µg/L	A	12	14	14			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	100µg/L	A	13	17	17			
BATT01-00393	F0	100µg/L	A	14	19	19			
BATT01-00393	F0	100µg/L	A	15	13	13			
BATT01-00393	F0	100µg/L	A	16	10	10			
BATT01-00393	F0	100µg/L	A	17	14	14			
BATT01-00393	F0	100µg/L	A	18	16	16			
BATT01-00393	F0	100µg/L	A	19	8	7			
BATT01-00393	F0	100µg/L	A	20	17	17			
BATT01-00393	F0	100µg/L	A	21	19	19			
BATT01-00393	F0	100µg/L	A	1-21			9	8.80952381	
BATT01-00393	F0	100µg/L	B	1	0	0			
BATT01-00393	F0	100µg/L	B	2	1	1			
BATT01-00393	F0	100µg/L	B	3	0	0			
BATT01-00393	F0	100µg/L	B	4	0	0			
BATT01-00393	F0	100µg/L	B	5	0	0			
BATT01-00393	F0	100µg/L	B	6	0	0			
BATT01-00393	F0	100µg/L	B	7	11	11			
BATT01-00393	F0	100µg/L	B	8	13	13			
BATT01-00393	F0	100µg/L	B	9	15	14			
BATT01-00393	F0	100µg/L	B	10	17	17			
BATT01-00393	F0	100µg/L	B	11	14	14			
BATT01-00393	F0	100µg/L	B	12	12	12			
BATT01-00393	F0	100µg/L	B	13	15	15			
BATT01-00393	F0	100µg/L	B	14	10	10			
BATT01-00393	F0	100µg/L	B	15	15	15			
BATT01-00393	F0	100µg/L	B	16	12	12			
BATT01-00393	F0	100µg/L	B	17	0	0			
BATT01-00393	F0	100µg/L	B	18	13	13			
BATT01-00393	F0	100µg/L	B	19	16	16			
BATT01-00393	F0	100µg/L	B	20	8	8			
BATT01-00393	F0	100µg/L	B	21	10	10			
BATT01-00393	F0	100µg/L	B	1-21			8.666666667	8.61904762	
BATT01-00393	F0	100µg/L	C	1	0	0			
BATT01-00393	F0	100µg/L	C	2	0	0			
BATT01-00393	F0	100µg/L	C	3	5	5			
BATT01-00393	F0	100µg/L	C	4	3	3			
BATT01-00393	F0	100µg/L	C	5	6	6			
BATT01-00393	F0	100µg/L	C	6	8	8			
BATT01-00393	F0	100µg/L	C	7	0	0			
BATT01-00393	F0	100µg/L	C	8	11	11			
BATT01-00393	F0	100µg/L	C	9	10	10			
BATT01-00393	F0	100µg/L	C	10	16	16			
BATT01-00393	F0	100µg/L	C	11	13	13			
BATT01-00393	F0	100µg/L	C	12	16	16			
BATT01-00393	F0	100µg/L	C	13	14	14			
BATT01-00393	F0	100µg/L	C	14	8	8			
BATT01-00393	F0	100µg/L	C	15	19	19			
BATT01-00393	F0	100µg/L	C	16	0	0			
BATT01-00393	F0	100µg/L	C	17	16	16			
BATT01-00393	F0	100µg/L	C	18	15	15			
BATT01-00393	F0	100µg/L	C	19	13	13			
BATT01-00393	F0	100µg/L	C	20	15	15			
BATT01-00393	F0	100µg/L	C	21	18	18			
BATT01-00393	F0	100µg/L	C	1-21			9.80952381	9.80952381	
BATT01-00393	F0	100µg/L	D	1	0	0			
BATT01-00393	F0	100µg/L	D	2	0	0			
BATT01-00393	F0	100µg/L	D	3	20	17			
BATT01-00393	F0	100µg/L	D	4	0	0			
BATT01-00393	F0	100µg/L	D	5	0	0			
BATT01-00393	F0	100µg/L	D	6	2	2			
BATT01-00393	F0	100µg/L	D	7	0	0			
BATT01-00393	F0	100µg/L	D	8	0	0			
BATT01-00393	F0	100µg/L	D	9	17	17			
BATT01-00393	F0	100µg/L	D	10	4	4			
BATT01-00393	F0	100µg/L	D	11	15	15			
BATT01-00393	F0	100µg/L	D	12	15	15			
BATT01-00393	F0	100µg/L	D	13	13	13			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F0	100µg/L	D	14	16	16			
BATT01-00393	F0	100µg/L	D	15	18	18			
BATT01-00393	F0	100µg/L	D	16	14	14			
BATT01-00393	F0	100µg/L	D	17	10	10			
BATT01-00393	F0	100µg/L	D	18	7	7			
BATT01-00393	F0	100µg/L	D	19	12	11			
BATT01-00393	F0	100µg/L	D	20	19	19			
BATT01-00393	F0	100µg/L	D	21	10	10			
BATT01-00393	F0	100µg/L	D	1-21			9.142857143	8.95238095	
BATT01-00393	F0	100µg/L	E	1	0	0			
BATT01-00393	F0	100µg/L	E	2	18	18			
BATT01-00393	F0	100µg/L	E	3	15	15			
BATT01-00393	F0	100µg/L	E	4	7	7			
BATT01-00393	F0	100µg/L	E	5	12	12			
BATT01-00393	F0	100µg/L	E	6	15	15			
BATT01-00393	F0	100µg/L	E	7	11	11			
BATT01-00393	F0	100µg/L	E	8	16	16			
BATT01-00393	F0	100µg/L	E	9	10	10			
BATT01-00393	F0	100µg/L	E	10	7	7			
BATT01-00393	F0	100µg/L	E	11	13	13			
BATT01-00393	F0	100µg/L	E	12	18	18			
BATT01-00393	F0	100µg/L	E	13	16	16			
BATT01-00393	F0	100µg/L	E	14	19	19			
BATT01-00393	F0	100µg/L	E	15	10	10			
BATT01-00393	F0	100µg/L	E	16	23	23			
BATT01-00393	F0	100µg/L	E	17	10	10			
BATT01-00393	F0	100µg/L	E	18	13	13			
BATT01-00393	F0	100µg/L	E	19	17	15			
BATT01-00393	F0	100µg/L	E	20	14	14			
BATT01-00393	F0	100µg/L	E	21	18	18			
BATT01-00393	F0	100µg/L	E	1-21			13.42857143	13.3333333	
BATT01-00393	F0	100µg/L	F	1	13	13			
BATT01-00393	F0	100µg/L	F	2	0	0			
BATT01-00393	F0	100µg/L	F	3	11	11			
BATT01-00393	F0	100µg/L	F	4	15	12			
BATT01-00393	F0	100µg/L	F	5	11	11			
BATT01-00393	F0	100µg/L	F	6	13	13			
BATT01-00393	F0	100µg/L	F	7	0	0			
BATT01-00393	F0	100µg/L	F	8	0	0			
BATT01-00393	F0	100µg/L	F	9	16	14			
BATT01-00393	F0	100µg/L	F	10	8	8			
BATT01-00393	F0	100µg/L	F	11	14	14			
BATT01-00393	F0	100µg/L	F	12	17	17			
BATT01-00393	F0	100µg/L	F	13	17	17			
BATT01-00393	F0	100µg/L	F	14	18	18			
BATT01-00393	F0	100µg/L	F	15	17	17			
BATT01-00393	F0	100µg/L	F	16	17	17			
BATT01-00393	F0	100µg/L	F	17	15	15			
BATT01-00393	F0	100µg/L	F	18	14	14			
BATT01-00393	F0	100µg/L	F	19	16	16			
BATT01-00393	F0	100µg/L	F	20	15	15			
BATT01-00393	F0	100µg/L	F	21	16	16			
BATT01-00393	F0	100µg/L	F	1-21			12.52380952	12.2857143	
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	99	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	100	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	101	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	102	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	103	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	104	38	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	105	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	106	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	107	13	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	108	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	109	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	110	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	111	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	112	10	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	113	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	114	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	115	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	116	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	117	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	118	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	119	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	A	99-119			20.04761905	19.952381	
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	99	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	100	24	24			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	101	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	102	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	103	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	104	10	9			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	105	12	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	106	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	107	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	108	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	109	33	33			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	110	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	111	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	112	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	113	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	114	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	115	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	116	18	18			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	117	18	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	118	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	119	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	B	99-119			18.23809524	18.047619	
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	99	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	100	20	20			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	101	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	102	33	33			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	103	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	104	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	105	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	106	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	107	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	108	6	6			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	109	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	110	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	111	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	112	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	113	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	114	6	6			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	115	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	116	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	117	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	118	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	119	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	C	99-119			18.19047619	18.1904762	
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	99	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	100	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	101	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	102	22	22			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	103	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	104	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	105	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	106	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	107	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	108	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	109	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	110	36	36			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	111	38	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	112	26	26			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	113	11	11			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	114	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	115	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	116	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	117	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	118	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	119	36	36			
BATT01-00393	F1	(Ctrl) 0.0µg/L	D	99-119			21.71428571	21.6666667	
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	99	20	20			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	100	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	101	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	102	24	24			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	103	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	104	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	105	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	106	9	8			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	107	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	108	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	109	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	110	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	111	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	112	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	113	36	36			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	114	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	115	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	116	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	117	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	118	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	119	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	E	99-119			19.66666667	19.6190476	
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	99	24	24			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	100	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	101	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	102	36	36			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	103	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	104	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	105	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	106	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	107	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	108	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	109	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	110	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	111	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	112	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	113	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	114	18	18			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	115	18	18			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	116	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	117	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	118	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	119	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	F	99-119			22.23809524	22.2380952	
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	99	17	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	100	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	101	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	102	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	103	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	104	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	105	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	106	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	107	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	108	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	109	35	35			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	110	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	111	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	112	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	113	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	114	26	26			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	115	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	116	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	117	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	118	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	119	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	G	99-119			20.52380952	20.4761905	
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	99	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	100	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	101	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	102	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	103	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	104	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	105	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	106	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	107	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	108	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	109	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	110	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	111	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	112	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	113	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	114	7	7			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	115	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	116	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	117	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	118	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	119	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	H	99-119			18.76190476	18.7619048	
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	99	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	100	22	22			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	101	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	102	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	103	32	32			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	104	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	105	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	106	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	107	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	108	36	36			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	109	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	110	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	111	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	112	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	113	7	7			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	114	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	115	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	116	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	117	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	118	36	36			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	119	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	I	99-119			19	19	
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	99	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	100	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	101	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	102	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	103	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	104	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	105	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	106	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	107	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	108	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	109	23	23			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	110	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	111	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	112	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	113	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	114	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	115	28	28			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	116	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	117	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	118	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	119	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	J	99-119			17.61904762	17.6190476	
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	99	18	18			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	100	22	22			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	101	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	102	36	36			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	103	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	104	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	105	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	106	14	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	107	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	108	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	109	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	110	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	111	13	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	112	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	113	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	114	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	115	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	116	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	117	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	118	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	119	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	K	99-119			21.38095238	21.2857143	
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	99	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	100	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	101	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	102	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	103	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	104	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	105	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	106	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	107	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	108	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	109	35	35			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	110	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	111	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	112	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	113	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	114	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	115	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	116	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	117	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	118	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	119	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	L	99-119			20.71428571	20.7142857	
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	99	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	100	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	101	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	102	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	103	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	104	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	105	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	106	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	107	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	108	34	34			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	109	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	110	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	111	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	112	11	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	113	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	114	5	5			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	115	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	116	15	15			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	117	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	118	35	35			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	119	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	M	99-119			16.19047619	16.1428571	
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	99	20	20			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	100	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	101	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	102	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	103	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	104	18	18			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	105	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	106	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	107	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	108	26	26			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	109	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	110	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	111	13	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	112	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	113	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	114	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	115	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	116	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	117	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	118	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	119	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	N	99-119			16.80952381	16.7619048	
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	99	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	100	32	32			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	101	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	102	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	103	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	104	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	105	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	106	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	107	29	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	108	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	109	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	110	24	24			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	111	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	112	26	26			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	113	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	114	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	115	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	116	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	117	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	118	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	119	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	O	99-119			18.66666667	18.6190476	
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	99	23	23			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	100	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	101	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	102	32	32			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	103	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	104	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	105	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	106	10	9			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	107	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	108	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	109	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	110	35	35			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	111	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	112	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	113	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	114	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	115	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	116	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	117	28	28			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	118	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	119	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	P	99-119			19.66666667	19.6190476	
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	99	24	24			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	100	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	101	35	35			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	102	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	103	22	22			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	104	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	105	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	106	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	107	36	36			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	108	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	109	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	110	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	111	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	112	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	113	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	114	9	9			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	115	18	18			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	116	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	117	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	118	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	119	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	Q	99-119			21.85714286	21.8571429	
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	99	20	20			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	100	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	101	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	102	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	103	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	104	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	105	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	106	12	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	107	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	108	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	109	26	26			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	110	33	33			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	111	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	112	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	113	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	114	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	115	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	116	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	117	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	118	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	119	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	R	99-119			20.61904762	20.5714286	
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	99	24	24			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	100	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	101	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	102	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	103	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	104	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	105	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	106	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	107	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	108	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	109	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	110	23	23			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	111	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	112	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	113	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	114	9	9			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	115	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	116	18	18			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	117	10	8			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	118	11	9			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	119	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	S	99-119			19.71428571	19.5238095	
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	99	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	100	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	101	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	102	32	32			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	103	24	24			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	104	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	105	12	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	106	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	107	12	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	108	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	109	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	110	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	111	15	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	112	13	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	113	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	114	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	115	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	116	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	117	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	118	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	119	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	T	99-119			15.28571429	15.0952381	
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	99	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	100	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	101	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	102	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	103	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	104	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	105	18	18			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	106	26	26			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	107	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	108	32	32			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	109	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	110	29	29			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	111	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	112	15	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	113	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	114	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	115	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	116	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	117	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	118	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	119	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	U	99-119			18.14285714	18.0952381	
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	99	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	100	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	101	19	19			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	102	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	103	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	104	13	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	105	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	106	18	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	107	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	108	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	109	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	110	33	33			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	111	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	112	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	113	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	114	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	115	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	116	38	38			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	117	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	118	28	28			
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	119	12	12			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	(Ctrl) 0.0µg/L	V	99-119			17.9047619	17.7619048	
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	99	16	16			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	100	0	0			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	101	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	102	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	103	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	104	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	105	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	106	13	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	107	13	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	108	25	25			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	109	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	110	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	111	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	112	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	113	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	114	8	8			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	115	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	116	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	117	27	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	118	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	119	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	W	99-119			16.19047619	16.047619	
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	99	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	100	12	12			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	101	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	102	15	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	103	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	104	28	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	105	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	106	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	107	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	108	37	37			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	109	13	13			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	110	26	26			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	111	28	27			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	112	39	39			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	113	14	14			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	114	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	115	11	11			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	116	17	17			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	117	15	15			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	118	10	10			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	119	26	26			
BATT01-00393	F1	(Ctrl) 0.0µg/L	X	99-119			18.14285714	18	
BATT01-00393	F1	6.3µg/L	A	99	0	0			
BATT01-00393	F1	6.3µg/L	A	100	18	18			
BATT01-00393	F1	6.3µg/L	A	101	19	19			
BATT01-00393	F1	6.3µg/L	A	102	16	16			
BATT01-00393	F1	6.3µg/L	A	103	15	15			
BATT01-00393	F1	6.3µg/L	A	104	17	17			
BATT01-00393	F1	6.3µg/L	A	105	10	10			
BATT01-00393	F1	6.3µg/L	A	106	11	11			
BATT01-00393	F1	6.3µg/L	A	107	14	14			
BATT01-00393	F1	6.3µg/L	A	108	14	14			
BATT01-00393	F1	6.3µg/L	A	109	12	12			
BATT01-00393	F1	6.3µg/L	A	110	16	16			
BATT01-00393	F1	6.3µg/L	A	111	17	17			
BATT01-00393	F1	6.3µg/L	A	112	9	9			
BATT01-00393	F1	6.3µg/L	A	113	5	5			
BATT01-00393	F1	6.3µg/L	A	114	13	13			
BATT01-00393	F1	6.3µg/L	A	115	19	19			
BATT01-00393	F1	6.3µg/L	A	116	14	14			
BATT01-00393	F1	6.3µg/L	A	117	10	10			
BATT01-00393	F1	6.3µg/L	A	118	12	12			
BATT01-00393	F1	6.3µg/L	A	119	15	15			
BATT01-00393	F1	6.3µg/L	A	99-119			13.14285714	13.1428571	

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	6.3µg/L	B	99	0	0			
BATT01-00393	F1	6.3µg/L	B	100	10	10			
BATT01-00393	F1	6.3µg/L	B	101	14	14			
BATT01-00393	F1	6.3µg/L	B	102	19	19			
BATT01-00393	F1	6.3µg/L	B	103	15	15			
BATT01-00393	F1	6.3µg/L	B	104	18	18			
BATT01-00393	F1	6.3µg/L	B	105	14	14			
BATT01-00393	F1	6.3µg/L	B	106	13	13			
BATT01-00393	F1	6.3µg/L	B	107	15	15			
BATT01-00393	F1	6.3µg/L	B	108	13	13			
BATT01-00393	F1	6.3µg/L	B	109	15	15			
BATT01-00393	F1	6.3µg/L	B	110	10	10			
BATT01-00393	F1	6.3µg/L	B	111	11	11			
BATT01-00393	F1	6.3µg/L	B	112	10	10			
BATT01-00393	F1	6.3µg/L	B	113	13	13			
BATT01-00393	F1	6.3µg/L	B	114	10	9			
BATT01-00393	F1	6.3µg/L	B	115	8	8			
BATT01-00393	F1	6.3µg/L	B	116	16	16			
BATT01-00393	F1	6.3µg/L	B	117	27	27			
BATT01-00393	F1	6.3µg/L	B	118	15	15			
BATT01-00393	F1	6.3µg/L	B	119	16	16			
BATT01-00393	F1	6.3µg/L	B	99-119			13.42857143	13.3809524	
BATT01-00393	F1	6.3µg/L	C	99	14	14			
BATT01-00393	F1	6.3µg/L	C	100	12	12			
BATT01-00393	F1	6.3µg/L	C	101	18	18			
BATT01-00393	F1	6.3µg/L	C	102	13	13			
BATT01-00393	F1	6.3µg/L	C	103	13	13			
BATT01-00393	F1	6.3µg/L	C	104	19	19			
BATT01-00393	F1	6.3µg/L	C	105	6	6			
BATT01-00393	F1	6.3µg/L	C	106	19	19			
BATT01-00393	F1	6.3µg/L	C	107	10	10			
BATT01-00393	F1	6.3µg/L	C	108	5	5			
BATT01-00393	F1	6.3µg/L	C	109	10	10			
BATT01-00393	F1	6.3µg/L	C	110	18	18			
BATT01-00393	F1	6.3µg/L	C	111	10	10			
BATT01-00393	F1	6.3µg/L	C	112	9	9			
BATT01-00393	F1	6.3µg/L	C	113	11	11			
BATT01-00393	F1	6.3µg/L	C	114	12	12			
BATT01-00393	F1	6.3µg/L	C	115	15	15			
BATT01-00393	F1	6.3µg/L	C	116	10	10			
BATT01-00393	F1	6.3µg/L	C	117	12	12			
BATT01-00393	F1	6.3µg/L	C	118	27	27			
BATT01-00393	F1	6.3µg/L	C	119	19	19			
BATT01-00393	F1	6.3µg/L	C	99-119			13.42857143	13.4285714	
BATT01-00393	F1	6.3µg/L	D	99	12	12			
BATT01-00393	F1	6.3µg/L	D	100	0	0			
BATT01-00393	F1	6.3µg/L	D	101	17	17			
BATT01-00393	F1	6.3µg/L	D	102	15	14			
BATT01-00393	F1	6.3µg/L	D	103	12	12			
BATT01-00393	F1	6.3µg/L	D	104	13	13			
BATT01-00393	F1	6.3µg/L	D	105	10	10			
BATT01-00393	F1	6.3µg/L	D	106	17	17			
BATT01-00393	F1	6.3µg/L	D	107	29	29			
BATT01-00393	F1	6.3µg/L	D	108	10	10			
BATT01-00393	F1	6.3µg/L	D	109	12	12			
BATT01-00393	F1	6.3µg/L	D	110	17	17			
BATT01-00393	F1	6.3µg/L	D	111	19	19			
BATT01-00393	F1	6.3µg/L	D	112	12	12			
BATT01-00393	F1	6.3µg/L	D	113	18	18			
BATT01-00393	F1	6.3µg/L	D	114	10	10			
BATT01-00393	F1	6.3µg/L	D	115	11	11			
BATT01-00393	F1	6.3µg/L	D	116	18	18			
BATT01-00393	F1	6.3µg/L	D	117	13	13			
BATT01-00393	F1	6.3µg/L	D	118	23	23			
BATT01-00393	F1	6.3µg/L	D	119	12	12			
BATT01-00393	F1	6.3µg/L	D	99-119			14.28571429	14.2380952	
BATT01-00393	F1	6.3µg/L	E	99	0	0			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	6.3µg/L	E	100	0	0			
BATT01-00393	F1	6.3µg/L	E	101	12	12			
BATT01-00393	F1	6.3µg/L	E	102	15	15			
BATT01-00393	F1	6.3µg/L	E	103	11	11			
BATT01-00393	F1	6.3µg/L	E	104	12	12			
BATT01-00393	F1	6.3µg/L	E	105	19	19			
BATT01-00393	F1	6.3µg/L	E	106	13	13			
BATT01-00393	F1	6.3µg/L	E	107	11	11			
BATT01-00393	F1	6.3µg/L	E	108	15	15			
BATT01-00393	F1	6.3µg/L	E	109	23	23			
BATT01-00393	F1	6.3µg/L	E	110	14	14			
BATT01-00393	F1	6.3µg/L	E	111	17	16			
BATT01-00393	F1	6.3µg/L	E	112	10	10			
BATT01-00393	F1	6.3µg/L	E	113	14	14			
BATT01-00393	F1	6.3µg/L	E	114	17	17			
BATT01-00393	F1	6.3µg/L	E	115	18	18			
BATT01-00393	F1	6.3µg/L	E	116	12	12			
BATT01-00393	F1	6.3µg/L	E	117	17	17			
BATT01-00393	F1	6.3µg/L	E	118	10	10			
BATT01-00393	F1	6.3µg/L	E	119	29	29			
BATT01-00393	F1	6.3µg/L	E	99-119			13.76190476	13.7142857	
BATT01-00393	F1	6.3µg/L	F	99	15	15			
BATT01-00393	F1	6.3µg/L	F	100	13	13			
BATT01-00393	F1	6.3µg/L	F	101	19	19			
BATT01-00393	F1	6.3µg/L	F	102	12	12			
BATT01-00393	F1	6.3µg/L	F	103	12	12			
BATT01-00393	F1	6.3µg/L	F	104	10	9			
BATT01-00393	F1	6.3µg/L	F	105	10	8			
BATT01-00393	F1	6.3µg/L	F	106	11	11			
BATT01-00393	F1	6.3µg/L	F	107	12	12			
BATT01-00393	F1	6.3µg/L	F	108	29	29			
BATT01-00393	F1	6.3µg/L	F	109	17	17			
BATT01-00393	F1	6.3µg/L	F	110	12	12			
BATT01-00393	F1	6.3µg/L	F	111	19	19			
BATT01-00393	F1	6.3µg/L	F	112	16	16			
BATT01-00393	F1	6.3µg/L	F	113	11	11			
BATT01-00393	F1	6.3µg/L	F	114	19	19			
BATT01-00393	F1	6.3µg/L	F	115	13	13			
BATT01-00393	F1	6.3µg/L	F	116	12	12			
BATT01-00393	F1	6.3µg/L	F	117	16	16			
BATT01-00393	F1	6.3µg/L	F	118	18	18			
BATT01-00393	F1	6.3µg/L	F	119	16	16			
BATT01-00393	F1	6.3µg/L	F	99-119			14.85714286	14.7142857	
BATT01-00393	F1	6.3µg/L	G	99	0	0			
BATT01-00393	F1	6.3µg/L	G	100	0	0			
BATT01-00393	F1	6.3µg/L	G	101	0	0			
BATT01-00393	F1	6.3µg/L	G	102	0	0			
BATT01-00393	F1	6.3µg/L	G	103	0	0			
BATT01-00393	F1	6.3µg/L	G	104	0	0			
BATT01-00393	F1	6.3µg/L	G	105	0	0			
BATT01-00393	F1	6.3µg/L	G	106	0	0			
BATT01-00393	F1	6.3µg/L	G	107	0	0			
BATT01-00393	F1	6.3µg/L	G	108	0	0			
BATT01-00393	F1	6.3µg/L	G	109	0	0			
BATT01-00393	F1	6.3µg/L	G	110	0	0			
BATT01-00393	F1	6.3µg/L	G	111	0	0			
BATT01-00393	F1	6.3µg/L	G	112	0	0			
BATT01-00393	F1	6.3µg/L	G	113	0	0			
BATT01-00393	F1	6.3µg/L	G	114	0	0			
BATT01-00393	F1	6.3µg/L	G	115	0	0			
BATT01-00393	F1	6.3µg/L	G	116	0	0			
BATT01-00393	F1	6.3µg/L	G	117	0	0			
BATT01-00393	F1	6.3µg/L	G	118	0	0			
BATT01-00393	F1	6.3µg/L	G	119	0	0			
BATT01-00393	F1	6.3µg/L	G	99-119			0	0	
BATT01-00393	F1	6.3µg/L	H	99	15	15			
BATT01-00393	F1	6.3µg/L	H	100	19	19			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	6.3µg/L	H	101	17	17			
BATT01-00393	F1	6.3µg/L	H	102	10	10			
BATT01-00393	F1	6.3µg/L	H	103	19	19			
BATT01-00393	F1	6.3µg/L	H	104	27	27			
BATT01-00393	F1	6.3µg/L	H	105	10	10			
BATT01-00393	F1	6.3µg/L	H	106	13	13			
BATT01-00393	F1	6.3µg/L	H	107	17	17			
BATT01-00393	F1	6.3µg/L	H	108	16	16			
BATT01-00393	F1	6.3µg/L	H	109	19	19			
BATT01-00393	F1	6.3µg/L	H	110	9	9			
BATT01-00393	F1	6.3µg/L	H	111	12	10			
BATT01-00393	F1	6.3µg/L	H	112	11	11			
BATT01-00393	F1	6.3µg/L	H	113	15	15			
BATT01-00393	F1	6.3µg/L	H	114	10	10			
BATT01-00393	F1	6.3µg/L	H	115	12	11			
BATT01-00393	F1	6.3µg/L	H	116	19	19			
BATT01-00393	F1	6.3µg/L	H	117	13	13			
BATT01-00393	F1	6.3µg/L	H	118	18	18			
BATT01-00393	F1	6.3µg/L	H	119	16	16			
BATT01-00393	F1	6.3µg/L	H	99-119			15.0952381	14.952381	
BATT01-00393	F1	6.3µg/L	I	99	17	17			
BATT01-00393	F1	6.3µg/L	I	100	18	18			
BATT01-00393	F1	6.3µg/L	I	101	19	18			
BATT01-00393	F1	6.3µg/L	I	102	17	17			
BATT01-00393	F1	6.3µg/L	I	103	10	10			
BATT01-00393	F1	6.3µg/L	I	104	29	27			
BATT01-00393	F1	6.3µg/L	I	105	17	17			
BATT01-00393	F1	6.3µg/L	I	106	18	17			
BATT01-00393	F1	6.3µg/L	I	107	18	16			
BATT01-00393	F1	6.3µg/L	I	108	22	22			
BATT01-00393	F1	6.3µg/L	I	109	17	17			
BATT01-00393	F1	6.3µg/L	I	110	15	15			
BATT01-00393	F1	6.3µg/L	I	111	9	9			
BATT01-00393	F1	6.3µg/L	I	112	12	12			
BATT01-00393	F1	6.3µg/L	I	113	18	18			
BATT01-00393	F1	6.3µg/L	I	114	15	15			
BATT01-00393	F1	6.3µg/L	I	115	14	14			
BATT01-00393	F1	6.3µg/L	I	116	17	17			
BATT01-00393	F1	6.3µg/L	I	117	19	19			
BATT01-00393	F1	6.3µg/L	I	118	28	28			
BATT01-00393	F1	6.3µg/L	I	119	12	12			
BATT01-00393	F1	6.3µg/L	I	99-119			17.19047619	16.9047619	
BATT01-00393	F1	6.3µg/L	J	99	0	0			
BATT01-00393	F1	6.3µg/L	J	100	10	10			
BATT01-00393	F1	6.3µg/L	J	101	13	13			
BATT01-00393	F1	6.3µg/L	J	102	15	15			
BATT01-00393	F1	6.3µg/L	J	103	11	11			
BATT01-00393	F1	6.3µg/L	J	104	10	10			
BATT01-00393	F1	6.3µg/L	J	105	19	18			
BATT01-00393	F1	6.3µg/L	J	106	10	10			
BATT01-00393	F1	6.3µg/L	J	107	19	19			
BATT01-00393	F1	6.3µg/L	J	108	14	14			
BATT01-00393	F1	6.3µg/L	J	109	10	10			
BATT01-00393	F1	6.3µg/L	J	110	23	23			
BATT01-00393	F1	6.3µg/L	J	111	13	13			
BATT01-00393	F1	6.3µg/L	J	112	9	9			
BATT01-00393	F1	6.3µg/L	J	113	11	10			
BATT01-00393	F1	6.3µg/L	J	114	13	13			
BATT01-00393	F1	6.3µg/L	J	115	18	18			
BATT01-00393	F1	6.3µg/L	J	116	10	10			
BATT01-00393	F1	6.3µg/L	J	117	16	16			
BATT01-00393	F1	6.3µg/L	J	118	19	19			
BATT01-00393	F1	6.3µg/L	J	119	13	13			
BATT01-00393	F1	6.3µg/L	J	99-119			13.14285714	13.047619	
BATT01-00393	F1	6.3µg/L	K	99	10	10			
BATT01-00393	F1	6.3µg/L	K	100	14	14			
BATT01-00393	F1	6.3µg/L	K	101	24	24			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	6.3µg/L	K	102	12	12			
BATT01-00393	F1	6.3µg/L	K	103	13	11			
BATT01-00393	F1	6.3µg/L	K	104	16	16			
BATT01-00393	F1	6.3µg/L	K	105	19	17			
BATT01-00393	F1	6.3µg/L	K	106	12	12			
BATT01-00393	F1	6.3µg/L	K	107	18	16			
BATT01-00393	F1	6.3µg/L	K	108	17	17			
BATT01-00393	F1	6.3µg/L	K	109	12	12			
BATT01-00393	F1	6.3µg/L	K	110	16	15			
BATT01-00393	F1	6.3µg/L	K	111	12	12			
BATT01-00393	F1	6.3µg/L	K	112	13	13			
BATT01-00393	F1	6.3µg/L	K	113	14	14			
BATT01-00393	F1	6.3µg/L	K	114	9	9			
BATT01-00393	F1	6.3µg/L	K	115	11	11			
BATT01-00393	F1	6.3µg/L	K	116	15	15			
BATT01-00393	F1	6.3µg/L	K	117	12	12			
BATT01-00393	F1	6.3µg/L	K	118	29	29			
BATT01-00393	F1	6.3µg/L	K	119	17	17			
BATT01-00393	F1	6.3µg/L	K	99-119			15	14.6666667	
BATT01-00393	F1	6.3µg/L	L	99	18	18			
BATT01-00393	F1	6.3µg/L	L	100	17	17			
BATT01-00393	F1	6.3µg/L	L	101	16	15			
BATT01-00393	F1	6.3µg/L	L	102	19	19			
BATT01-00393	F1	6.3µg/L	L	103	12	12			
BATT01-00393	F1	6.3µg/L	L	104	18	18			
BATT01-00393	F1	6.3µg/L	L	105	10	10			
BATT01-00393	F1	6.3µg/L	L	106	8	8			
BATT01-00393	F1	6.3µg/L	L	107	12	11			
BATT01-00393	F1	6.3µg/L	L	108	19	19			
BATT01-00393	F1	6.3µg/L	L	109	22	22			
BATT01-00393	F1	6.3µg/L	L	110	16	13			
BATT01-00393	F1	6.3µg/L	L	111	10	10			
BATT01-00393	F1	6.3µg/L	L	112	12	12			
BATT01-00393	F1	6.3µg/L	L	113	16	16			
BATT01-00393	F1	6.3µg/L	L	114	11	11			
BATT01-00393	F1	6.3µg/L	L	115	13	13			
BATT01-00393	F1	6.3µg/L	L	116	12	12			
BATT01-00393	F1	6.3µg/L	L	117	15	15			
BATT01-00393	F1	6.3µg/L	L	118	10	10			
BATT01-00393	F1	6.3µg/L	L	119	27	27			
BATT01-00393	F1	6.3µg/L	L	99-119			14.9047619	14.6666667	
BATT01-00393	F1	12.5µg/L	A	99	0	0			
BATT01-00393	F1	12.5µg/L	A	100	15	15			
BATT01-00393	F1	12.5µg/L	A	101	11	11			
BATT01-00393	F1	12.5µg/L	A	102	19	19			
BATT01-00393	F1	12.5µg/L	A	103	17	17			
BATT01-00393	F1	12.5µg/L	A	104	12	12			
BATT01-00393	F1	12.5µg/L	A	105	10	10			
BATT01-00393	F1	12.5µg/L	A	106	18	17			
BATT01-00393	F1	12.5µg/L	A	107	10	10			
BATT01-00393	F1	12.5µg/L	A	108	14	14			
BATT01-00393	F1	12.5µg/L	A	109	17	17			
BATT01-00393	F1	12.5µg/L	A	110	19	17			
BATT01-00393	F1	12.5µg/L	A	111	12	12			
BATT01-00393	F1	12.5µg/L	A	112	17	17			
BATT01-00393	F1	12.5µg/L	A	113	12	12			
BATT01-00393	F1	12.5µg/L	A	114	12	12			
BATT01-00393	F1	12.5µg/L	A	115	7	7			
BATT01-00393	F1	12.5µg/L	A	116	13	13			
BATT01-00393	F1	12.5µg/L	A	117	15	15			
BATT01-00393	F1	12.5µg/L	A	118	18	18			
BATT01-00393	F1	12.5µg/L	A	119	19	19			
BATT01-00393	F1	12.5µg/L	A	99-119			13.66666667	13.5238095	
BATT01-00393	F1	12.5µg/L	B	99	12	12			
BATT01-00393	F1	12.5µg/L	B	100	17	17			
BATT01-00393	F1	12.5µg/L	B	101	13	13			
BATT01-00393	F1	12.5µg/L	B	102	10	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	12.5µg/L	B	103	14	14			
BATT01-00393	F1	12.5µg/L	B	104	10	10			
BATT01-00393	F1	12.5µg/L	B	105	16	16			
BATT01-00393	F1	12.5µg/L	B	106	19	19			
BATT01-00393	F1	12.5µg/L	B	107	18	18			
BATT01-00393	F1	12.5µg/L	B	108	6	6			
BATT01-00393	F1	12.5µg/L	B	109	15	15			
BATT01-00393	F1	12.5µg/L	B	110	10	10			
BATT01-00393	F1	12.5µg/L	B	111	9	9			
BATT01-00393	F1	12.5µg/L	B	112	10	8			
BATT01-00393	F1	12.5µg/L	B	113	16	16			
BATT01-00393	F1	12.5µg/L	B	114	19	19			
BATT01-00393	F1	12.5µg/L	B	115	14	14			
BATT01-00393	F1	12.5µg/L	B	116	10	10			
BATT01-00393	F1	12.5µg/L	B	117	10	10			
BATT01-00393	F1	12.5µg/L	B	118	17	17			
BATT01-00393	F1	12.5µg/L	B	119	13	13			
BATT01-00393	F1	12.5µg/L	B	99-119			13.23809524	13.1428571	
BATT01-00393	F1	12.5µg/L	C	99	0	0			
BATT01-00393	F1	12.5µg/L	C	100	10	10			
BATT01-00393	F1	12.5µg/L	C	101	7	7			
BATT01-00393	F1	12.5µg/L	C	102	15	15			
BATT01-00393	F1	12.5µg/L	C	103	16	16			
BATT01-00393	F1	12.5µg/L	C	104	9	9			
BATT01-00393	F1	12.5µg/L	C	105	7	7			
BATT01-00393	F1	12.5µg/L	C	106	18	16			
BATT01-00393	F1	12.5µg/L	C	107	12	11			
BATT01-00393	F1	12.5µg/L	C	108	8	6			
BATT01-00393	F1	12.5µg/L	C	109	9	9			
BATT01-00393	F1	12.5µg/L	C	110	12	11			
BATT01-00393	F1	12.5µg/L	C	111	10	10			
BATT01-00393	F1	12.5µg/L	C	112	12	12			
BATT01-00393	F1	12.5µg/L	C	113	10	10			
BATT01-00393	F1	12.5µg/L	C	114	12	11			
BATT01-00393	F1	12.5µg/L	C	115	16	16			
BATT01-00393	F1	12.5µg/L	C	116	18	18			
BATT01-00393	F1	12.5µg/L	C	117	15	15			
BATT01-00393	F1	12.5µg/L	C	118	19	19			
BATT01-00393	F1	12.5µg/L	C	119	12	12			
BATT01-00393	F1	12.5µg/L	C	99-119			11.76190476	11.4285714	
BATT01-00393	F1	12.5µg/L	D	99	15	15			
BATT01-00393	F1	12.5µg/L	D	100	3	3			
BATT01-00393	F1	12.5µg/L	D	101	19	19			
BATT01-00393	F1	12.5µg/L	D	102	17	16			
BATT01-00393	F1	12.5µg/L	D	103	15	15			
BATT01-00393	F1	12.5µg/L	D	104	7	5			
BATT01-00393	F1	12.5µg/L	D	105	19	19			
BATT01-00393	F1	12.5µg/L	D	106	6	6			
BATT01-00393	F1	12.5µg/L	D	107	11	9			
BATT01-00393	F1	12.5µg/L	D	108	10	10			
BATT01-00393	F1	12.5µg/L	D	109	12	10			
BATT01-00393	F1	12.5µg/L	D	110	17	17			
BATT01-00393	F1	12.5µg/L	D	111	18	18			
BATT01-00393	F1	12.5µg/L	D	112	16	16			
BATT01-00393	F1	12.5µg/L	D	113	9	9			
BATT01-00393	F1	12.5µg/L	D	114	13	13			
BATT01-00393	F1	12.5µg/L	D	115	10	10			
BATT01-00393	F1	12.5µg/L	D	116	7	7			
BATT01-00393	F1	12.5µg/L	D	117	7	7			
BATT01-00393	F1	12.5µg/L	D	118	10	10			
BATT01-00393	F1	12.5µg/L	D	119	6	6			
BATT01-00393	F1	12.5µg/L	D	99-119			11.76190476	11.4285714	
BATT01-00393	F1	12.5µg/L	E	99	8	8			
BATT01-00393	F1	12.5µg/L	E	100	0	0			
BATT01-00393	F1	12.5µg/L	E	101	13	13			
BATT01-00393	F1	12.5µg/L	E	102	14	13			
BATT01-00393	F1	12.5µg/L	E	103	15	15			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	12.5µg/L	E	104	8	7			
BATT01-00393	F1	12.5µg/L	E	105	17	17			
BATT01-00393	F1	12.5µg/L	E	106	10	9			
BATT01-00393	F1	12.5µg/L	E	107	11	11			
BATT01-00393	F1	12.5µg/L	E	108	8	8			
BATT01-00393	F1	12.5µg/L	E	109	19	19			
BATT01-00393	F1	12.5µg/L	E	110	13	11			
BATT01-00393	F1	12.5µg/L	E	111	19	19			
BATT01-00393	F1	12.5µg/L	E	112	13	12			
BATT01-00393	F1	12.5µg/L	E	113	17	17			
BATT01-00393	F1	12.5µg/L	E	114	15	15			
BATT01-00393	F1	12.5µg/L	E	115	9	8			
BATT01-00393	F1	12.5µg/L	E	116	13	13			
BATT01-00393	F1	12.5µg/L	E	117	5	5			
BATT01-00393	F1	12.5µg/L	E	118	7	7			
BATT01-00393	F1	12.5µg/L	E	119	10	10			
BATT01-00393	F1	12.5µg/L	E	99-119			11.61904762	11.2857143	
BATT01-00393	F1	12.5µg/L	F	99	9	9			
BATT01-00393	F1	12.5µg/L	F	100	13	13			
BATT01-00393	F1	12.5µg/L	F	101	10	10			
BATT01-00393	F1	12.5µg/L	F	102	19	19			
BATT01-00393	F1	12.5µg/L	F	103	11	10			
BATT01-00393	F1	12.5µg/L	F	104	10	10			
BATT01-00393	F1	12.5µg/L	F	105	11	10			
BATT01-00393	F1	12.5µg/L	F	106	12	11			
BATT01-00393	F1	12.5µg/L	F	107	10	8			
BATT01-00393	F1	12.5µg/L	F	108	12	12			
BATT01-00393	F1	12.5µg/L	F	109	11	11			
BATT01-00393	F1	12.5µg/L	F	110	5	3			
BATT01-00393	F1	12.5µg/L	F	111	19	18			
BATT01-00393	F1	12.5µg/L	F	112	10	10			
BATT01-00393	F1	12.5µg/L	F	113	9	9			
BATT01-00393	F1	12.5µg/L	F	114	10	10			
BATT01-00393	F1	12.5µg/L	F	115	14	14			
BATT01-00393	F1	12.5µg/L	F	116	10	10			
BATT01-00393	F1	12.5µg/L	F	117	6	6			
BATT01-00393	F1	12.5µg/L	F	118	13	13			
BATT01-00393	F1	12.5µg/L	F	119	10	10			
BATT01-00393	F1	12.5µg/L	F	99-119			11.14285714	10.7619048	
BATT01-00393	F1	12.5µg/L	G	99	15	15			
BATT01-00393	F1	12.5µg/L	G	100	19	19			
BATT01-00393	F1	12.5µg/L	G	101	14	14			
BATT01-00393	F1	12.5µg/L	G	102	13	13			
BATT01-00393	F1	12.5µg/L	G	103	17	16			
BATT01-00393	F1	12.5µg/L	G	104	18	18			
BATT01-00393	F1	12.5µg/L	G	105	10	10			
BATT01-00393	F1	12.5µg/L	G	106	11	9			
BATT01-00393	F1	12.5µg/L	G	107	12	12			
BATT01-00393	F1	12.5µg/L	G	108	15	15			
BATT01-00393	F1	12.5µg/L	G	109	14	14			
BATT01-00393	F1	12.5µg/L	G	110	10	8			
BATT01-00393	F1	12.5µg/L	G	111	17	17			
BATT01-00393	F1	12.5µg/L	G	112	19	19			
BATT01-00393	F1	12.5µg/L	G	113	7	7			
BATT01-00393	F1	12.5µg/L	G	114	18	18			
BATT01-00393	F1	12.5µg/L	G	115	13	13			
BATT01-00393	F1	12.5µg/L	G	116	11	11			
BATT01-00393	F1	12.5µg/L	G	117	15	15			
BATT01-00393	F1	12.5µg/L	G	118	19	19			
BATT01-00393	F1	12.5µg/L	G	119	17	17			
BATT01-00393	F1	12.5µg/L	G	99-119			14.47619048	14.2380952	
BATT01-00393	F1	12.5µg/L	H	99	0	0			
BATT01-00393	F1	12.5µg/L	H	100	17	17			
BATT01-00393	F1	12.5µg/L	H	101	11	11			
BATT01-00393	F1	12.5µg/L	H	102	18	18			
BATT01-00393	F1	12.5µg/L	H	103	15	15			
BATT01-00393	F1	12.5µg/L	H	104	17	17			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	12.5µg/L	H	105	12	12			
BATT01-00393	F1	12.5µg/L	H	106	18	17			
BATT01-00393	F1	12.5µg/L	H	107	10	8			
BATT01-00393	F1	12.5µg/L	H	108	19	19			
BATT01-00393	F1	12.5µg/L	H	109	12	12			
BATT01-00393	F1	12.5µg/L	H	110	11	10			
BATT01-00393	F1	12.5µg/L	H	111	19	19			
BATT01-00393	F1	12.5µg/L	H	112	17	17			
BATT01-00393	F1	12.5µg/L	H	113	18	16			
BATT01-00393	F1	12.5µg/L	H	114	15	15			
BATT01-00393	F1	12.5µg/L	H	115	12	12			
BATT01-00393	F1	12.5µg/L	H	116	6	6			
BATT01-00393	F1	12.5µg/L	H	117	10	10			
BATT01-00393	F1	12.5µg/L	H	118	13	13			
BATT01-00393	F1	12.5µg/L	H	119	18	18			
BATT01-00393	F1	12.5µg/L	H	99-119			13.71428571	13.4285714	
BATT01-00393	F1	12.5µg/L	I	99	12	12			
BATT01-00393	F1	12.5µg/L	I	100	13	13			
BATT01-00393	F1	12.5µg/L	I	101	15	15			
BATT01-00393	F1	12.5µg/L	I	102	10	10			
BATT01-00393	F1	12.5µg/L	I	103	19	19			
BATT01-00393	F1	12.5µg/L	I	104	14	14			
BATT01-00393	F1	12.5µg/L	I	105	9	9			
BATT01-00393	F1	12.5µg/L	I	106	5	5			
BATT01-00393	F1	12.5µg/L	I	107	11	10			
BATT01-00393	F1	12.5µg/L	I	108	7	6			
BATT01-00393	F1	12.5µg/L	I	109	12	12			
BATT01-00393	F1	12.5µg/L	I	110	14	12			
BATT01-00393	F1	12.5µg/L	I	111	12	10			
BATT01-00393	F1	12.5µg/L	I	112	10	9			
BATT01-00393	F1	12.5µg/L	I	113	11	11			
BATT01-00393	F1	12.5µg/L	I	114	12	12			
BATT01-00393	F1	12.5µg/L	I	115	10	10			
BATT01-00393	F1	12.5µg/L	I	116	18	18			
BATT01-00393	F1	12.5µg/L	I	117	19	19			
BATT01-00393	F1	12.5µg/L	I	118	12	12			
BATT01-00393	F1	12.5µg/L	I	119	10	10			
BATT01-00393	F1	12.5µg/L	I	99-119			12.14285714	11.8095238	
BATT01-00393	F1	12.5µg/L	J	99	0	0			
BATT01-00393	F1	12.5µg/L	J	100	0	0			
BATT01-00393	F1	12.5µg/L	J	101	8	8			
BATT01-00393	F1	12.5µg/L	J	102	11	11			
BATT01-00393	F1	12.5µg/L	J	103	10	8			
BATT01-00393	F1	12.5µg/L	J	104	9	9			
BATT01-00393	F1	12.5µg/L	J	105	13	13			
BATT01-00393	F1	12.5µg/L	J	106	11	11			
BATT01-00393	F1	12.5µg/L	J	107	13	13			
BATT01-00393	F1	12.5µg/L	J	108	11	11			
BATT01-00393	F1	12.5µg/L	J	109	19	19			
BATT01-00393	F1	12.5µg/L	J	110	7	6			
BATT01-00393	F1	12.5µg/L	J	111	19	19			
BATT01-00393	F1	12.5µg/L	J	112	10	8			
BATT01-00393	F1	12.5µg/L	J	113	13	13			
BATT01-00393	F1	12.5µg/L	J	114	10	10			
BATT01-00393	F1	12.5µg/L	J	115	12	12			
BATT01-00393	F1	12.5µg/L	J	116	14	13			
BATT01-00393	F1	12.5µg/L	J	117	16	14			
BATT01-00393	F1	12.5µg/L	J	118	10	8			
BATT01-00393	F1	12.5µg/L	J	119	11	11			
BATT01-00393	F1	12.5µg/L	J	99-119			10.80952381	10.3333333	
BATT01-00393	F1	12.5µg/L	K	99	0	0			
BATT01-00393	F1	12.5µg/L	K	100	6	6			
BATT01-00393	F1	12.5µg/L	K	101	12	12			
BATT01-00393	F1	12.5µg/L	K	102	10	10			
BATT01-00393	F1	12.5µg/L	K	103	13	13			
BATT01-00393	F1	12.5µg/L	K	104	18	18			
BATT01-00393	F1	12.5µg/L	K	105	17	17			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	12.5µg/L	K	106	15	13			
BATT01-00393	F1	12.5µg/L	K	107	12	12			
BATT01-00393	F1	12.5µg/L	K	108	15	13			
BATT01-00393	F1	12.5µg/L	K	109	7	6			
BATT01-00393	F1	12.5µg/L	K	110	18	18			
BATT01-00393	F1	12.5µg/L	K	111	17	16			
BATT01-00393	F1	12.5µg/L	K	112	10	10			
BATT01-00393	F1	12.5µg/L	K	113	11	11			
BATT01-00393	F1	12.5µg/L	K	114	14	14			
BATT01-00393	F1	12.5µg/L	K	115	15	15			
BATT01-00393	F1	12.5µg/L	K	116	11	11			
BATT01-00393	F1	12.5µg/L	K	117	15	15			
BATT01-00393	F1	12.5µg/L	K	118	19	17			
BATT01-00393	F1	12.5µg/L	K	119	19	19			
BATT01-00393	F1	12.5µg/L	K	99-119			13.04761905	12.6666667	
BATT01-00393	F1	12.5µg/L	L	99	10	10			
BATT01-00393	F1	12.5µg/L	L	100	11	11			
BATT01-00393	F1	12.5µg/L	L	101	10	10			
BATT01-00393	F1	12.5µg/L	L	102	12	12			
BATT01-00393	F1	12.5µg/L	L	103	17	17			
BATT01-00393	F1	12.5µg/L	L	104	19	17			
BATT01-00393	F1	12.5µg/L	L	105	12	12			
BATT01-00393	F1	12.5µg/L	L	106	10	10			
BATT01-00393	F1	12.5µg/L	L	107	8	8			
BATT01-00393	F1	12.5µg/L	L	108	12	12			
BATT01-00393	F1	12.5µg/L	L	109	10	10			
BATT01-00393	F1	12.5µg/L	L	110	17	17			
BATT01-00393	F1	12.5µg/L	L	111	9	9			
BATT01-00393	F1	12.5µg/L	L	112	18	18			
BATT01-00393	F1	12.5µg/L	L	113	15	15			
BATT01-00393	F1	12.5µg/L	L	114	8	8			
BATT01-00393	F1	12.5µg/L	L	115	11	11			
BATT01-00393	F1	12.5µg/L	L	116	9	9			
BATT01-00393	F1	12.5µg/L	L	117	18	18			
BATT01-00393	F1	12.5µg/L	L	118	19	19			
BATT01-00393	F1	12.5µg/L	L	119	12	12			
BATT01-00393	F1	12.5µg/L	L	99-119			12.71428571	12.6190476	
BATT01-00393	F1	25µg/L	A	99	0	0			
BATT01-00393	F1	25µg/L	A	100	14	14			
BATT01-00393	F1	25µg/L	A	101	6	6			
BATT01-00393	F1	25µg/L	A	102	17	17			
BATT01-00393	F1	25µg/L	A	103	18	18			
BATT01-00393	F1	25µg/L	A	104	8	8			
BATT01-00393	F1	25µg/L	A	105	12	12			
BATT01-00393	F1	25µg/L	A	106	14	12			
BATT01-00393	F1	25µg/L	A	107	19	19			
BATT01-00393	F1	25µg/L	A	108	14	14			
BATT01-00393	F1	25µg/L	A	109	6	6			
BATT01-00393	F1	25µg/L	A	110	10	7			
BATT01-00393	F1	25µg/L	A	111	12	11			
BATT01-00393	F1	25µg/L	A	112	16	16			
BATT01-00393	F1	25µg/L	A	113	13	13			
BATT01-00393	F1	25µg/L	A	114	10	9			
BATT01-00393	F1	25µg/L	A	115	14	14			
BATT01-00393	F1	25µg/L	A	116	12	12			
BATT01-00393	F1	25µg/L	A	117	17	17			
BATT01-00393	F1	25µg/L	A	118	13	13			
BATT01-00393	F1	25µg/L	A	119	10	8			
BATT01-00393	F1	25µg/L	A	99-119			12.14285714	11.7142857	
BATT01-00393	F1	25µg/L	B	99	5	5			
BATT01-00393	F1	25µg/L	B	100	19	19			
BATT01-00393	F1	25µg/L	B	101	7	7			
BATT01-00393	F1	25µg/L	B	102	15	15			
BATT01-00393	F1	25µg/L	B	103	17	15			
BATT01-00393	F1	25µg/L	B	104	9	8			
BATT01-00393	F1	25µg/L	B	105	13	13			
BATT01-00393	F1	25µg/L	B	106	16	15			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	25µg/L	B	107	17	17			
BATT01-00393	F1	25µg/L	B	108	17	17			
BATT01-00393	F1	25µg/L	B	109	9	9			
BATT01-00393	F1	25µg/L	B	110	15	15			
BATT01-00393	F1	25µg/L	B	111	10	10			
BATT01-00393	F1	25µg/L	B	112	17	17			
BATT01-00393	F1	25µg/L	B	113	12	12			
BATT01-00393	F1	25µg/L	B	114	7	7			
BATT01-00393	F1	25µg/L	B	115	13	13			
BATT01-00393	F1	25µg/L	B	116	6	6			
BATT01-00393	F1	25µg/L	B	117	19	18			
BATT01-00393	F1	25µg/L	B	118	10	8			
BATT01-00393	F1	25µg/L	B	119	13	13			
BATT01-00393	F1	25µg/L	B	99-119			12.66666667	12.3333333	
BATT01-00393	F1	25µg/L	C	99	3	3			
BATT01-00393	F1	25µg/L	C	100	16	16			
BATT01-00393	F1	25µg/L	C	101	8	8			
BATT01-00393	F1	25µg/L	C	102	10	10			
BATT01-00393	F1	25µg/L	C	103	7	6			
BATT01-00393	F1	25µg/L	C	104	10	9			
BATT01-00393	F1	25µg/L	C	105	10	9			
BATT01-00393	F1	25µg/L	C	106	8	8			
BATT01-00393	F1	25µg/L	C	107	10	10			
BATT01-00393	F1	25µg/L	C	108	12	10			
BATT01-00393	F1	25µg/L	C	109	8	8			
BATT01-00393	F1	25µg/L	C	110	13	12			
BATT01-00393	F1	25µg/L	C	111	11	11			
BATT01-00393	F1	25µg/L	C	112	9	8			
BATT01-00393	F1	25µg/L	C	113	8	8			
BATT01-00393	F1	25µg/L	C	114	10	9			
BATT01-00393	F1	25µg/L	C	115	7	7			
BATT01-00393	F1	25µg/L	C	116	10	10			
BATT01-00393	F1	25µg/L	C	117	19	19			
BATT01-00393	F1	25µg/L	C	118	18	18			
BATT01-00393	F1	25µg/L	C	119	15	13			
BATT01-00393	F1	25µg/L	C	99-119			10.57142857	10.0952381	
BATT01-00393	F1	25µg/L	D	99	0	0			
BATT01-00393	F1	25µg/L	D	100	5	5			
BATT01-00393	F1	25µg/L	D	101	15	15			
BATT01-00393	F1	25µg/L	D	102	15	15			
BATT01-00393	F1	25µg/L	D	103	13	13			
BATT01-00393	F1	25µg/L	D	104	7	7			
BATT01-00393	F1	25µg/L	D	105	17	17			
BATT01-00393	F1	25µg/L	D	106	9	9			
BATT01-00393	F1	25µg/L	D	107	15	15			
BATT01-00393	F1	25µg/L	D	108	7	7			
BATT01-00393	F1	25µg/L	D	109	19	19			
BATT01-00393	F1	25µg/L	D	110	10	10			
BATT01-00393	F1	25µg/L	D	111	9	8			
BATT01-00393	F1	25µg/L	D	112	10	9			
BATT01-00393	F1	25µg/L	D	113	11	10			
BATT01-00393	F1	25µg/L	D	114	6	6			
BATT01-00393	F1	25µg/L	D	115	17	17			
BATT01-00393	F1	25µg/L	D	116	8	8			
BATT01-00393	F1	25µg/L	D	117	12	12			
BATT01-00393	F1	25µg/L	D	118	16	16			
BATT01-00393	F1	25µg/L	D	119	12	11			
BATT01-00393	F1	25µg/L	D	99-119			11.0952381	10.9047619	
BATT01-00393	F1	25µg/L	E	99	12	12			
BATT01-00393	F1	25µg/L	E	100	8	8			
BATT01-00393	F1	25µg/L	E	101	12	12			
BATT01-00393	F1	25µg/L	E	102	17	17			
BATT01-00393	F1	25µg/L	E	103	8	6			
BATT01-00393	F1	25µg/L	E	104	18	18			
BATT01-00393	F1	25µg/L	E	105	5	5			
BATT01-00393	F1	25µg/L	E	106	10	10			
BATT01-00393	F1	25µg/L	E	107	19	17			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	25µg/L	E	108	5	5			
BATT01-00393	F1	25µg/L	E	109	12	12			
BATT01-00393	F1	25µg/L	E	110	15	13			
BATT01-00393	F1	25µg/L	E	111	10	9			
BATT01-00393	F1	25µg/L	E	112	11	11			
BATT01-00393	F1	25µg/L	E	113	14	14			
BATT01-00393	F1	25µg/L	E	114	5	5			
BATT01-00393	F1	25µg/L	E	115	19	19			
BATT01-00393	F1	25µg/L	E	116	13	13			
BATT01-00393	F1	25µg/L	E	117	15	15			
BATT01-00393	F1	25µg/L	E	118	8	6			
BATT01-00393	F1	25µg/L	E	119	19	19			
BATT01-00393	F1	25µg/L	E	99-119			12.14285714	11.7142857	
BATT01-00393	F1	25µg/L	F	99	5	5			
BATT01-00393	F1	25µg/L	F	100	14	14			
BATT01-00393	F1	25µg/L	F	101	19	19			
BATT01-00393	F1	25µg/L	F	102	10	10			
BATT01-00393	F1	25µg/L	F	103	19	17			
BATT01-00393	F1	25µg/L	F	104	4	4			
BATT01-00393	F1	25µg/L	F	105	16	16			
BATT01-00393	F1	25µg/L	F	106	7	6			
BATT01-00393	F1	25µg/L	F	107	18	17			
BATT01-00393	F1	25µg/L	F	108	7	7			
BATT01-00393	F1	25µg/L	F	109	12	10			
BATT01-00393	F1	25µg/L	F	110	11	10			
BATT01-00393	F1	25µg/L	F	111	10	10			
BATT01-00393	F1	25µg/L	F	112	12	11			
BATT01-00393	F1	25µg/L	F	113	8	8			
BATT01-00393	F1	25µg/L	F	114	13	13			
BATT01-00393	F1	25µg/L	F	115	9	9			
BATT01-00393	F1	25µg/L	F	116	7	7			
BATT01-00393	F1	25µg/L	F	117	12	12			
BATT01-00393	F1	25µg/L	F	118	10	10			
BATT01-00393	F1	25µg/L	F	119	18	18			
BATT01-00393	F1	25µg/L	F	99-119			11.47619048	11.0952381	
BATT01-00393	F1	25µg/L	G	99	0	0			
BATT01-00393	F1	25µg/L	G	100	6	6			
BATT01-00393	F1	25µg/L	G	101	7	7			
BATT01-00393	F1	25µg/L	G	102	18	18			
BATT01-00393	F1	25µg/L	G	103	17	17			
BATT01-00393	F1	25µg/L	G	104	6	5			
BATT01-00393	F1	25µg/L	G	105	19	19			
BATT01-00393	F1	25µg/L	G	106	8	8			
BATT01-00393	F1	25µg/L	G	107	19	19			
BATT01-00393	F1	25µg/L	G	108	10	10			
BATT01-00393	F1	25µg/L	G	109	12	10			
BATT01-00393	F1	25µg/L	G	110	7	7			
BATT01-00393	F1	25µg/L	G	111	18	18			
BATT01-00393	F1	25µg/L	G	112	10	10			
BATT01-00393	F1	25µg/L	G	113	14	14			
BATT01-00393	F1	25µg/L	G	114	9	9			
BATT01-00393	F1	25µg/L	G	115	12	11			
BATT01-00393	F1	25µg/L	G	116	13	13			
BATT01-00393	F1	25µg/L	G	117	10	10			
BATT01-00393	F1	25µg/L	G	118	8	8			
BATT01-00393	F1	25µg/L	G	119	17	17			
BATT01-00393	F1	25µg/L	G	99-119			11.42857143	11.2380952	
BATT01-00393	F1	25µg/L	H	99	5	5			
BATT01-00393	F1	25µg/L	H	100	8	8			
BATT01-00393	F1	25µg/L	H	101	11	11			
BATT01-00393	F1	25µg/L	H	102	19	19			
BATT01-00393	F1	25µg/L	H	103	6	5			
BATT01-00393	F1	25µg/L	H	104	17	17			
BATT01-00393	F1	25µg/L	H	105	12	12			
BATT01-00393	F1	25µg/L	H	106	10	9			
BATT01-00393	F1	25µg/L	H	107	10	8			
BATT01-00393	F1	25µg/L	H	108	15	15			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	25µg/L	H	109	17	17			
BATT01-00393	F1	25µg/L	H	110	10	9			
BATT01-00393	F1	25µg/L	H	111	17	16			
BATT01-00393	F1	25µg/L	H	112	9	8			
BATT01-00393	F1	25µg/L	H	113	14	14			
BATT01-00393	F1	25µg/L	H	114	17	16			
BATT01-00393	F1	25µg/L	H	115	10	10			
BATT01-00393	F1	25µg/L	H	116	9	9			
BATT01-00393	F1	25µg/L	H	117	18	18			
BATT01-00393	F1	25µg/L	H	118	19	19			
BATT01-00393	F1	25µg/L	H	119	12	12			
BATT01-00393	F1	25µg/L	H	99-119			12.61904762	12.2380952	
BATT01-00393	F1	25µg/L	I	99	7	7			
BATT01-00393	F1	25µg/L	I	100	9	9			
BATT01-00393	F1	25µg/L	I	101	10	10			
BATT01-00393	F1	25µg/L	I	102	17	17			
BATT01-00393	F1	25µg/L	I	103	9	7			
BATT01-00393	F1	25µg/L	I	104	5	5			
BATT01-00393	F1	25µg/L	I	105	13	13			
BATT01-00393	F1	25µg/L	I	106	17	17			
BATT01-00393	F1	25µg/L	I	107	11	10			
BATT01-00393	F1	25µg/L	I	108	7	6			
BATT01-00393	F1	25µg/L	I	109	14	12			
BATT01-00393	F1	25µg/L	I	110	9	9			
BATT01-00393	F1	25µg/L	I	111	8	7			
BATT01-00393	F1	25µg/L	I	112	10	9			
BATT01-00393	F1	25µg/L	I	113	12	12			
BATT01-00393	F1	25µg/L	I	114	11	11			
BATT01-00393	F1	25µg/L	I	115	7	7			
BATT01-00393	F1	25µg/L	I	116	10	8			
BATT01-00393	F1	25µg/L	I	117	10	10			
BATT01-00393	F1	25µg/L	I	118	17	15			
BATT01-00393	F1	25µg/L	I	119	8	6			
BATT01-00393	F1	25µg/L	I	99-119			10.52380952	9.85714286	
BATT01-00393	F1	25µg/L	J	99	0	0			
BATT01-00393	F1	25µg/L	J	100	12	12			
BATT01-00393	F1	25µg/L	J	101	12	10			
BATT01-00393	F1	25µg/L	J	102	10	10			
BATT01-00393	F1	25µg/L	J	103	19	18			
BATT01-00393	F1	25µg/L	J	104	9	7			
BATT01-00393	F1	25µg/L	J	105	8	6			
BATT01-00393	F1	25µg/L	J	106	19	19			
BATT01-00393	F1	25µg/L	J	107	7	7			
BATT01-00393	F1	25µg/L	J	108	18	18			
BATT01-00393	F1	25µg/L	J	109	6	5			
BATT01-00393	F1	25µg/L	J	110	15	15			
BATT01-00393	F1	25µg/L	J	111	10	9			
BATT01-00393	F1	25µg/L	J	112	19	18			
BATT01-00393	F1	25µg/L	J	113	16	16			
BATT01-00393	F1	25µg/L	J	114	8	8			
BATT01-00393	F1	25µg/L	J	115	9	9			
BATT01-00393	F1	25µg/L	J	116	8	8			
BATT01-00393	F1	25µg/L	J	117	19	19			
BATT01-00393	F1	25µg/L	J	118	10	8			
BATT01-00393	F1	25µg/L	J	119	10	10			
BATT01-00393	F1	25µg/L	J	99-119			11.61904762	11.047619	
BATT01-00393	F1	25µg/L	K	99	4	4			
BATT01-00393	F1	25µg/L	K	100	7	7			
BATT01-00393	F1	25µg/L	K	101	8	8			
BATT01-00393	F1	25µg/L	K	102	15	15			
BATT01-00393	F1	25µg/L	K	103	4	4			
BATT01-00393	F1	25µg/L	K	104	8	7			
BATT01-00393	F1	25µg/L	K	105	18	18			
BATT01-00393	F1	25µg/L	K	106	10	9			
BATT01-00393	F1	25µg/L	K	107	19	17			
BATT01-00393	F1	25µg/L	K	108	10	9			
BATT01-00393	F1	25µg/L	K	109	12	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	25µg/L	K	110	19	19			
BATT01-00393	F1	25µg/L	K	111	10	10			
BATT01-00393	F1	25µg/L	K	112	12	12			
BATT01-00393	F1	25µg/L	K	113	10	10			
BATT01-00393	F1	25µg/L	K	114	13	12			
BATT01-00393	F1	25µg/L	K	115	6	6			
BATT01-00393	F1	25µg/L	K	116	10	9			
BATT01-00393	F1	25µg/L	K	117	7	5			
BATT01-00393	F1	25µg/L	K	118	9	8			
BATT01-00393	F1	25µg/L	K	119	12	12			
BATT01-00393	F1	25µg/L	K	99-119			10.61904762	10.047619	
BATT01-00393	F1	25µg/L	L	99	2	2			
BATT01-00393	F1	25µg/L	L	100	15	15			
BATT01-00393	F1	25µg/L	L	101	13	13			
BATT01-00393	F1	25µg/L	L	102	9	9			
BATT01-00393	F1	25µg/L	L	103	17	16			
BATT01-00393	F1	25µg/L	L	104	10	9			
BATT01-00393	F1	25µg/L	L	105	12	12			
BATT01-00393	F1	25µg/L	L	106	10	10			
BATT01-00393	F1	25µg/L	L	107	11	11			
BATT01-00393	F1	25µg/L	L	108	7	7			
BATT01-00393	F1	25µg/L	L	109	5	3			
BATT01-00393	F1	25µg/L	L	110	10	10			
BATT01-00393	F1	25µg/L	L	111	17	17			
BATT01-00393	F1	25µg/L	L	112	8	8			
BATT01-00393	F1	25µg/L	L	113	9	9			
BATT01-00393	F1	25µg/L	L	114	15	15			
BATT01-00393	F1	25µg/L	L	115	10	9			
BATT01-00393	F1	25µg/L	L	116	16	16			
BATT01-00393	F1	25µg/L	L	117	10	10			
BATT01-00393	F1	25µg/L	L	118	19	17			
BATT01-00393	F1	25µg/L	L	119	18	16			
BATT01-00393	F1	25µg/L	L	99-119			11.57142857	11.1428571	
BATT01-00393	F1	50µg/L	A	99	2	2			
BATT01-00393	F1	50µg/L	A	100	7	7			
BATT01-00393	F1	50µg/L	A	101	4	4			
BATT01-00393	F1	50µg/L	A	102	8	8			
BATT01-00393	F1	50µg/L	A	103	7	5			
BATT01-00393	F1	50µg/L	A	104	8	8			
BATT01-00393	F1	50µg/L	A	105	14	12			
BATT01-00393	F1	50µg/L	A	106	10	9			
BATT01-00393	F1	50µg/L	A	107	11	11			
BATT01-00393	F1	50µg/L	A	108	9	9			
BATT01-00393	F1	50µg/L	A	109	6	6			
BATT01-00393	F1	50µg/L	A	110	10	8			
BATT01-00393	F1	50µg/L	A	111	9	9			
BATT01-00393	F1	50µg/L	A	112	11	11			
BATT01-00393	F1	50µg/L	A	113	8	8			
BATT01-00393	F1	50µg/L	A	114	10	10			
BATT01-00393	F1	50µg/L	A	115	11	11			
BATT01-00393	F1	50µg/L	A	116	12	12			
BATT01-00393	F1	50µg/L	A	117	9	9			
BATT01-00393	F1	50µg/L	A	118	8	6			
BATT01-00393	F1	50µg/L	A	119	9	7			
BATT01-00393	F1	50µg/L	A	99-119			8.714285714	8.19047619	
BATT01-00393	F1	50µg/L	B	99	0	0			
BATT01-00393	F1	50µg/L	B	100	0	0			
BATT01-00393	F1	50µg/L	B	101	8	8			
BATT01-00393	F1	50µg/L	B	102	9	9			
BATT01-00393	F1	50µg/L	B	103	7	6			
BATT01-00393	F1	50µg/L	B	104	9	7			
BATT01-00393	F1	50µg/L	B	105	11	10			
BATT01-00393	F1	50µg/L	B	106	9	9			
BATT01-00393	F1	50µg/L	B	107	8	8			
BATT01-00393	F1	50µg/L	B	108	7	5			
BATT01-00393	F1	50µg/L	B	109	7	6			
BATT01-00393	F1	50µg/L	B	110	9	9			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	50µg/L	B	111	8	8			
BATT01-00393	F1	50µg/L	B	112	9	9			
BATT01-00393	F1	50µg/L	B	113	13	12			
BATT01-00393	F1	50µg/L	B	114	8	6			
BATT01-00393	F1	50µg/L	B	115	13	13			
BATT01-00393	F1	50µg/L	B	116	10	10			
BATT01-00393	F1	50µg/L	B	117	12	9			
BATT01-00393	F1	50µg/L	B	118	10	10			
BATT01-00393	F1	50µg/L	B	119	7	7			
BATT01-00393	F1	50µg/L	B	99-119			8.285714286	7.66666667	
BATT01-00393	F1	50µg/L	C	99	0	0			
BATT01-00393	F1	50µg/L	C	100	2	2			
BATT01-00393	F1	50µg/L	C	101	5	5			
BATT01-00393	F1	50µg/L	C	102	9	9			
BATT01-00393	F1	50µg/L	C	103	6	6			
BATT01-00393	F1	50µg/L	C	104	5	4			
BATT01-00393	F1	50µg/L	C	105	7	5			
BATT01-00393	F1	50µg/L	C	106	8	7			
BATT01-00393	F1	50µg/L	C	107	9	9			
BATT01-00393	F1	50µg/L	C	108	12	12			
BATT01-00393	F1	50µg/L	C	109	11	10			
BATT01-00393	F1	50µg/L	C	110	6	4			
BATT01-00393	F1	50µg/L	C	111	10	10			
BATT01-00393	F1	50µg/L	C	112	8	8			
BATT01-00393	F1	50µg/L	C	113	7	7			
BATT01-00393	F1	50µg/L	C	114	11	11			
BATT01-00393	F1	50µg/L	C	115	5	5			
BATT01-00393	F1	50µg/L	C	116	9	9			
BATT01-00393	F1	50µg/L	C	117	8	5			
BATT01-00393	F1	50µg/L	C	118	7	6			
BATT01-00393	F1	50µg/L	C	119	5	5			
BATT01-00393	F1	50µg/L	C	99-119			7.142857143	6.61904762	
BATT01-00393	F1	50µg/L	D	99	0	0			
BATT01-00393	F1	50µg/L	D	100	4	4			
BATT01-00393	F1	50µg/L	D	101	6	6			
BATT01-00393	F1	50µg/L	D	102	7	7			
BATT01-00393	F1	50µg/L	D	103	7	7			
BATT01-00393	F1	50µg/L	D	104	6	5			
BATT01-00393	F1	50µg/L	D	105	4	4			
BATT01-00393	F1	50µg/L	D	106	10	9			
BATT01-00393	F1	50µg/L	D	107	12	11			
BATT01-00393	F1	50µg/L	D	108	5	5			
BATT01-00393	F1	50µg/L	D	109	7	6			
BATT01-00393	F1	50µg/L	D	110	6	5			
BATT01-00393	F1	50µg/L	D	111	7	6			
BATT01-00393	F1	50µg/L	D	112	6	5			
BATT01-00393	F1	50µg/L	D	113	15	15			
BATT01-00393	F1	50µg/L	D	114	8	8			
BATT01-00393	F1	50µg/L	D	115	9	9			
BATT01-00393	F1	50µg/L	D	116	13	11			
BATT01-00393	F1	50µg/L	D	117	7	7			
BATT01-00393	F1	50µg/L	D	118	8	8			
BATT01-00393	F1	50µg/L	D	119	9	7			
BATT01-00393	F1	50µg/L	D	99-119			7.428571429	6.9047619	
BATT01-00393	F1	50µg/L	E	99	0	0			
BATT01-00393	F1	50µg/L	E	100	0	0			
BATT01-00393	F1	50µg/L	E	101	6	6			
BATT01-00393	F1	50µg/L	E	102	8	6			
BATT01-00393	F1	50µg/L	E	103	7	6			
BATT01-00393	F1	50µg/L	E	104	7	7			
BATT01-00393	F1	50µg/L	E	105	12	12			
BATT01-00393	F1	50µg/L	E	106	11	11			
BATT01-00393	F1	50µg/L	E	107	8	8			
BATT01-00393	F1	50µg/L	E	108	10	8			
BATT01-00393	F1	50µg/L	E	109	11	7			
BATT01-00393	F1	50µg/L	E	110	12	12			
BATT01-00393	F1	50µg/L	E	111	9	8			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	50µg/L	E	112	7	5			
BATT01-00393	F1	50µg/L	E	113	4	4			
BATT01-00393	F1	50µg/L	E	114	14	14			
BATT01-00393	F1	50µg/L	E	115	13	13			
BATT01-00393	F1	50µg/L	E	116	8	8			
BATT01-00393	F1	50µg/L	E	117	7	6			
BATT01-00393	F1	50µg/L	E	118	9	8			
BATT01-00393	F1	50µg/L	E	119	10	10			
BATT01-00393	F1	50µg/L	E	99-119			8.238095238	7.57142857	
BATT01-00393	F1	50µg/L	F	99	3	3			
BATT01-00393	F1	50µg/L	F	100	7	7			
BATT01-00393	F1	50µg/L	F	101	7	7			
BATT01-00393	F1	50µg/L	F	102	9	9			
BATT01-00393	F1	50µg/L	F	103	8	6			
BATT01-00393	F1	50µg/L	F	104	5	4			
BATT01-00393	F1	50µg/L	F	105	9	9			
BATT01-00393	F1	50µg/L	F	106	8	7			
BATT01-00393	F1	50µg/L	F	107	9	9			
BATT01-00393	F1	50µg/L	F	108	6	6			
BATT01-00393	F1	50µg/L	F	109	4	4			
BATT01-00393	F1	50µg/L	F	110	7	5			
BATT01-00393	F1	50µg/L	F	111	10	9			
BATT01-00393	F1	50µg/L	F	112	12	11			
BATT01-00393	F1	50µg/L	F	113	9	9			
BATT01-00393	F1	50µg/L	F	114	12	12			
BATT01-00393	F1	50µg/L	F	115	7	7			
BATT01-00393	F1	50µg/L	F	116	15	15			
BATT01-00393	F1	50µg/L	F	117	8	8			
BATT01-00393	F1	50µg/L	F	118	6	3			
BATT01-00393	F1	50µg/L	F	119	9	7			
BATT01-00393	F1	50µg/L	F	99-119			8.095238095	7.47619048	
BATT01-00393	F1	50µg/L	G	99	0	0			
BATT01-00393	F1	50µg/L	G	100	4	4			
BATT01-00393	F1	50µg/L	G	101	2	2			
BATT01-00393	F1	50µg/L	G	102	6	6			
BATT01-00393	F1	50µg/L	G	103	7	5			
BATT01-00393	F1	50µg/L	G	104	9	8			
BATT01-00393	F1	50µg/L	G	105	12	10			
BATT01-00393	F1	50µg/L	G	106	8	8			
BATT01-00393	F1	50µg/L	G	107	6	6			
BATT01-00393	F1	50µg/L	G	108	10	10			
BATT01-00393	F1	50µg/L	G	109	11	9			
BATT01-00393	F1	50µg/L	G	110	10	7			
BATT01-00393	F1	50µg/L	G	111	9	8			
BATT01-00393	F1	50µg/L	G	112	8	8			
BATT01-00393	F1	50µg/L	G	113	13	10			
BATT01-00393	F1	50µg/L	G	114	7	7			
BATT01-00393	F1	50µg/L	G	115	9	9			
BATT01-00393	F1	50µg/L	G	116	6	6			
BATT01-00393	F1	50µg/L	G	117	7	5			
BATT01-00393	F1	50µg/L	G	118	9	9			
BATT01-00393	F1	50µg/L	G	119	6	6			
BATT01-00393	F1	50µg/L	G	99-119			7.571428571	6.80952381	
BATT01-00393	F1	50µg/L	H	99	0	0			
BATT01-00393	F1	50µg/L	H	100	6	6			
BATT01-00393	F1	50µg/L	H	101	5	5			
BATT01-00393	F1	50µg/L	H	102	4	4			
BATT01-00393	F1	50µg/L	H	103	6	4			
BATT01-00393	F1	50µg/L	H	104	7	5			
BATT01-00393	F1	50µg/L	H	105	7	7			
BATT01-00393	F1	50µg/L	H	106	9	7			
BATT01-00393	F1	50µg/L	H	107	8	5			
BATT01-00393	F1	50µg/L	H	108	8	8			
BATT01-00393	F1	50µg/L	H	109	9	7			
BATT01-00393	F1	50µg/L	H	110	10	10			
BATT01-00393	F1	50µg/L	H	111	9	9			
BATT01-00393	F1	50µg/L	H	112	7	7			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	50µg/L	H	113	6	6			
BATT01-00393	F1	50µg/L	H	114	8	8			
BATT01-00393	F1	50µg/L	H	115	8	8			
BATT01-00393	F1	50µg/L	H	116	9	9			
BATT01-00393	F1	50µg/L	H	117	10	7			
BATT01-00393	F1	50µg/L	H	118	10	10			
BATT01-00393	F1	50µg/L	H	119	8	8			
BATT01-00393	F1	50µg/L	H	99-119			7.333333333	6.66666667	
BATT01-00393	F1	50µg/L	I	99	0	0			
BATT01-00393	F1	50µg/L	I	100	5	4			
BATT01-00393	F1	50µg/L	I	101	3	3			
BATT01-00393	F1	50µg/L	I	102	7	7			
BATT01-00393	F1	50µg/L	I	103	7	7			
BATT01-00393	F1	50µg/L	I	104	8	8			
BATT01-00393	F1	50µg/L	I	105	9	9			
BATT01-00393	F1	50µg/L	I	106	6	3			
BATT01-00393	F1	50µg/L	I	107	9	7			
BATT01-00393	F1	50µg/L	I	108	11	11			
BATT01-00393	F1	50µg/L	I	109	12	10			
BATT01-00393	F1	50µg/L	I	110	7	5			
BATT01-00393	F1	50µg/L	I	111	8	6			
BATT01-00393	F1	50µg/L	I	112	9	8			
BATT01-00393	F1	50µg/L	I	113	10	10			
BATT01-00393	F1	50µg/L	I	114	9	9			
BATT01-00393	F1	50µg/L	I	115	7	7			
BATT01-00393	F1	50µg/L	I	116	11	11			
BATT01-00393	F1	50µg/L	I	117	9	9			
BATT01-00393	F1	50µg/L	I	118	7	6			
BATT01-00393	F1	50µg/L	I	119	10	7			
BATT01-00393	F1	50µg/L	I	99-119			7.80952381	7	
BATT01-00393	F1	50µg/L	J	99	0	0			
BATT01-00393	F1	50µg/L	J	100	4	3			
BATT01-00393	F1	50µg/L	J	101	6	4			
BATT01-00393	F1	50µg/L	J	102	8	6			
BATT01-00393	F1	50µg/L	J	103	7	6			
BATT01-00393	F1	50µg/L	J	104	9	7			
BATT01-00393	F1	50µg/L	J	105	7	5			
BATT01-00393	F1	50µg/L	J	106	8	7			
BATT01-00393	F1	50µg/L	J	107	10	9			
BATT01-00393	F1	50µg/L	J	108	4	4			
BATT01-00393	F1	50µg/L	J	109	5	5			
BATT01-00393	F1	50µg/L	J	110	3	3			
BATT01-00393	F1	50µg/L	J	111	7	5			
BATT01-00393	F1	50µg/L	J	112	10	9			
BATT01-00393	F1	50µg/L	J	113	7	7			
BATT01-00393	F1	50µg/L	J	114	5	4			
BATT01-00393	F1	50µg/L	J	115	13	13			
BATT01-00393	F1	50µg/L	J	116	7	7			
BATT01-00393	F1	50µg/L	J	117	9	8			
BATT01-00393	F1	50µg/L	J	118	10	7			
BATT01-00393	F1	50µg/L	J	119	9	8			
BATT01-00393	F1	50µg/L	J	99-119			7.047619048	6.04761905	
BATT01-00393	F1	50µg/L	K	99	0	0			
BATT01-00393	F1	50µg/L	K	100	0	0			
BATT01-00393	F1	50µg/L	K	101	3	3			
BATT01-00393	F1	50µg/L	K	102	9	9			
BATT01-00393	F1	50µg/L	K	103	8	6			
BATT01-00393	F1	50µg/L	K	104	10	10			
BATT01-00393	F1	50µg/L	K	105	9	9			
BATT01-00393	F1	50µg/L	K	106	6	6			
BATT01-00393	F1	50µg/L	K	107	11	11			
BATT01-00393	F1	50µg/L	K	108	9	9			
BATT01-00393	F1	50µg/L	K	109	7	5			
BATT01-00393	F1	50µg/L	K	110	6	3			
BATT01-00393	F1	50µg/L	K	111	9	8			
BATT01-00393	F1	50µg/L	K	112	11	10			
BATT01-00393	F1	50µg/L	K	113	12	12			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	50µg/L	K	114	8	8			
BATT01-00393	F1	50µg/L	K	115	6	6			
BATT01-00393	F1	50µg/L	K	116	10	10			
BATT01-00393	F1	50µg/L	K	117	11	11			
BATT01-00393	F1	50µg/L	K	118	13	10			
BATT01-00393	F1	50µg/L	K	119	10	8			
BATT01-00393	F1	50µg/L	K	99-119			8	7.33333333	
BATT01-00393	F1	50µg/L	L	99	0	0			
BATT01-00393	F1	50µg/L	L	100	0	0			
BATT01-00393	F1	50µg/L	L	101	2	2			
BATT01-00393	F1	50µg/L	L	102	5	5			
BATT01-00393	F1	50µg/L	L	103	8	7			
BATT01-00393	F1	50µg/L	L	104	5	5			
BATT01-00393	F1	50µg/L	L	105	7	5			
BATT01-00393	F1	50µg/L	L	106	9	7			
BATT01-00393	F1	50µg/L	L	107	8	8			
BATT01-00393	F1	50µg/L	L	108	9	9			
BATT01-00393	F1	50µg/L	L	109	10	7			
BATT01-00393	F1	50µg/L	L	110	9	8			
BATT01-00393	F1	50µg/L	L	111	10	10			
BATT01-00393	F1	50µg/L	L	112	12	11			
BATT01-00393	F1	50µg/L	L	113	11	11			
BATT01-00393	F1	50µg/L	L	114	10	10			
BATT01-00393	F1	50µg/L	L	115	9	9			
BATT01-00393	F1	50µg/L	L	116	12	12			
BATT01-00393	F1	50µg/L	L	117	12	12			
BATT01-00393	F1	50µg/L	L	118	10	7			
BATT01-00393	F1	50µg/L	L	119	9	9			
BATT01-00393	F1	50µg/L	L	99-119			7.952380952	7.33333333	
BATT01-00393	F1	100µg/L	A	99	0	0			
BATT01-00393	F1	100µg/L	A	100	0	0			
BATT01-00393	F1	100µg/L	A	101	0	0			
BATT01-00393	F1	100µg/L	A	102	3	3			
BATT01-00393	F1	100µg/L	A	103	5	3			
BATT01-00393	F1	100µg/L	A	104	6	4			
BATT01-00393	F1	100µg/L	A	105	5	2			
BATT01-00393	F1	100µg/L	A	106	7	4			
BATT01-00393	F1	100µg/L	A	107	9	7			
BATT01-00393	F1	100µg/L	A	108	5	3			
BATT01-00393	F1	100µg/L	A	109	4	4			
BATT01-00393	F1	100µg/L	A	110	6	3			
BATT01-00393	F1	100µg/L	A	111	7	5			
BATT01-00393	F1	100µg/L	A	112	5	3			
BATT01-00393	F1	100µg/L	A	113	8	8			
BATT01-00393	F1	100µg/L	A	114	6	5			
BATT01-00393	F1	100µg/L	A	115	4	4			
BATT01-00393	F1	100µg/L	A	116	9	7			
BATT01-00393	F1	100µg/L	A	117	10	7			
BATT01-00393	F1	100µg/L	A	118	6	4			
BATT01-00393	F1	100µg/L	A	119	5	3			
BATT01-00393	F1	100µg/L	A	99-119			5.238095238	3.76190476	
BATT01-00393	F1	100µg/L	B	99	0	0			
BATT01-00393	F1	100µg/L	B	100	3	3			
BATT01-00393	F1	100µg/L	B	101	0	0			
BATT01-00393	F1	100µg/L	B	102	4	4			
BATT01-00393	F1	100µg/L	B	103	6	6			
BATT01-00393	F1	100µg/L	B	104	7	6			
BATT01-00393	F1	100µg/L	B	105	8	6			
BATT01-00393	F1	100µg/L	B	106	9	9			
BATT01-00393	F1	100µg/L	B	107	8	7			
BATT01-00393	F1	100µg/L	B	108	7	5			
BATT01-00393	F1	100µg/L	B	109	4	4			
BATT01-00393	F1	100µg/L	B	110	9	9			
BATT01-00393	F1	100µg/L	B	111	8	6			
BATT01-00393	F1	100µg/L	B	112	9	7			
BATT01-00393	F1	100µg/L	B	113	10	9			
BATT01-00393	F1	100µg/L	B	114	12	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	100µg/L	B	115	7	7			
BATT01-00393	F1	100µg/L	B	116	10	10			
BATT01-00393	F1	100µg/L	B	117	7	5			
BATT01-00393	F1	100µg/L	B	118	8	8			
BATT01-00393	F1	100µg/L	B	119	2	2			
BATT01-00393	F1	100µg/L	B	99-119			6.571428571	5.85714286	
BATT01-00393	F1	100µg/L	C	99	0	0			
BATT01-00393	F1	100µg/L	C	100	2	2			
BATT01-00393	F1	100µg/L	C	101	0	0			
BATT01-00393	F1	100µg/L	C	102	3	1			
BATT01-00393	F1	100µg/L	C	103	4	3			
BATT01-00393	F1	100µg/L	C	104	3	3			
BATT01-00393	F1	100µg/L	C	105	5	5			
BATT01-00393	F1	100µg/L	C	106	2	2			
BATT01-00393	F1	100µg/L	C	107	5	3			
BATT01-00393	F1	100µg/L	C	108	8	8			
BATT01-00393	F1	100µg/L	C	109	2	2			
BATT01-00393	F1	100µg/L	C	110	3	3			
BATT01-00393	F1	100µg/L	C	111	5	4			
BATT01-00393	F1	100µg/L	C	112	10	8			
BATT01-00393	F1	100µg/L	C	113	3	3			
BATT01-00393	F1	100µg/L	C	114	9	9			
BATT01-00393	F1	100µg/L	C	115	10	8			
BATT01-00393	F1	100µg/L	C	116	5	5			
BATT01-00393	F1	100µg/L	C	117	6	6			
BATT01-00393	F1	100µg/L	C	118	5	2			
BATT01-00393	F1	100µg/L	C	119	7	5			
BATT01-00393	F1	100µg/L	C	99-119			4.619047619	3.9047619	
BATT01-00393	F1	100µg/L	D	99	0	0			
BATT01-00393	F1	100µg/L	D	100	0	0			
BATT01-00393	F1	100µg/L	D	101	6	6			
BATT01-00393	F1	100µg/L	D	102	7	7			
BATT01-00393	F1	100µg/L	D	103	5	3			
BATT01-00393	F1	100µg/L	D	104	4	2			
BATT01-00393	F1	100µg/L	D	105	7	5			
BATT01-00393	F1	100µg/L	D	106	6	3			
BATT01-00393	F1	100µg/L	D	107	4	2			
BATT01-00393	F1	100µg/L	D	108	7	7			
BATT01-00393	F1	100µg/L	D	109	6	4			
BATT01-00393	F1	100µg/L	D	110	4	2			
BATT01-00393	F1	100µg/L	D	111	7	7			
BATT01-00393	F1	100µg/L	D	112	7	5			
BATT01-00393	F1	100µg/L	D	113	6	6			
BATT01-00393	F1	100µg/L	D	114	9	8			
BATT01-00393	F1	100µg/L	D	115	8	8			
BATT01-00393	F1	100µg/L	D	116	11	11			
BATT01-00393	F1	100µg/L	D	117	9	7			
BATT01-00393	F1	100µg/L	D	118	6	4			
BATT01-00393	F1	100µg/L	D	119	3	2			
BATT01-00393	F1	100µg/L	D	99-119			5.80952381	4.71428571	
BATT01-00393	F1	100µg/L	E	99	0	0			
BATT01-00393	F1	100µg/L	E	100	0	0			
BATT01-00393	F1	100µg/L	E	101	4	4			
BATT01-00393	F1	100µg/L	E	102	6	5			
BATT01-00393	F1	100µg/L	E	103	3	1			
BATT01-00393	F1	100µg/L	E	104	5	4			
BATT01-00393	F1	100µg/L	E	105	8	4			
BATT01-00393	F1	100µg/L	E	106	9	7			
BATT01-00393	F1	100µg/L	E	107	6	3			
BATT01-00393	F1	100µg/L	E	108	6	6			
BATT01-00393	F1	100µg/L	E	109	5	2			
BATT01-00393	F1	100µg/L	E	110	7	3			
BATT01-00393	F1	100µg/L	E	111	6	6			
BATT01-00393	F1	100µg/L	E	112	8	7			
BATT01-00393	F1	100µg/L	E	113	6	5			
BATT01-00393	F1	100µg/L	E	114	7	7			
BATT01-00393	F1	100µg/L	E	115	12	12			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	100µg/L	E	116	9	9			
BATT01-00393	F1	100µg/L	E	117	8	8			
BATT01-00393	F1	100µg/L	E	118	7	7			
BATT01-00393	F1	100µg/L	E	119	5	2			
BATT01-00393	F1	100µg/L	E	99-119			6.047619048	4.85714286	
BATT01-00393	F1	100µg/L	F	99	2	2			
BATT01-00393	F1	100µg/L	F	100	0	0			
BATT01-00393	F1	100µg/L	F	101	0	0			
BATT01-00393	F1	100µg/L	F	102	4	3			
BATT01-00393	F1	100µg/L	F	103	5	3			
BATT01-00393	F1	100µg/L	F	104	6	4			
BATT01-00393	F1	100µg/L	F	105	8	7			
BATT01-00393	F1	100µg/L	F	106	6	4			
BATT01-00393	F1	100µg/L	F	107	5	4			
BATT01-00393	F1	100µg/L	F	108	6	3			
BATT01-00393	F1	100µg/L	F	109	5	3			
BATT01-00393	F1	100µg/L	F	110	9	8			
BATT01-00393	F1	100µg/L	F	111	8	6			
BATT01-00393	F1	100µg/L	F	112	9	9			
BATT01-00393	F1	100µg/L	F	113	7	7			
BATT01-00393	F1	100µg/L	F	114	8	8			
BATT01-00393	F1	100µg/L	F	115	8	8			
BATT01-00393	F1	100µg/L	F	116	13	13			
BATT01-00393	F1	100µg/L	F	117	8	6			
BATT01-00393	F1	100µg/L	F	118	7	5			
BATT01-00393	F1	100µg/L	F	119	8	7			
BATT01-00393	F1	100µg/L	F	99-119			6.285714286	5.23809524	
BATT01-00393	F1	100µg/L	G	99	6	6			
BATT01-00393	F1	100µg/L	G	100	0	0			
BATT01-00393	F1	100µg/L	G	101	0	0			
BATT01-00393	F1	100µg/L	G	102	2	2			
BATT01-00393	F1	100µg/L	G	103	5	3			
BATT01-00393	F1	100µg/L	G	104	4	4			
BATT01-00393	F1	100µg/L	G	105	2	2			
BATT01-00393	F1	100µg/L	G	106	4	1			
BATT01-00393	F1	100µg/L	G	107	6	3			
BATT01-00393	F1	100µg/L	G	108	4	4			
BATT01-00393	F1	100µg/L	G	109	7	5			
BATT01-00393	F1	100µg/L	G	110	5	3			
BATT01-00393	F1	100µg/L	G	111	8	7			
BATT01-00393	F1	100µg/L	G	112	6	6			
BATT01-00393	F1	100µg/L	G	113	11	11			
BATT01-00393	F1	100µg/L	G	114	13	13			
BATT01-00393	F1	100µg/L	G	115	4	4			
BATT01-00393	F1	100µg/L	G	116	6	6			
BATT01-00393	F1	100µg/L	G	117	4	2			
BATT01-00393	F1	100µg/L	G	118	5	5			
BATT01-00393	F1	100µg/L	G	119	6	4			
BATT01-00393	F1	100µg/L	G	99-119			5.142857143	4.33333333	
BATT01-00393	F1	100µg/L	H	99	0	0			
BATT01-00393	F1	100µg/L	H	100	3	3			
BATT01-00393	F1	100µg/L	H	101	0	0			
BATT01-00393	F1	100µg/L	H	102	0	0			
BATT01-00393	F1	100µg/L	H	103	6	5			
BATT01-00393	F1	100µg/L	H	104	3	3			
BATT01-00393	F1	100µg/L	H	105	5	2			
BATT01-00393	F1	100µg/L	H	106	7	4			
BATT01-00393	F1	100µg/L	H	107	5	3			
BATT01-00393	F1	100µg/L	H	108	6	6			
BATT01-00393	F1	100µg/L	H	109	5	5			
BATT01-00393	F1	100µg/L	H	110	4	3			
BATT01-00393	F1	100µg/L	H	111	6	4			
BATT01-00393	F1	100µg/L	H	112	7	4			
BATT01-00393	F1	100µg/L	H	113	5	5			
BATT01-00393	F1	100µg/L	H	114	7	6			
BATT01-00393	F1	100µg/L	H	115	8	8			
BATT01-00393	F1	100µg/L	H	116	11	11			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	100µg/L	H	117	5	5			
BATT01-00393	F1	100µg/L	H	118	4	2			
BATT01-00393	F1	100µg/L	H	119	6	5			
BATT01-00393	F1	100µg/L	H	99-119			4.904761905	4	
BATT01-00393	F1	100µg/L	I	99	3	3			
BATT01-00393	F1	100µg/L	I	100	2	2			
BATT01-00393	F1	100µg/L	I	101	0	0			
BATT01-00393	F1	100µg/L	I	102	3	3			
BATT01-00393	F1	100µg/L	I	103	7	7			
BATT01-00393	F1	100µg/L	I	104	6	4			
BATT01-00393	F1	100µg/L	I	105	8	6			
BATT01-00393	F1	100µg/L	I	106	9	9			
BATT01-00393	F1	100µg/L	I	107	7	5			
BATT01-00393	F1	100µg/L	I	108	9	9			
BATT01-00393	F1	100µg/L	I	109	10	8			
BATT01-00393	F1	100µg/L	I	110	11	8			
BATT01-00393	F1	100µg/L	I	111	9	7			
BATT01-00393	F1	100µg/L	I	112	8	8			
BATT01-00393	F1	100µg/L	I	113	8	6			
BATT01-00393	F1	100µg/L	I	114	4	4			
BATT01-00393	F1	100µg/L	I	115	9	7			
BATT01-00393	F1	100µg/L	I	116	10	10			
BATT01-00393	F1	100µg/L	I	117	8	8			
BATT01-00393	F1	100µg/L	I	118	7	5			
BATT01-00393	F1	100µg/L	I	119	6	3			
BATT01-00393	F1	100µg/L	I	99-119			6.857142857	5.80952381	
BATT01-00393	F1	100µg/L	J	99	0	0			
BATT01-00393	F1	100µg/L	J	100	0	0			
BATT01-00393	F1	100µg/L	J	101	5	5			
BATT01-00393	F1	100µg/L	J	102	4	2			
BATT01-00393	F1	100µg/L	J	103	6	4			
BATT01-00393	F1	100µg/L	J	104	8	5			
BATT01-00393	F1	100µg/L	J	105	5	3			
BATT01-00393	F1	100µg/L	J	106	6	3			
BATT01-00393	F1	100µg/L	J	107	4	4			
BATT01-00393	F1	100µg/L	J	108	6	6			
BATT01-00393	F1	100µg/L	J	109	7	7			
BATT01-00393	F1	100µg/L	J	110	5	2			
BATT01-00393	F1	100µg/L	J	111	8	6			
BATT01-00393	F1	100µg/L	J	112	6	5			
BATT01-00393	F1	100µg/L	J	113	10	9			
BATT01-00393	F1	100µg/L	J	114	10	10			
BATT01-00393	F1	100µg/L	J	115	5	5			
BATT01-00393	F1	100µg/L	J	116	8	8			
BATT01-00393	F1	100µg/L	J	117	9	9			
BATT01-00393	F1	100µg/L	J	118	7	5			
BATT01-00393	F1	100µg/L	J	119	6	3			
BATT01-00393	F1	100µg/L	J	99-119			5.952380952	4.80952381	
BATT01-00393	F1	100µg/L	K	99	0	0			
BATT01-00393	F1	100µg/L	K	100	0	0			
BATT01-00393	F1	100µg/L	K	101	0	0			
BATT01-00393	F1	100µg/L	K	102	5	2			
BATT01-00393	F1	100µg/L	K	103	7	5			
BATT01-00393	F1	100µg/L	K	104	6	6			
BATT01-00393	F1	100µg/L	K	105	7	5			
BATT01-00393	F1	100µg/L	K	106	8	7			
BATT01-00393	F1	100µg/L	K	107	5	5			
BATT01-00393	F1	100µg/L	K	108	8	8			
BATT01-00393	F1	100µg/L	K	109	6	4			
BATT01-00393	F1	100µg/L	K	110	7	6			
BATT01-00393	F1	100µg/L	K	111	7	7			
BATT01-00393	F1	100µg/L	K	112	7	7			
BATT01-00393	F1	100µg/L	K	113	9	9			
BATT01-00393	F1	100µg/L	K	114	8	6			
BATT01-00393	F1	100µg/L	K	115	6	6			
BATT01-00393	F1	100µg/L	K	116	7	6			
BATT01-00393	F1	100µg/L	K	117	8	5			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F1	100µg/L	K	118	7	6			
BATT01-00393	F1	100µg/L	K	119	9	9			
BATT01-00393	F1	100µg/L	K	99-119			6.047619048	5.19047619	
BATT01-00393	F1	100µg/L	L	99	0	0			
BATT01-00393	F1	100µg/L	L	100	4	3			
BATT01-00393	F1	100µg/L	L	101	6	4			
BATT01-00393	F1	100µg/L	L	102	3	2			
BATT01-00393	F1	100µg/L	L	103	5	2			
BATT01-00393	F1	100µg/L	L	104	4	2			
BATT01-00393	F1	100µg/L	L	105	9	6			
BATT01-00393	F1	100µg/L	L	106	7	5			
BATT01-00393	F1	100µg/L	L	107	6	4			
BATT01-00393	F1	100µg/L	L	108	9	9			
BATT01-00393	F1	100µg/L	L	109	7	7			
BATT01-00393	F1	100µg/L	L	110	10	8			
BATT01-00393	F1	100µg/L	L	111	9	8			
BATT01-00393	F1	100µg/L	L	112	3	3			
BATT01-00393	F1	100µg/L	L	113	8	7			
BATT01-00393	F1	100µg/L	L	114	11	11			
BATT01-00393	F1	100µg/L	L	115	10	8			
BATT01-00393	F1	100µg/L	L	116	5	5			
BATT01-00393	F1	100µg/L	L	117	4	2			
BATT01-00393	F1	100µg/L	L	118	5	3			
BATT01-00393	F1	100µg/L	L	119	7	6			
BATT01-00393	F1	100µg/L	L	99-119			6.285714286	5	
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	197	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	198	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	199	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	200	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	201	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	202	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	203	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	204	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	205	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	206	16	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	207	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	208	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	209	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	210	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	211	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	212	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	213	35	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	214	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	215	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	216	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	217	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	A	197-217			19.38095238	19.2857143	
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	197	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	198	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	199	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	200	29	29			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	201	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	202	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	203	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	204	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	205	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	206	28	28			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	207	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	208	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	209	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	210	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	211	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	212	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	213	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	214	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	215	29	29			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	216	15	15			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	217	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	B	197-217			20.28571429	20.2380952	
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	198	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	199	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	200	25	25			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	201	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	202	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	203	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	204	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	205	29	29			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	206	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	207	36	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	208	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	209	17	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	210	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	211	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	212	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	213	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	214	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	215	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	216	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	217	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	C	197-217			20.33333333	20.1904762	
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	198	40	40			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	199	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	200	32	32			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	201	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	202	29	29			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	203	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	204	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	205	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	206	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	207	27	27			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	208	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	209	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	210	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	211	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	212	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	213	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	214	14	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	215	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	216	39	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	217	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	D	197-217			19.23809524	19.047619	
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	197	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	198	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	199	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	200	24	24			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	201	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	202	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	203	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	204	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	205	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	206	16	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	207	17	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	208	29	29			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	209	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	210	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	211	17	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	212	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	213	13	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	214	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	215	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	216	20	19			
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	217	16	16			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	(Ctrl) 0.0µg/L	E	197-217			18.19047619	17.952381	
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	197	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	198	40	40			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	199	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	200	35	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	201	8	8			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	202	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	203	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	204	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	205	28	28			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	206	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	207	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	208	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	209	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	210	16	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	211	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	212	27	27			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	213	19	19			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	214	14	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	215	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	216	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	217	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	F	197-217			18.9047619	18.7142857	
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	197	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	198	33	33			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	199	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	200	25	25			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	201	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	202	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	203	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	204	13	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	205	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	206	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	207	10	9			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	208	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	209	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	210	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	211	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	212	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	213	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	214	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	215	29	28			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	216	37	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	217	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	G	197-217			18.38095238	18.1904762	
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	197	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	198	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	199	26	26			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	200	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	201	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	202	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	203	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	204	36	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	205	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	206	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	207	15	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	208	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	209	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	210	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	211	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	212	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	213	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	214	28	28			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	215	39	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	216	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	217	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	H	197-217			17.80952381	17.5714286	

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	198	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	199	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	200	35	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	201	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	202	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	203	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	204	28	28			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	205	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	206	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	207	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	208	15	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	209	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	210	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	211	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	212	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	213	19	19			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	214	18	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	215	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	216	28	28			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	217	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	I	197-217			18.28571429	18.047619	
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	198	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	199	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	200	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	201	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	202	35	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	203	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	204	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	205	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	206	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	207	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	208	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	209	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	210	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	211	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	212	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	213	39	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	214	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	215	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	216	19	19			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	217	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	J	197-217			21.04761905	20.8571429	
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	198	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	199	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	200	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	201	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	202	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	203	29	28			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	204	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	205	38	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	206	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	207	13	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	208	16	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	209	19	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	210	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	211	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	212	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	213	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	214	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	215	14	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	216	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	217	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	K	197-217			19.52380952	19.1428571	
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	197	10	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	198	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	199	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	200	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	201	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	202	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	203	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	204	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	205	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	206	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	207	13	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	208	10	9			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	209	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	210	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	211	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	212	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	213	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	214	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	215	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	216	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	217	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	L	197-217			19	18.8571429	
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	198	33	33			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	199	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	200	35	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	201	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	202	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	203	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	204	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	205	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	206	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	207	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	208	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	209	19	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	210	21	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	211	18	18			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	212	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	213	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	214	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	215	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	216	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	217	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	M	197-217			22.0952381	21.8571429	
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	197	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	198	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	199	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	200	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	201	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	202	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	203	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	204	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	205	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	206	13	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	207	10	8			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	208	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	209	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	210	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	211	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	212	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	213	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	214	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	215	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	216	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	217	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	N	197-217			17.80952381	17.6666667	
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	197	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	198	10	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	199	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	200	32	32			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	201	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	202	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	203	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	204	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	205	35	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	206	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	207	13	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	208	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	209	14	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	210	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	211	18	18			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	212	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	213	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	214	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	215	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	216	12	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	217	13	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	O	197-217			19.66666667	19.3809524	
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	198	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	199	40	40			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	200	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	201	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	202	15	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	203	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	204	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	205	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	206	36	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	207	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	208	18	18			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	209	17	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	210	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	211	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	212	17	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	213	19	18			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	214	20	18			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	215	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	216	18	18			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	217	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	P	197-217			24	23.6190476	
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	197	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	198	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	199	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	200	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	201	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	202	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	203	11	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	204	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	205	36	34			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	206	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	207	10	9			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	208	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	209	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	210	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	211	19	19			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	212	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	213	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	214	37	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	215	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	216	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	217	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	Q	197-217			20.85714286	20.5714286	
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	198	35	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	199	11	11			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	200	11	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	201	12	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	202	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	203	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	204	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	205	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	206	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	207	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	208	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	209	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	210	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	211	17	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	212	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	213	18	18			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	214	19	19			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	215	20	18			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	216	11	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	217	14	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	R	197-217			19.04761905	18.6666667	
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	197	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	198	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	199	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	200	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	201	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	202	13	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	203	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	204	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	205	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	206	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	207	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	208	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	209	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	210	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	211	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	212	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	213	19	19			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	214	18	18			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	215	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	216	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	217	13	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	S	197-217			21.76190476	21.5714286	
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	197	40	40			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	198	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	199	29	29			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	200	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	201	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	202	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	203	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	204	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	205	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	206	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	207	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	208	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	209	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	210	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	211	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	212	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	213	18	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	214	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	215	19	19			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	216	10	8			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	217	11	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	T	197-217			18.66666667	18.4761905	
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	198	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	199	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	200	35	35			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	201	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	202	11	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	203	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	204	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	205	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	206	28	28			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	207	35	35			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	208	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	209	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	210	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	211	8	8			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	212	25	24			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	213	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	214	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	215	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	216	10	9			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	217	14	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	U	197-217			18.66666667	18.4285714	
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	197	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	198	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	199	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	200	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	201	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	202	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	203	16	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	204	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	205	26	26			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	206	12	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	207	14	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	208	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	209	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	210	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	211	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	212	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	213	17	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	214	28	26			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	215	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	216	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	217	37	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	V	197-217			23.19047619	22.8095238	
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	197	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	198	34	34			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	199	10	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	200	33	33			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	201	14	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	202	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	203	39	39			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	204	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	205	37	37			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	206	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	207	12	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	208	10	8			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	209	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	210	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	211	15	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	212	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	213	19	19			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	214	17	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	215	18	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	216	37	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	217	39	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	W	197-217			22.33333333	21.7619048	
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	197	30	30			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	198	12	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	199	20	20			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	200	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	201	29	29			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	202	11	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	203	36	36			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	204	13	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	205	16	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	206	17	17			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	207	38	38			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	208	15	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	209	17	16			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	210	10	9			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	211	12	11			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	212	13	12			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	213	14	13			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	214	16	15			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	215	10	8			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	216	11	10			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	217	14	14			
BATT01-00393	F2	(Ctrl) 0.0µg/L	X	197-217			17.57142857	17.0952381	
BATT01-00393	F2	6.3µg/L	A	197	10	10			
BATT01-00393	F2	6.3µg/L	A	198	30	30			
BATT01-00393	F2	6.3µg/L	A	199	0	0			
BATT01-00393	F2	6.3µg/L	A	200	15	15			
BATT01-00393	F2	6.3µg/L	A	201	12	12			
BATT01-00393	F2	6.3µg/L	A	202	36	36			
BATT01-00393	F2	6.3µg/L	A	203	13	13			
BATT01-00393	F2	6.3µg/L	A	204	10	10			
BATT01-00393	F2	6.3µg/L	A	205	14	14			
BATT01-00393	F2	6.3µg/L	A	206	12	12			
BATT01-00393	F2	6.3µg/L	A	207	11	10			
BATT01-00393	F2	6.3µg/L	A	208	15	14			
BATT01-00393	F2	6.3µg/L	A	209	16	14			
BATT01-00393	F2	6.3µg/L	A	210	17	17			
BATT01-00393	F2	6.3µg/L	A	211	39	39			
BATT01-00393	F2	6.3µg/L	A	212	16	16			
BATT01-00393	F2	6.3µg/L	A	213	32	32			
BATT01-00393	F2	6.3µg/L	A	214	13	12			
BATT01-00393	F2	6.3µg/L	A	215	17	17			
BATT01-00393	F2	6.3µg/L	A	216	18	17			
BATT01-00393	F2	6.3µg/L	A	217	19	19			
BATT01-00393	F2	6.3µg/L	A	197-217			17.38095238	17.0952381	
BATT01-00393	F2	6.3µg/L	B	197	20	20			
BATT01-00393	F2	6.3µg/L	B	198	10	10			
BATT01-00393	F2	6.3µg/L	B	199	34	34			
BATT01-00393	F2	6.3µg/L	B	200	10	8			
BATT01-00393	F2	6.3µg/L	B	201	13	12			
BATT01-00393	F2	6.3µg/L	B	202	37	37			
BATT01-00393	F2	6.3µg/L	B	203	15	15			
BATT01-00393	F2	6.3µg/L	B	204	13	12			
BATT01-00393	F2	6.3µg/L	B	205	38	38			
BATT01-00393	F2	6.3µg/L	B	206	16	16			
BATT01-00393	F2	6.3µg/L	B	207	10	10			
BATT01-00393	F2	6.3µg/L	B	208	12	12			
BATT01-00393	F2	6.3µg/L	B	209	16	16			
BATT01-00393	F2	6.3µg/L	B	210	10	10			
BATT01-00393	F2	6.3µg/L	B	211	13	13			
BATT01-00393	F2	6.3µg/L	B	212	28	27			
BATT01-00393	F2	6.3µg/L	B	213	39	38			
BATT01-00393	F2	6.3µg/L	B	214	15	15			
BATT01-00393	F2	6.3µg/L	B	215	18	18			
BATT01-00393	F2	6.3µg/L	B	216	16	14			
BATT01-00393	F2	6.3µg/L	B	217	12	11			
BATT01-00393	F2	6.3µg/L	B	197-217			18.80952381	18.3809524	
BATT01-00393	F2	6.3µg/L	C	197	10	10			
BATT01-00393	F2	6.3µg/L	C	198	20	20			
BATT01-00393	F2	6.3µg/L	C	199	36	36			
BATT01-00393	F2	6.3µg/L	C	200	15	15			
BATT01-00393	F2	6.3µg/L	C	201	16	14			
BATT01-00393	F2	6.3µg/L	C	202	35	35			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	6.3µg/L	C	203	39	39			
BATT01-00393	F2	6.3µg/L	C	204	15	13			
BATT01-00393	F2	6.3µg/L	C	205	14	13			
BATT01-00393	F2	6.3µg/L	C	206	10	10			
BATT01-00393	F2	6.3µg/L	C	207	16	16			
BATT01-00393	F2	6.3µg/L	C	208	10	10			
BATT01-00393	F2	6.3µg/L	C	209	13	13			
BATT01-00393	F2	6.3µg/L	C	210	12	11			
BATT01-00393	F2	6.3µg/L	C	211	10	10			
BATT01-00393	F2	6.3µg/L	C	212	15	15			
BATT01-00393	F2	6.3µg/L	C	213	10	9			
BATT01-00393	F2	6.3µg/L	C	214	17	16			
BATT01-00393	F2	6.3µg/L	C	215	18	17			
BATT01-00393	F2	6.3µg/L	C	216	13	12			
BATT01-00393	F2	6.3µg/L	C	217	17	17			
BATT01-00393	F2	6.3µg/L	C	197-217			17.19047619	16.7142857	
BATT01-00393	F2	6.3µg/L	D	197	0	0			
BATT01-00393	F2	6.3µg/L	D	198	23	23			
BATT01-00393	F2	6.3µg/L	D	199	37	37			
BATT01-00393	F2	6.3µg/L	D	200	10	10			
BATT01-00393	F2	6.3µg/L	D	201	39	39			
BATT01-00393	F2	6.3µg/L	D	202	11	11			
BATT01-00393	F2	6.3µg/L	D	203	13	13			
BATT01-00393	F2	6.3µg/L	D	204	10	10			
BATT01-00393	F2	6.3µg/L	D	205	28	27			
BATT01-00393	F2	6.3µg/L	D	206	13	13			
BATT01-00393	F2	6.3µg/L	D	207	15	13			
BATT01-00393	F2	6.3µg/L	D	208	16	16			
BATT01-00393	F2	6.3µg/L	D	209	12	12			
BATT01-00393	F2	6.3µg/L	D	210	15	15			
BATT01-00393	F2	6.3µg/L	D	211	14	14			
BATT01-00393	F2	6.3µg/L	D	212	16	16			
BATT01-00393	F2	6.3µg/L	D	213	19	18			
BATT01-00393	F2	6.3µg/L	D	214	16	15			
BATT01-00393	F2	6.3µg/L	D	215	18	17			
BATT01-00393	F2	6.3µg/L	D	216	21	19			
BATT01-00393	F2	6.3µg/L	D	217	11	11			
BATT01-00393	F2	6.3µg/L	D	197-217			17	16.6190476	
BATT01-00393	F2	6.3µg/L	E	197	10	10			
BATT01-00393	F2	6.3µg/L	E	198	20	20			
BATT01-00393	F2	6.3µg/L	E	199	30	30			
BATT01-00393	F2	6.3µg/L	E	200	14	14			
BATT01-00393	F2	6.3µg/L	E	201	10	10			
BATT01-00393	F2	6.3µg/L	E	202	10	8			
BATT01-00393	F2	6.3µg/L	E	203	37	37			
BATT01-00393	F2	6.3µg/L	E	204	38	38			
BATT01-00393	F2	6.3µg/L	E	205	15	15			
BATT01-00393	F2	6.3µg/L	E	206	12	12			
BATT01-00393	F2	6.3µg/L	E	207	14	12			
BATT01-00393	F2	6.3µg/L	E	208	13	11			
BATT01-00393	F2	6.3µg/L	E	209	15	15			
BATT01-00393	F2	6.3µg/L	E	210	16	15			
BATT01-00393	F2	6.3µg/L	E	211	10	10			
BATT01-00393	F2	6.3µg/L	E	212	39	39			
BATT01-00393	F2	6.3µg/L	E	213	23	23			
BATT01-00393	F2	6.3µg/L	E	214	14	14			
BATT01-00393	F2	6.3µg/L	E	215	16	16			
BATT01-00393	F2	6.3µg/L	E	216	29	29			
BATT01-00393	F2	6.3µg/L	E	217	11	11			
BATT01-00393	F2	6.3µg/L	E	197-217			18.85714286	18.5238095	
BATT01-00393	F2	6.3µg/L	F	197	0	0			
BATT01-00393	F2	6.3µg/L	F	198	10	10			
BATT01-00393	F2	6.3µg/L	F	199	37	37			
BATT01-00393	F2	6.3µg/L	F	200	11	11			
BATT01-00393	F2	6.3µg/L	F	201	27	27			
BATT01-00393	F2	6.3µg/L	F	202	29	29			
BATT01-00393	F2	6.3µg/L	F	203	12	12			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	6.3µg/L	F	204	10	10			
BATT01-00393	F2	6.3µg/L	F	205	38	38			
BATT01-00393	F2	6.3µg/L	F	206	39	37			
BATT01-00393	F2	6.3µg/L	F	207	14	14			
BATT01-00393	F2	6.3µg/L	F	208	15	13			
BATT01-00393	F2	6.3µg/L	F	209	14	14			
BATT01-00393	F2	6.3µg/L	F	210	17	16			
BATT01-00393	F2	6.3µg/L	F	211	18	17			
BATT01-00393	F2	6.3µg/L	F	212	20	20			
BATT01-00393	F2	6.3µg/L	F	213	16	16			
BATT01-00393	F2	6.3µg/L	F	214	17	15			
BATT01-00393	F2	6.3µg/L	F	215	19	19			
BATT01-00393	F2	6.3µg/L	F	216	18	18			
BATT01-00393	F2	6.3µg/L	F	217	10	9			
BATT01-00393	F2	6.3µg/L	F	197-217			18.61904762	18.1904762	
BATT01-00393	F2	6.3µg/L	G	197	10	10			
BATT01-00393	F2	6.3µg/L	G	198	32	32			
BATT01-00393	F2	6.3µg/L	G	199	34	34			
BATT01-00393	F2	6.3µg/L	G	200	37	37			
BATT01-00393	F2	6.3µg/L	G	201	29	29			
BATT01-00393	F2	6.3µg/L	G	202	12	12			
BATT01-00393	F2	6.3µg/L	G	203	11	11			
BATT01-00393	F2	6.3µg/L	G	204	10	8			
BATT01-00393	F2	6.3µg/L	G	205	13	13			
BATT01-00393	F2	6.3µg/L	G	206	12	12			
BATT01-00393	F2	6.3µg/L	G	207	11	10			
BATT01-00393	F2	6.3µg/L	G	208	15	14			
BATT01-00393	F2	6.3µg/L	G	209	36	36			
BATT01-00393	F2	6.3µg/L	G	210	12	12			
BATT01-00393	F2	6.3µg/L	G	211	15	14			
BATT01-00393	F2	6.3µg/L	G	212	17	16			
BATT01-00393	F2	6.3µg/L	G	213	29	28			
BATT01-00393	F2	6.3µg/L	G	214	12	11			
BATT01-00393	F2	6.3µg/L	G	215	10	10			
BATT01-00393	F2	6.3µg/L	G	216	13	12			
BATT01-00393	F2	6.3µg/L	G	217	15	15			
BATT01-00393	F2	6.3µg/L	G	197-217			18.33333333	17.9047619	
BATT01-00393	F2	6.3µg/L	H	197	0	0			
BATT01-00393	F2	6.3µg/L	H	198	30	30			
BATT01-00393	F2	6.3µg/L	H	199	36	36			
BATT01-00393	F2	6.3µg/L	H	200	12	12			
BATT01-00393	F2	6.3µg/L	H	201	10	10			
BATT01-00393	F2	6.3µg/L	H	202	28	28			
BATT01-00393	F2	6.3µg/L	H	203	29	29			
BATT01-00393	F2	6.3µg/L	H	204	13	13			
BATT01-00393	F2	6.3µg/L	H	205	16	16			
BATT01-00393	F2	6.3µg/L	H	206	15	14			
BATT01-00393	F2	6.3µg/L	H	207	29	29			
BATT01-00393	F2	6.3µg/L	H	208	10	10			
BATT01-00393	F2	6.3µg/L	H	209	38	38			
BATT01-00393	F2	6.3µg/L	H	210	37	37			
BATT01-00393	F2	6.3µg/L	H	211	12	11			
BATT01-00393	F2	6.3µg/L	H	212	15	15			
BATT01-00393	F2	6.3µg/L	H	213	13	13			
BATT01-00393	F2	6.3µg/L	H	214	14	14			
BATT01-00393	F2	6.3µg/L	H	215	12	12			
BATT01-00393	F2	6.3µg/L	H	216	39	39			
BATT01-00393	F2	6.3µg/L	H	217	13	13			
BATT01-00393	F2	6.3µg/L	H	197-217			20.04761905	19.952381	
BATT01-00393	F2	6.3µg/L	I	197	20	20			
BATT01-00393	F2	6.3µg/L	I	198	0	0			
BATT01-00393	F2	6.3µg/L	I	199	10	10			
BATT01-00393	F2	6.3µg/L	I	200	13	13			
BATT01-00393	F2	6.3µg/L	I	201	37	37			
BATT01-00393	F2	6.3µg/L	I	202	15	14			
BATT01-00393	F2	6.3µg/L	I	203	12	12			
BATT01-00393	F2	6.3µg/L	I	204	11	11			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	6.3µg/L	I	205	27	27			
BATT01-00393	F2	6.3µg/L	I	206	13	12			
BATT01-00393	F2	6.3µg/L	I	207	11	11			
BATT01-00393	F2	6.3µg/L	I	208	15	15			
BATT01-00393	F2	6.3µg/L	I	209	13	12			
BATT01-00393	F2	6.3µg/L	I	210	14	14			
BATT01-00393	F2	6.3µg/L	I	211	16	16			
BATT01-00393	F2	6.3µg/L	I	212	37	37			
BATT01-00393	F2	6.3µg/L	I	213	39	39			
BATT01-00393	F2	6.3µg/L	I	214	16	15			
BATT01-00393	F2	6.3µg/L	I	215	12	12			
BATT01-00393	F2	6.3µg/L	I	216	14	14			
BATT01-00393	F2	6.3µg/L	I	217	11	11			
BATT01-00393	F2	6.3µg/L	I	197-217			16.95238095	16.7619048	
BATT01-00393	F2	6.3µg/L	J	197	10	10			
BATT01-00393	F2	6.3µg/L	J	198	4	4			
BATT01-00393	F2	6.3µg/L	J	199	0	0			
BATT01-00393	F2	6.3µg/L	J	200	15	15			
BATT01-00393	F2	6.3µg/L	J	201	12	10			
BATT01-00393	F2	6.3µg/L	J	202	10	10			
BATT01-00393	F2	6.3µg/L	J	203	38	38			
BATT01-00393	F2	6.3µg/L	J	204	15	13			
BATT01-00393	F2	6.3µg/L	J	205	36	36			
BATT01-00393	F2	6.3µg/L	J	206	15	14			
BATT01-00393	F2	6.3µg/L	J	207	12	12			
BATT01-00393	F2	6.3µg/L	J	208	10	8			
BATT01-00393	F2	6.3µg/L	J	209	15	14			
BATT01-00393	F2	6.3µg/L	J	210	10	9			
BATT01-00393	F2	6.3µg/L	J	211	11	11			
BATT01-00393	F2	6.3µg/L	J	212	13	13			
BATT01-00393	F2	6.3µg/L	J	213	10	10			
BATT01-00393	F2	6.3µg/L	J	214	38	38			
BATT01-00393	F2	6.3µg/L	J	215	16	16			
BATT01-00393	F2	6.3µg/L	J	216	13	13			
BATT01-00393	F2	6.3µg/L	J	217	12	12			
BATT01-00393	F2	6.3µg/L	J	197-217			15	14.5714286	
BATT01-00393	F2	6.3µg/L	K	197	0	0			
BATT01-00393	F2	6.3µg/L	K	198	20	20			
BATT01-00393	F2	6.3µg/L	K	199	37	37			
BATT01-00393	F2	6.3µg/L	K	200	14	13			
BATT01-00393	F2	6.3µg/L	K	201	10	10			
BATT01-00393	F2	6.3µg/L	K	202	12	12			
BATT01-00393	F2	6.3µg/L	K	203	37	37			
BATT01-00393	F2	6.3µg/L	K	204	12	12			
BATT01-00393	F2	6.3µg/L	K	205	39	39			
BATT01-00393	F2	6.3µg/L	K	206	13	13			
BATT01-00393	F2	6.3µg/L	K	207	14	14			
BATT01-00393	F2	6.3µg/L	K	208	16	15			
BATT01-00393	F2	6.3µg/L	K	209	9	8			
BATT01-00393	F2	6.3µg/L	K	210	13	13			
BATT01-00393	F2	6.3µg/L	K	211	10	10			
BATT01-00393	F2	6.3µg/L	K	212	13	12			
BATT01-00393	F2	6.3µg/L	K	213	39	38			
BATT01-00393	F2	6.3µg/L	K	214	36	36			
BATT01-00393	F2	6.3µg/L	K	215	38	38			
BATT01-00393	F2	6.3µg/L	K	216	12	12			
BATT01-00393	F2	6.3µg/L	K	217	11	11			
BATT01-00393	F2	6.3µg/L	K	197-217			19.28571429	19.047619	
BATT01-00393	F2	6.3µg/L	L	197	10	10			
BATT01-00393	F2	6.3µg/L	L	198	35	35			
BATT01-00393	F2	6.3µg/L	L	199	39	39			
BATT01-00393	F2	6.3µg/L	L	200	28	28			
BATT01-00393	F2	6.3µg/L	L	201	10	9			
BATT01-00393	F2	6.3µg/L	L	202	11	10			
BATT01-00393	F2	6.3µg/L	L	203	14	12			
BATT01-00393	F2	6.3µg/L	L	204	10	9			
BATT01-00393	F2	6.3µg/L	L	205	36	36			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	6.3µg/L	L	206	39	39			
BATT01-00393	F2	6.3µg/L	L	207	12	12			
BATT01-00393	F2	6.3µg/L	L	208	15	14			
BATT01-00393	F2	6.3µg/L	L	209	13	13			
BATT01-00393	F2	6.3µg/L	L	210	39	39			
BATT01-00393	F2	6.3µg/L	L	211	14	14			
BATT01-00393	F2	6.3µg/L	L	212	15	15			
BATT01-00393	F2	6.3µg/L	L	213	17	16			
BATT01-00393	F2	6.3µg/L	L	214	19	19			
BATT01-00393	F2	6.3µg/L	L	215	16	16			
BATT01-00393	F2	6.3µg/L	L	216	15	14			
BATT01-00393	F2	6.3µg/L	L	217	12	12			
BATT01-00393	F2	6.3µg/L	L	197-217			19.95238095	19.5714286	
BATT01-00393	F2	12.5µg/L	A	197	0	0			
BATT01-00393	F2	12.5µg/L	A	198	15	15			
BATT01-00393	F2	12.5µg/L	A	199	17	17			
BATT01-00393	F2	12.5µg/L	A	200	10	10			
BATT01-00393	F2	12.5µg/L	A	201	19	19			
BATT01-00393	F2	12.5µg/L	A	202	12	11			
BATT01-00393	F2	12.5µg/L	A	203	14	12			
BATT01-00393	F2	12.5µg/L	A	204	13	12			
BATT01-00393	F2	12.5µg/L	A	205	9	8			
BATT01-00393	F2	12.5µg/L	A	206	11	11			
BATT01-00393	F2	12.5µg/L	A	207	14	12			
BATT01-00393	F2	12.5µg/L	A	208	13	13			
BATT01-00393	F2	12.5µg/L	A	209	16	15			
BATT01-00393	F2	12.5µg/L	A	210	18	18			
BATT01-00393	F2	12.5µg/L	A	211	12	10			
BATT01-00393	F2	12.5µg/L	A	212	11	8			
BATT01-00393	F2	12.5µg/L	A	213	16	16			
BATT01-00393	F2	12.5µg/L	A	214	17	17			
BATT01-00393	F2	12.5µg/L	A	215	19	19			
BATT01-00393	F2	12.5µg/L	A	216	18	18			
BATT01-00393	F2	12.5µg/L	A	217	12	12			
BATT01-00393	F2	12.5µg/L	A	197-217			13.61904762	13	
BATT01-00393	F2	12.5µg/L	B	197	0	0			
BATT01-00393	F2	12.5µg/L	B	198	0	0			
BATT01-00393	F2	12.5µg/L	B	199	13	13			
BATT01-00393	F2	12.5µg/L	B	200	12	12			
BATT01-00393	F2	12.5µg/L	B	201	10	10			
BATT01-00393	F2	12.5µg/L	B	202	19	19			
BATT01-00393	F2	12.5µg/L	B	203	18	18			
BATT01-00393	F2	12.5µg/L	B	204	19	19			
BATT01-00393	F2	12.5µg/L	B	205	18	18			
BATT01-00393	F2	12.5µg/L	B	206	16	16			
BATT01-00393	F2	12.5µg/L	B	207	17	17			
BATT01-00393	F2	12.5µg/L	B	208	15	12			
BATT01-00393	F2	12.5µg/L	B	209	14	14			
BATT01-00393	F2	12.5µg/L	B	210	10	10			
BATT01-00393	F2	12.5µg/L	B	211	18	18			
BATT01-00393	F2	12.5µg/L	B	212	11	11			
BATT01-00393	F2	12.5µg/L	B	213	13	13			
BATT01-00393	F2	12.5µg/L	B	214	10	10			
BATT01-00393	F2	12.5µg/L	B	215	16	16			
BATT01-00393	F2	12.5µg/L	B	216	14	14			
BATT01-00393	F2	12.5µg/L	B	217	12	10			
BATT01-00393	F2	12.5µg/L	B	197-217			13.0952381	12.8571429	
BATT01-00393	F2	12.5µg/L	C	197	0	0			
BATT01-00393	F2	12.5µg/L	C	198	12	12			
BATT01-00393	F2	12.5µg/L	C	199	17	17			
BATT01-00393	F2	12.5µg/L	C	200	19	18			
BATT01-00393	F2	12.5µg/L	C	201	12	11			
BATT01-00393	F2	12.5µg/L	C	202	13	13			
BATT01-00393	F2	12.5µg/L	C	203	12	12			
BATT01-00393	F2	12.5µg/L	C	204	13	11			
BATT01-00393	F2	12.5µg/L	C	205	17	17			
BATT01-00393	F2	12.5µg/L	C	206	19	19			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	12.5µg/L	C	207	10	8			
BATT01-00393	F2	12.5µg/L	C	208	12	12			
BATT01-00393	F2	12.5µg/L	C	209	15	14			
BATT01-00393	F2	12.5µg/L	C	210	16	15			
BATT01-00393	F2	12.5µg/L	C	211	11	10			
BATT01-00393	F2	12.5µg/L	C	212	13	12			
BATT01-00393	F2	12.5µg/L	C	213	19	18			
BATT01-00393	F2	12.5µg/L	C	214	14	12			
BATT01-00393	F2	12.5µg/L	C	215	8	7			
BATT01-00393	F2	12.5µg/L	C	216	15	15			
BATT01-00393	F2	12.5µg/L	C	217	16	14			
BATT01-00393	F2	12.5µg/L	C	197-217			13.47619048	12.7142857	
BATT01-00393	F2	12.5µg/L	D	197	0	0			
BATT01-00393	F2	12.5µg/L	D	198	16	16			
BATT01-00393	F2	12.5µg/L	D	199	16	16			
BATT01-00393	F2	12.5µg/L	D	200	10	10			
BATT01-00393	F2	12.5µg/L	D	201	19	19			
BATT01-00393	F2	12.5µg/L	D	202	10	10			
BATT01-00393	F2	12.5µg/L	D	203	14	13			
BATT01-00393	F2	12.5µg/L	D	204	12	12			
BATT01-00393	F2	12.5µg/L	D	205	15	15			
BATT01-00393	F2	12.5µg/L	D	206	9	9			
BATT01-00393	F2	12.5µg/L	D	207	18	18			
BATT01-00393	F2	12.5µg/L	D	208	12	12			
BATT01-00393	F2	12.5µg/L	D	209	17	17			
BATT01-00393	F2	12.5µg/L	D	210	16	15			
BATT01-00393	F2	12.5µg/L	D	211	19	19			
BATT01-00393	F2	12.5µg/L	D	212	12	11			
BATT01-00393	F2	12.5µg/L	D	213	10	10			
BATT01-00393	F2	12.5µg/L	D	214	11	11			
BATT01-00393	F2	12.5µg/L	D	215	19	17			
BATT01-00393	F2	12.5µg/L	D	216	12	10			
BATT01-00393	F2	12.5µg/L	D	217	13	13			
BATT01-00393	F2	12.5µg/L	D	197-217			13.33333333	13	
BATT01-00393	F2	12.5µg/L	E	197	0	0			
BATT01-00393	F2	12.5µg/L	E	198	10	10			
BATT01-00393	F2	12.5µg/L	E	199	15	15			
BATT01-00393	F2	12.5µg/L	E	200	13	13			
BATT01-00393	F2	12.5µg/L	E	201	10	10			
BATT01-00393	F2	12.5µg/L	E	202	18	18			
BATT01-00393	F2	12.5µg/L	E	203	19	19			
BATT01-00393	F2	12.5µg/L	E	204	12	12			
BATT01-00393	F2	12.5µg/L	E	205	16	16			
BATT01-00393	F2	12.5µg/L	E	206	17	17			
BATT01-00393	F2	12.5µg/L	E	207	14	14			
BATT01-00393	F2	12.5µg/L	E	208	19	18			
BATT01-00393	F2	12.5µg/L	E	209	17	17			
BATT01-00393	F2	12.5µg/L	E	210	15	13			
BATT01-00393	F2	12.5µg/L	E	211	11	10			
BATT01-00393	F2	12.5µg/L	E	212	13	13			
BATT01-00393	F2	12.5µg/L	E	213	12	12			
BATT01-00393	F2	12.5µg/L	E	214	11	10			
BATT01-00393	F2	12.5µg/L	E	215	15	14			
BATT01-00393	F2	12.5µg/L	E	216	12	12			
BATT01-00393	F2	12.5µg/L	E	217	11	11			
BATT01-00393	F2	12.5µg/L	E	197-217			13.33333333	13.047619	
BATT01-00393	F2	12.5µg/L	F	197	0	0			
BATT01-00393	F2	12.5µg/L	F	198	10	10			
BATT01-00393	F2	12.5µg/L	F	199	0	0			
BATT01-00393	F2	12.5µg/L	F	200	12	12			
BATT01-00393	F2	12.5µg/L	F	201	10	10			
BATT01-00393	F2	12.5µg/L	F	202	19	18			
BATT01-00393	F2	12.5µg/L	F	203	19	19			
BATT01-00393	F2	12.5µg/L	F	204	12	12			
BATT01-00393	F2	12.5µg/L	F	205	18	18			
BATT01-00393	F2	12.5µg/L	F	206	10	10			
BATT01-00393	F2	12.5µg/L	F	207	12	12			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	12.5µg/L	F	208	17	17			
BATT01-00393	F2	12.5µg/L	F	209	19	19			
BATT01-00393	F2	12.5µg/L	F	210	10	10			
BATT01-00393	F2	12.5µg/L	F	211	19	18			
BATT01-00393	F2	12.5µg/L	F	212	15	14			
BATT01-00393	F2	12.5µg/L	F	213	13	13			
BATT01-00393	F2	12.5µg/L	F	214	18	18			
BATT01-00393	F2	12.5µg/L	F	215	19	19			
BATT01-00393	F2	12.5µg/L	F	216	10	8			
BATT01-00393	F2	12.5µg/L	F	217	16	15			
BATT01-00393	F2	12.5µg/L	F	197-217			13.23809524	12.952381	
BATT01-00393	F2	12.5µg/L	G	197	0	0			
BATT01-00393	F2	12.5µg/L	G	198	10	10			
BATT01-00393	F2	12.5µg/L	G	199	17	17			
BATT01-00393	F2	12.5µg/L	G	200	13	13			
BATT01-00393	F2	12.5µg/L	G	201	12	12			
BATT01-00393	F2	12.5µg/L	G	202	18	18			
BATT01-00393	F2	12.5µg/L	G	203	19	19			
BATT01-00393	F2	12.5µg/L	G	204	17	16			
BATT01-00393	F2	12.5µg/L	G	205	19	19			
BATT01-00393	F2	12.5µg/L	G	206	12	11			
BATT01-00393	F2	12.5µg/L	G	207	15	15			
BATT01-00393	F2	12.5µg/L	G	208	18	18			
BATT01-00393	F2	12.5µg/L	G	209	11	10			
BATT01-00393	F2	12.5µg/L	G	210	13	12			
BATT01-00393	F2	12.5µg/L	G	211	10	10			
BATT01-00393	F2	12.5µg/L	G	212	16	16			
BATT01-00393	F2	12.5µg/L	G	213	13	13			
BATT01-00393	F2	12.5µg/L	G	214	14	14			
BATT01-00393	F2	12.5µg/L	G	215	16	15			
BATT01-00393	F2	12.5µg/L	G	216	17	15			
BATT01-00393	F2	12.5µg/L	G	217	13	13			
BATT01-00393	F2	12.5µg/L	G	197-217			13.95238095	13.6190476	
BATT01-00393	F2	12.5µg/L	H	197	0	0			
BATT01-00393	F2	12.5µg/L	H	198	12	12			
BATT01-00393	F2	12.5µg/L	H	199	16	16			
BATT01-00393	F2	12.5µg/L	H	200	10	10			
BATT01-00393	F2	12.5µg/L	H	201	11	11			
BATT01-00393	F2	12.5µg/L	H	202	12	10			
BATT01-00393	F2	12.5µg/L	H	203	10	10			
BATT01-00393	F2	12.5µg/L	H	204	11	11			
BATT01-00393	F2	12.5µg/L	H	205	19	17			
BATT01-00393	F2	12.5µg/L	H	206	15	15			
BATT01-00393	F2	12.5µg/L	H	207	17	17			
BATT01-00393	F2	12.5µg/L	H	208	12	11			
BATT01-00393	F2	12.5µg/L	H	209	13	10			
BATT01-00393	F2	12.5µg/L	H	210	15	14			
BATT01-00393	F2	12.5µg/L	H	211	10	10			
BATT01-00393	F2	12.5µg/L	H	212	18	18			
BATT01-00393	F2	12.5µg/L	H	213	16	15			
BATT01-00393	F2	12.5µg/L	H	214	10	8			
BATT01-00393	F2	12.5µg/L	H	215	11	10			
BATT01-00393	F2	12.5µg/L	H	216	12	12			
BATT01-00393	F2	12.5µg/L	H	217	19	19			
BATT01-00393	F2	12.5µg/L	H	197-217			12.80952381	12.1904762	
BATT01-00393	F2	12.5µg/L	I	197	0	0			
BATT01-00393	F2	12.5µg/L	I	198	20	20			
BATT01-00393	F2	12.5µg/L	I	199	10	10			
BATT01-00393	F2	12.5µg/L	I	200	15	15			
BATT01-00393	F2	12.5µg/L	I	201	13	13			
BATT01-00393	F2	12.5µg/L	I	202	17	17			
BATT01-00393	F2	12.5µg/L	I	203	9	9			
BATT01-00393	F2	12.5µg/L	I	204	12	12			
BATT01-00393	F2	12.5µg/L	I	205	14	13			
BATT01-00393	F2	12.5µg/L	I	206	16	16			
BATT01-00393	F2	12.5µg/L	I	207	19	19			
BATT01-00393	F2	12.5µg/L	I	208	15	13			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	12.5µg/L	I	209	11	11			
BATT01-00393	F2	12.5µg/L	I	210	12	10			
BATT01-00393	F2	12.5µg/L	I	211	13	11			
BATT01-00393	F2	12.5µg/L	I	212	16	15			
BATT01-00393	F2	12.5µg/L	I	213	10	10			
BATT01-00393	F2	12.5µg/L	I	214	18	18			
BATT01-00393	F2	12.5µg/L	I	215	13	13			
BATT01-00393	F2	12.5µg/L	I	216	14	13			
BATT01-00393	F2	12.5µg/L	I	217	16	14			
BATT01-00393	F2	12.5µg/L	I	197-217			13.47619048	12.952381	
BATT01-00393	F2	12.5µg/L	J	197	0	0			
BATT01-00393	F2	12.5µg/L	J	198	0	0			
BATT01-00393	F2	12.5µg/L	J	199	10	10			
BATT01-00393	F2	12.5µg/L	J	200	18	18			
BATT01-00393	F2	12.5µg/L	J	201	19	19			
BATT01-00393	F2	12.5µg/L	J	202	11	10			
BATT01-00393	F2	12.5µg/L	J	203	13	10			
BATT01-00393	F2	12.5µg/L	J	204	12	11			
BATT01-00393	F2	12.5µg/L	J	205	17	17			
BATT01-00393	F2	12.5µg/L	J	206	18	16			
BATT01-00393	F2	12.5µg/L	J	207	13	13			
BATT01-00393	F2	12.5µg/L	J	208	19	19			
BATT01-00393	F2	12.5µg/L	J	209	15	14			
BATT01-00393	F2	12.5µg/L	J	210	17	15			
BATT01-00393	F2	12.5µg/L	J	211	17	17			
BATT01-00393	F2	12.5µg/L	J	212	19	19			
BATT01-00393	F2	12.5µg/L	J	213	13	12			
BATT01-00393	F2	12.5µg/L	J	214	16	16			
BATT01-00393	F2	12.5µg/L	J	215	11	11			
BATT01-00393	F2	12.5µg/L	J	216	14	13			
BATT01-00393	F2	12.5µg/L	J	217	15	15			
BATT01-00393	F2	12.5µg/L	J	197-217			13.66666667	13.0952381	
BATT01-00393	F2	12.5µg/L	K	197	0	0			
BATT01-00393	F2	12.5µg/L	K	198	13	13			
BATT01-00393	F2	12.5µg/L	K	199	19	19			
BATT01-00393	F2	12.5µg/L	K	200	15	15			
BATT01-00393	F2	12.5µg/L	K	201	10	10			
BATT01-00393	F2	12.5µg/L	K	202	17	17			
BATT01-00393	F2	12.5µg/L	K	203	19	18			
BATT01-00393	F2	12.5µg/L	K	204	12	12			
BATT01-00393	F2	12.5µg/L	K	205	12	12			
BATT01-00393	F2	12.5µg/L	K	206	10	10			
BATT01-00393	F2	12.5µg/L	K	207	18	18			
BATT01-00393	F2	12.5µg/L	K	208	16	15			
BATT01-00393	F2	12.5µg/L	K	209	19	19			
BATT01-00393	F2	12.5µg/L	K	210	14	13			
BATT01-00393	F2	12.5µg/L	K	211	15	14			
BATT01-00393	F2	12.5µg/L	K	212	12	10			
BATT01-00393	F2	12.5µg/L	K	213	13	13			
BATT01-00393	F2	12.5µg/L	K	214	10	10			
BATT01-00393	F2	12.5µg/L	K	215	17	17			
BATT01-00393	F2	12.5µg/L	K	216	12	12			
BATT01-00393	F2	12.5µg/L	K	217	14	14			
BATT01-00393	F2	12.5µg/L	K	197-217			13.66666667	13.3809524	
BATT01-00393	F2	12.5µg/L	L	197	0	0			
BATT01-00393	F2	12.5µg/L	L	198	16	16			
BATT01-00393	F2	12.5µg/L	L	199	10	10			
BATT01-00393	F2	12.5µg/L	L	200	17	15			
BATT01-00393	F2	12.5µg/L	L	201	18	15			
BATT01-00393	F2	12.5µg/L	L	202	12	10			
BATT01-00393	F2	12.5µg/L	L	203	13	12			
BATT01-00393	F2	12.5µg/L	L	204	10	9			
BATT01-00393	F2	12.5µg/L	L	205	17	17			
BATT01-00393	F2	12.5µg/L	L	206	19	19			
BATT01-00393	F2	12.5µg/L	L	207	12	11			
BATT01-00393	F2	12.5µg/L	L	208	10	9			
BATT01-00393	F2	12.5µg/L	L	209	11	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	12.5µg/L	L	210	12	12			
BATT01-00393	F2	12.5µg/L	L	211	8	7			
BATT01-00393	F2	12.5µg/L	L	212	19	18			
BATT01-00393	F2	12.5µg/L	L	213	15	14			
BATT01-00393	F2	12.5µg/L	L	214	16	16			
BATT01-00393	F2	12.5µg/L	L	215	12	10			
BATT01-00393	F2	12.5µg/L	L	216	10	9			
BATT01-00393	F2	12.5µg/L	L	217	13	13			
BATT01-00393	F2	12.5µg/L	L	197-217			12.85714286	12	
BATT01-00393	F2	25µg/L	A	197	0	0			
BATT01-00393	F2	25µg/L	A	198	0	0			
BATT01-00393	F2	25µg/L	A	199	0	0			
BATT01-00393	F2	25µg/L	A	200	0	0			
BATT01-00393	F2	25µg/L	A	201	9	9			
BATT01-00393	F2	25µg/L	A	202	10	10			
BATT01-00393	F2	25µg/L	A	203	8	8			
BATT01-00393	F2	25µg/L	A	204	11	11			
BATT01-00393	F2	25µg/L	A	205	15	13			
BATT01-00393	F2	25µg/L	A	206	7	7			
BATT01-00393	F2	25µg/L	A	207	9	9			
BATT01-00393	F2	25µg/L	A	208	6	6			
BATT01-00393	F2	25µg/L	A	209	12	12			
BATT01-00393	F2	25µg/L	A	210	11	9			
BATT01-00393	F2	25µg/L	A	211	13	8			
BATT01-00393	F2	25µg/L	A	212	15	15			
BATT01-00393	F2	25µg/L	A	213	9	9			
BATT01-00393	F2	25µg/L	A	214	8	8			
BATT01-00393	F2	25µg/L	A	215	10	9			
BATT01-00393	F2	25µg/L	A	216	11	9			
BATT01-00393	F2	25µg/L	A	217	12	12			
BATT01-00393	F2	25µg/L	A	197-217			8.380952381	7.80952381	
BATT01-00393	F2	25µg/L	B	197	0	0			
BATT01-00393	F2	25µg/L	B	198	6	6			
BATT01-00393	F2	25µg/L	B	199	0	0			
BATT01-00393	F2	25µg/L	B	200	5	3			
BATT01-00393	F2	25µg/L	B	201	7	6			
BATT01-00393	F2	25µg/L	B	202	5	4			
BATT01-00393	F2	25µg/L	B	203	12	10			
BATT01-00393	F2	25µg/L	B	204	9	7			
BATT01-00393	F2	25µg/L	B	205	13	10			
BATT01-00393	F2	25µg/L	B	206	14	13			
BATT01-00393	F2	25µg/L	B	207	6	6			
BATT01-00393	F2	25µg/L	B	208	8	8			
BATT01-00393	F2	25µg/L	B	209	13	13			
BATT01-00393	F2	25µg/L	B	210	12	12			
BATT01-00393	F2	25µg/L	B	211	11	9			
BATT01-00393	F2	25µg/L	B	212	10	7			
BATT01-00393	F2	25µg/L	B	213	13	13			
BATT01-00393	F2	25µg/L	B	214	5	5			
BATT01-00393	F2	25µg/L	B	215	9	9			
BATT01-00393	F2	25µg/L	B	216	14	12			
BATT01-00393	F2	25µg/L	B	217	11	11			
BATT01-00393	F2	25µg/L	B	197-217			8.714285714	7.80952381	
BATT01-00393	F2	25µg/L	C	197	0	0			
BATT01-00393	F2	25µg/L	C	198	0	0			
BATT01-00393	F2	25µg/L	C	199	8	8			
BATT01-00393	F2	25µg/L	C	200	9	9			
BATT01-00393	F2	25µg/L	C	201	10	9			
BATT01-00393	F2	25µg/L	C	202	11	8			
BATT01-00393	F2	25µg/L	C	203	12	10			
BATT01-00393	F2	25µg/L	C	204	13	13			
BATT01-00393	F2	25µg/L	C	205	8	8			
BATT01-00393	F2	25µg/L	C	206	10	8			
BATT01-00393	F2	25µg/L	C	207	9	7			
BATT01-00393	F2	25µg/L	C	208	12	12			
BATT01-00393	F2	25µg/L	C	209	13	10			
BATT01-00393	F2	25µg/L	C	210	9	9			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	25µg/L	C	211	12	12			
BATT01-00393	F2	25µg/L	C	212	11	11			
BATT01-00393	F2	25µg/L	C	213	8	8			
BATT01-00393	F2	25µg/L	C	214	14	13			
BATT01-00393	F2	25µg/L	C	215	8	8			
BATT01-00393	F2	25µg/L	C	216	9	9			
BATT01-00393	F2	25µg/L	C	217	13	12			
BATT01-00393	F2	25µg/L	C	197-217			9.476190476	8.76190476	
BATT01-00393	F2	25µg/L	D	197	0	0			
BATT01-00393	F2	25µg/L	D	198	3	3			
BATT01-00393	F2	25µg/L	D	199	9	9			
BATT01-00393	F2	25µg/L	D	200	13	10			
BATT01-00393	F2	25µg/L	D	201	12	8			
BATT01-00393	F2	25µg/L	D	202	5	5			
BATT01-00393	F2	25µg/L	D	203	8	7			
BATT01-00393	F2	25µg/L	D	204	10	8			
BATT01-00393	F2	25µg/L	D	205	7	7			
BATT01-00393	F2	25µg/L	D	206	5	3			
BATT01-00393	F2	25µg/L	D	207	8	7			
BATT01-00393	F2	25µg/L	D	208	6	6			
BATT01-00393	F2	25µg/L	D	209	11	11			
BATT01-00393	F2	25µg/L	D	210	13	12			
BATT01-00393	F2	25µg/L	D	211	10	10			
BATT01-00393	F2	25µg/L	D	212	8	8			
BATT01-00393	F2	25µg/L	D	213	15	13			
BATT01-00393	F2	25µg/L	D	214	14	14			
BATT01-00393	F2	25µg/L	D	215	11	11			
BATT01-00393	F2	25µg/L	D	216	10	10			
BATT01-00393	F2	25µg/L	D	217	11	11			
BATT01-00393	F2	25µg/L	D	197-217			9	8.23809524	
BATT01-00393	F2	25µg/L	E	197	0	0			
BATT01-00393	F2	25µg/L	E	198	0	0			
BATT01-00393	F2	25µg/L	E	199	5	5			
BATT01-00393	F2	25µg/L	E	200	7	7			
BATT01-00393	F2	25µg/L	E	201	9	9			
BATT01-00393	F2	25µg/L	E	202	6	6			
BATT01-00393	F2	25µg/L	E	203	13	10			
BATT01-00393	F2	25µg/L	E	204	12	11			
BATT01-00393	F2	25µg/L	E	205	10	8			
BATT01-00393	F2	25µg/L	E	206	13	12			
BATT01-00393	F2	25µg/L	E	207	7	7			
BATT01-00393	F2	25µg/L	E	208	8	6			
BATT01-00393	F2	25µg/L	E	209	12	12			
BATT01-00393	F2	25µg/L	E	210	10	8			
BATT01-00393	F2	25µg/L	E	211	9	9			
BATT01-00393	F2	25µg/L	E	212	14	14			
BATT01-00393	F2	25µg/L	E	213	15	13			
BATT01-00393	F2	25µg/L	E	214	12	12			
BATT01-00393	F2	25µg/L	E	215	11	10			
BATT01-00393	F2	25µg/L	E	216	10	7			
BATT01-00393	F2	25µg/L	E	217	12	12			
BATT01-00393	F2	25µg/L	E	197-217			9.285714286	8.47619048	
BATT01-00393	F2	25µg/L	F	197	0	0			
BATT01-00393	F2	25µg/L	F	198	8	8			
BATT01-00393	F2	25µg/L	F	199	0	0			
BATT01-00393	F2	25µg/L	F	200	6	6			
BATT01-00393	F2	25µg/L	F	201	0	0			
BATT01-00393	F2	25µg/L	F	202	10	10			
BATT01-00393	F2	25µg/L	F	203	12	12			
BATT01-00393	F2	25µg/L	F	204	10	10			
BATT01-00393	F2	25µg/L	F	205	15	15			
BATT01-00393	F2	25µg/L	F	206	15	13			
BATT01-00393	F2	25µg/L	F	207	12	11			
BATT01-00393	F2	25µg/L	F	208	15	14			
BATT01-00393	F2	25µg/L	F	209	14	12			
BATT01-00393	F2	25µg/L	F	210	11	11			
BATT01-00393	F2	25µg/L	F	211	6	6			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	25µg/L	F	212	5	5			
BATT01-00393	F2	25µg/L	F	213	12	11			
BATT01-00393	F2	25µg/L	F	214	15	15			
BATT01-00393	F2	25µg/L	F	215	11	9			
BATT01-00393	F2	25µg/L	F	216	14	12			
BATT01-00393	F2	25µg/L	F	217	13	13			
BATT01-00393	F2	25µg/L	F	197-217			9.714285714	9.19047619	
BATT01-00393	F2	25µg/L	G	197	0	0			
BATT01-00393	F2	25µg/L	G	198	3	3			
BATT01-00393	F2	25µg/L	G	199	5	5			
BATT01-00393	F2	25µg/L	G	200	9	6			
BATT01-00393	F2	25µg/L	G	201	5	5			
BATT01-00393	F2	25µg/L	G	202	7	7			
BATT01-00393	F2	25µg/L	G	203	11	11			
BATT01-00393	F2	25µg/L	G	204	10	9			
BATT01-00393	F2	25µg/L	G	205	12	12			
BATT01-00393	F2	25µg/L	G	206	13	13			
BATT01-00393	F2	25µg/L	G	207	14	14			
BATT01-00393	F2	25µg/L	G	208	9	7			
BATT01-00393	F2	25µg/L	G	209	10	10			
BATT01-00393	F2	25µg/L	G	210	9	8			
BATT01-00393	F2	25µg/L	G	211	13	12			
BATT01-00393	F2	25µg/L	G	212	15	14			
BATT01-00393	F2	25µg/L	G	213	11	11			
BATT01-00393	F2	25µg/L	G	214	10	10			
BATT01-00393	F2	25µg/L	G	215	8	8			
BATT01-00393	F2	25µg/L	G	216	13	12			
BATT01-00393	F2	25µg/L	G	217	11	9			
BATT01-00393	F2	25µg/L	G	197-217			9.428571429	8.85714286	
BATT01-00393	F2	25µg/L	H	197	0	0			
BATT01-00393	F2	25µg/L	H	198	0	0			
BATT01-00393	F2	25µg/L	H	199	7	7			
BATT01-00393	F2	25µg/L	H	200	8	8			
BATT01-00393	F2	25µg/L	H	201	9	9			
BATT01-00393	F2	25µg/L	H	202	10	8			
BATT01-00393	F2	25µg/L	H	203	13	10			
BATT01-00393	F2	25µg/L	H	204	12	10			
BATT01-00393	F2	25µg/L	H	205	8	6			
BATT01-00393	F2	25µg/L	H	206	9	8			
BATT01-00393	F2	25µg/L	H	207	10	9			
BATT01-00393	F2	25µg/L	H	208	13	12			
BATT01-00393	F2	25µg/L	H	209	15	15			
BATT01-00393	F2	25µg/L	H	210	12	11			
BATT01-00393	F2	25µg/L	H	211	14	12			
BATT01-00393	F2	25µg/L	H	212	13	13			
BATT01-00393	F2	25µg/L	H	213	10	10			
BATT01-00393	F2	25µg/L	H	214	6	6			
BATT01-00393	F2	25µg/L	H	215	4	4			
BATT01-00393	F2	25µg/L	H	216	11	11			
BATT01-00393	F2	25µg/L	H	217	13	11			
BATT01-00393	F2	25µg/L	H	197-217			9.380952381	8.57142857	
BATT01-00393	F2	25µg/L	I	197	0	0			
BATT01-00393	F2	25µg/L	I	198	6	6			
BATT01-00393	F2	25µg/L	I	199	0	0			
BATT01-00393	F2	25µg/L	I	200	6	6			
BATT01-00393	F2	25µg/L	I	201	3	1			
BATT01-00393	F2	25µg/L	I	202	10	9			
BATT01-00393	F2	25µg/L	I	203	11	8			
BATT01-00393	F2	25µg/L	I	204	13	10			
BATT01-00393	F2	25µg/L	I	205	9	7			
BATT01-00393	F2	25µg/L	I	206	10	8			
BATT01-00393	F2	25µg/L	I	207	6	6			
BATT01-00393	F2	25µg/L	I	208	9	9			
BATT01-00393	F2	25µg/L	I	209	15	13			
BATT01-00393	F2	25µg/L	I	210	14	12			
BATT01-00393	F2	25µg/L	I	211	16	16			
BATT01-00393	F2	25µg/L	I	212	15	14			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	25µg/L	I	213	10	9			
BATT01-00393	F2	25µg/L	I	214	13	11			
BATT01-00393	F2	25µg/L	I	215	8	8			
BATT01-00393	F2	25µg/L	I	216	10	10			
BATT01-00393	F2	25µg/L	I	217	7	7			
BATT01-00393	F2	25µg/L	I	197-217			9.095238095	8.0952381	
BATT01-00393	F2	25µg/L	J	197	0	0			
BATT01-00393	F2	25µg/L	J	198	0	0			
BATT01-00393	F2	25µg/L	J	199	8	8			
BATT01-00393	F2	25µg/L	J	200	4	4			
BATT01-00393	F2	25µg/L	J	201	0	0			
BATT01-00393	F2	25µg/L	J	202	9	9			
BATT01-00393	F2	25µg/L	J	203	10	10			
BATT01-00393	F2	25µg/L	J	204	9	8			
BATT01-00393	F2	25µg/L	J	205	7	7			
BATT01-00393	F2	25µg/L	J	206	9	9			
BATT01-00393	F2	25µg/L	J	207	8	8			
BATT01-00393	F2	25µg/L	J	208	5	3			
BATT01-00393	F2	25µg/L	J	209	7	5			
BATT01-00393	F2	25µg/L	J	210	8	8			
BATT01-00393	F2	25µg/L	J	211	13	11			
BATT01-00393	F2	25µg/L	J	212	10	9			
BATT01-00393	F2	25µg/L	J	213	14	12			
BATT01-00393	F2	25µg/L	J	214	15	15			
BATT01-00393	F2	25µg/L	J	215	6	6			
BATT01-00393	F2	25µg/L	J	216	7	7			
BATT01-00393	F2	25µg/L	J	217	14	14			
BATT01-00393	F2	25µg/L	J	197-217			7.761904762	7.28571429	
BATT01-00393	F2	25µg/L	K	197	0	0			
BATT01-00393	F2	25µg/L	K	198	0	0			
BATT01-00393	F2	25µg/L	K	199	0	0			
BATT01-00393	F2	25µg/L	K	200	5	3			
BATT01-00393	F2	25µg/L	K	201	6	5			
BATT01-00393	F2	25µg/L	K	202	7	7			
BATT01-00393	F2	25µg/L	K	203	11	10			
BATT01-00393	F2	25µg/L	K	204	7	6			
BATT01-00393	F2	25µg/L	K	205	8	8			
BATT01-00393	F2	25µg/L	K	206	10	10			
BATT01-00393	F2	25µg/L	K	207	6	4			
BATT01-00393	F2	25µg/L	K	208	10	10			
BATT01-00393	F2	25µg/L	K	209	9	8			
BATT01-00393	F2	25µg/L	K	210	13	12			
BATT01-00393	F2	25µg/L	K	211	15	15			
BATT01-00393	F2	25µg/L	K	212	8	8			
BATT01-00393	F2	25µg/L	K	213	6	6			
BATT01-00393	F2	25µg/L	K	214	9	9			
BATT01-00393	F2	25µg/L	K	215	16	15			
BATT01-00393	F2	25µg/L	K	216	13	12			
BATT01-00393	F2	25µg/L	K	217	8	8			
BATT01-00393	F2	25µg/L	K	197-217			7.952380952	7.42857143	
BATT01-00393	F2	25µg/L	L	197	0	0			
BATT01-00393	F2	25µg/L	L	198	0	0			
BATT01-00393	F2	25µg/L	L	199	9	9			
BATT01-00393	F2	25µg/L	L	200	0	0			
BATT01-00393	F2	25µg/L	L	201	10	10			
BATT01-00393	F2	25µg/L	L	202	8	8			
BATT01-00393	F2	25µg/L	L	203	9	9			
BATT01-00393	F2	25µg/L	L	204	7	7			
BATT01-00393	F2	25µg/L	L	205	8	6			
BATT01-00393	F2	25µg/L	L	206	9	9			
BATT01-00393	F2	25µg/L	L	207	8	6			
BATT01-00393	F2	25µg/L	L	208	9	9			
BATT01-00393	F2	25µg/L	L	209	12	11			
BATT01-00393	F2	25µg/L	L	210	14	10			
BATT01-00393	F2	25µg/L	L	211	16	16			
BATT01-00393	F2	25µg/L	L	212	8	8			
BATT01-00393	F2	25µg/L	L	213	7	7			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	25µg/L	L	214	11	9			
BATT01-00393	F2	25µg/L	L	215	13	13			
BATT01-00393	F2	25µg/L	L	216	15	15			
BATT01-00393	F2	25µg/L	L	217	9	9			
BATT01-00393	F2	25µg/L	L	197-217			8.666666667	8.14285714	
BATT01-00393	F2	50µg/L	A	197	0	0			
BATT01-00393	F2	50µg/L	A	198	0	0			
BATT01-00393	F2	50µg/L	A	199	4	2			
BATT01-00393	F2	50µg/L	A	200	5	1			
BATT01-00393	F2	50µg/L	A	201	2	2			
BATT01-00393	F2	50µg/L	A	202	6	4			
BATT01-00393	F2	50µg/L	A	203	5	3			
BATT01-00393	F2	50µg/L	A	204	7	5			
BATT01-00393	F2	50µg/L	A	205	9	9			
BATT01-00393	F2	50µg/L	A	206	8	7			
BATT01-00393	F2	50µg/L	A	207	12	8			
BATT01-00393	F2	50µg/L	A	208	5	3			
BATT01-00393	F2	50µg/L	A	209	8	6			
BATT01-00393	F2	50µg/L	A	210	9	5			
BATT01-00393	F2	50µg/L	A	211	10	10			
BATT01-00393	F2	50µg/L	A	212	8	7			
BATT01-00393	F2	50µg/L	A	213	9	6			
BATT01-00393	F2	50µg/L	A	214	11	11			
BATT01-00393	F2	50µg/L	A	215	7	7			
BATT01-00393	F2	50µg/L	A	216	6	3			
BATT01-00393	F2	50µg/L	A	217	9	6			
BATT01-00393	F2	50µg/L	A	197-217			6.666666667	5	
BATT01-00393	F2	50µg/L	B	197	0	0			
BATT01-00393	F2	50µg/L	B	198	0	0			
BATT01-00393	F2	50µg/L	B	199	0	0			
BATT01-00393	F2	50µg/L	B	200	6	3			
BATT01-00393	F2	50µg/L	B	201	7	5			
BATT01-00393	F2	50µg/L	B	202	8	3			
BATT01-00393	F2	50µg/L	B	203	9	6			
BATT01-00393	F2	50µg/L	B	204	10	7			
BATT01-00393	F2	50µg/L	B	205	6	4			
BATT01-00393	F2	50µg/L	B	206	7	5			
BATT01-00393	F2	50µg/L	B	207	4	3			
BATT01-00393	F2	50µg/L	B	208	5	2			
BATT01-00393	F2	50µg/L	B	209	7	5			
BATT01-00393	F2	50µg/L	B	210	8	5			
BATT01-00393	F2	50µg/L	B	211	9	6			
BATT01-00393	F2	50µg/L	B	212	10	7			
BATT01-00393	F2	50µg/L	B	213	9	6			
BATT01-00393	F2	50µg/L	B	214	11	7			
BATT01-00393	F2	50µg/L	B	215	10	7			
BATT01-00393	F2	50µg/L	B	216	6	6			
BATT01-00393	F2	50µg/L	B	217	4	4			
BATT01-00393	F2	50µg/L	B	197-217			6.476190476	4.33333333	
BATT01-00393	F2	50µg/L	C	197	0	0			
BATT01-00393	F2	50µg/L	C	198	0	0			
BATT01-00393	F2	50µg/L	C	199	5	3			
BATT01-00393	F2	50µg/L	C	200	8	7			
BATT01-00393	F2	50µg/L	C	201	9	9			
BATT01-00393	F2	50µg/L	C	202	7	7			
BATT01-00393	F2	50µg/L	C	203	9	6			
BATT01-00393	F2	50µg/L	C	204	10	7			
BATT01-00393	F2	50µg/L	C	205	8	7			
BATT01-00393	F2	50µg/L	C	206	9	9			
BATT01-00393	F2	50µg/L	C	207	10	6			
BATT01-00393	F2	50µg/L	C	208	8	8			
BATT01-00393	F2	50µg/L	C	209	5	3			
BATT01-00393	F2	50µg/L	C	210	7	5			
BATT01-00393	F2	50µg/L	C	211	4	4			
BATT01-00393	F2	50µg/L	C	212	9	6			
BATT01-00393	F2	50µg/L	C	213	12	8			
BATT01-00393	F2	50µg/L	C	214	14	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	50µg/L	C	215	6	5			
BATT01-00393	F2	50µg/L	C	216	8	8			
BATT01-00393	F2	50µg/L	C	217	10	6			
BATT01-00393	F2	50µg/L	C	197-217			7.523809524	5.9047619	
BATT01-00393	F2	50µg/L	D	197	0	0			
BATT01-00393	F2	50µg/L	D	198	3	3			
BATT01-00393	F2	50µg/L	D	199	0	0			
BATT01-00393	F2	50µg/L	D	200	5	5			
BATT01-00393	F2	50µg/L	D	201	6	4			
BATT01-00393	F2	50µg/L	D	202	4	4			
BATT01-00393	F2	50µg/L	D	203	8	6			
BATT01-00393	F2	50µg/L	D	204	9	8			
BATT01-00393	F2	50µg/L	D	205	6	4			
BATT01-00393	F2	50µg/L	D	206	7	7			
BATT01-00393	F2	50µg/L	D	207	6	3			
BATT01-00393	F2	50µg/L	D	208	7	5			
BATT01-00393	F2	50µg/L	D	209	8	7			
BATT01-00393	F2	50µg/L	D	210	10	6			
BATT01-00393	F2	50µg/L	D	211	13	12			
BATT01-00393	F2	50µg/L	D	212	5	4			
BATT01-00393	F2	50µg/L	D	213	7	5			
BATT01-00393	F2	50µg/L	D	214	5	4			
BATT01-00393	F2	50µg/L	D	215	8	8			
BATT01-00393	F2	50µg/L	D	216	7	4			
BATT01-00393	F2	50µg/L	D	217	10	9			
BATT01-00393	F2	50µg/L	D	197-217			6.380952381	5.14285714	
BATT01-00393	F2	50µg/L	E	197	0	0			
BATT01-00393	F2	50µg/L	E	198	0	0			
BATT01-00393	F2	50µg/L	E	199	0	0			
BATT01-00393	F2	50µg/L	E	200	5	5			
BATT01-00393	F2	50µg/L	E	201	3	1			
BATT01-00393	F2	50µg/L	E	202	8	8			
BATT01-00393	F2	50µg/L	E	203	10	9			
BATT01-00393	F2	50µg/L	E	204	11	8			
BATT01-00393	F2	50µg/L	E	205	5	2			
BATT01-00393	F2	50µg/L	E	206	6	6			
BATT01-00393	F2	50µg/L	E	207	8	6			
BATT01-00393	F2	50µg/L	E	208	7	7			
BATT01-00393	F2	50µg/L	E	209	6	5			
BATT01-00393	F2	50µg/L	E	210	11	10			
BATT01-00393	F2	50µg/L	E	211	7	5			
BATT01-00393	F2	50µg/L	E	212	9	6			
BATT01-00393	F2	50µg/L	E	213	10	9			
BATT01-00393	F2	50µg/L	E	214	11	11			
BATT01-00393	F2	50µg/L	E	215	7	5			
BATT01-00393	F2	50µg/L	E	216	4	4			
BATT01-00393	F2	50µg/L	E	217	6	6			
BATT01-00393	F2	50µg/L	E	197-217			6.380952381	5.38095238	
BATT01-00393	F2	50µg/L	F	197	0	0			
BATT01-00393	F2	50µg/L	F	198	0	0			
BATT01-00393	F2	50µg/L	F	199	0	0			
BATT01-00393	F2	50µg/L	F	200	0	0			
BATT01-00393	F2	50µg/L	F	201	7	7			
BATT01-00393	F2	50µg/L	F	202	9	9			
BATT01-00393	F2	50µg/L	F	203	7	5			
BATT01-00393	F2	50µg/L	F	204	8	4			
BATT01-00393	F2	50µg/L	F	205	9	8			
BATT01-00393	F2	50µg/L	F	206	10	6			
BATT01-00393	F2	50µg/L	F	207	7	7			
BATT01-00393	F2	50µg/L	F	208	8	5			
BATT01-00393	F2	50µg/L	F	209	4	2			
BATT01-00393	F2	50µg/L	F	210	7	6			
BATT01-00393	F2	50µg/L	F	211	9	7			
BATT01-00393	F2	50µg/L	F	212	10	8			
BATT01-00393	F2	50µg/L	F	213	12	9			
BATT01-00393	F2	50µg/L	F	214	11	11			
BATT01-00393	F2	50µg/L	F	215	10	10			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	50µg/L	F	216	7	7			
BATT01-00393	F2	50µg/L	F	217	8	5			
BATT01-00393	F2	50µg/L	F	197-217			6.80952381	5.52380952	
BATT01-00393	F2	50µg/L	G	197	0	0			
BATT01-00393	F2	50µg/L	G	198	4	3			
BATT01-00393	F2	50µg/L	G	199	0	0			
BATT01-00393	F2	50µg/L	G	200	7	7			
BATT01-00393	F2	50µg/L	G	201	9	9			
BATT01-00393	F2	50µg/L	G	202	8	7			
BATT01-00393	F2	50µg/L	G	203	10	8			
BATT01-00393	F2	50µg/L	G	204	9	6			
BATT01-00393	F2	50µg/L	G	205	12	10			
BATT01-00393	F2	50µg/L	G	206	10	8			
BATT01-00393	F2	50µg/L	G	207	9	7			
BATT01-00393	F2	50µg/L	G	208	4	4			
BATT01-00393	F2	50µg/L	G	209	9	7			
BATT01-00393	F2	50µg/L	G	210	6	4			
BATT01-00393	F2	50µg/L	G	211	8	5			
BATT01-00393	F2	50µg/L	G	212	9	6			
BATT01-00393	F2	50µg/L	G	213	10	7			
BATT01-00393	F2	50µg/L	G	214	11	7			
BATT01-00393	F2	50µg/L	G	215	9	9			
BATT01-00393	F2	50µg/L	G	216	12	12			
BATT01-00393	F2	50µg/L	G	217	11	10			
BATT01-00393	F2	50µg/L	G	197-217			7.952380952	6.47619048	
BATT01-00393	F2	50µg/L	H	197	0	0			
BATT01-00393	F2	50µg/L	H	198	0	0			
BATT01-00393	F2	50µg/L	H	199	5	2			
BATT01-00393	F2	50µg/L	H	200	8	6			
BATT01-00393	F2	50µg/L	H	201	9	5			
BATT01-00393	F2	50µg/L	H	202	7	6			
BATT01-00393	F2	50µg/L	H	203	7	7			
BATT01-00393	F2	50µg/L	H	204	8	5			
BATT01-00393	F2	50µg/L	H	205	6	5			
BATT01-00393	F2	50µg/L	H	206	5	2			
BATT01-00393	F2	50µg/L	H	207	8	5			
BATT01-00393	F2	50µg/L	H	208	6	6			
BATT01-00393	F2	50µg/L	H	209	10	7			
BATT01-00393	F2	50µg/L	H	210	6	5			
BATT01-00393	F2	50µg/L	H	211	9	7			
BATT01-00393	F2	50µg/L	H	212	8	8			
BATT01-00393	F2	50µg/L	H	213	6	4			
BATT01-00393	F2	50µg/L	H	214	7	5			
BATT01-00393	F2	50µg/L	H	215	11	11			
BATT01-00393	F2	50µg/L	H	216	10	7			
BATT01-00393	F2	50µg/L	H	217	12	8			
BATT01-00393	F2	50µg/L	H	197-217			7.047619048	5.28571429	
BATT01-00393	F2	50µg/L	I	197	0	0			
BATT01-00393	F2	50µg/L	I	198	0	0			
BATT01-00393	F2	50µg/L	I	199	0	0			
BATT01-00393	F2	50µg/L	I	200	8	6			
BATT01-00393	F2	50µg/L	I	201	0	0			
BATT01-00393	F2	50µg/L	I	202	9	7			
BATT01-00393	F2	50µg/L	I	203	6	3			
BATT01-00393	F2	50µg/L	I	204	7	5			
BATT01-00393	F2	50µg/L	I	205	4	2			
BATT01-00393	F2	50µg/L	I	206	8	5			
BATT01-00393	F2	50µg/L	I	207	7	3			
BATT01-00393	F2	50µg/L	I	208	7	5			
BATT01-00393	F2	50µg/L	I	209	8	7			
BATT01-00393	F2	50µg/L	I	210	10	8			
BATT01-00393	F2	50µg/L	I	211	9	6			
BATT01-00393	F2	50µg/L	I	212	11	10			
BATT01-00393	F2	50µg/L	I	213	9	9			
BATT01-00393	F2	50µg/L	I	214	5	4			
BATT01-00393	F2	50µg/L	I	215	6	2			
BATT01-00393	F2	50µg/L	I	216	7	4			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	50µg/L	I	217	5	3			
BATT01-00393	F2	50µg/L	I	197-217			6	4.23809524	
BATT01-00393	F2	50µg/L	J	197	0	0			
BATT01-00393	F2	50µg/L	J	198	7	4			
BATT01-00393	F2	50µg/L	J	199	3	3			
BATT01-00393	F2	50µg/L	J	200	7	5			
BATT01-00393	F2	50µg/L	J	201	5	2			
BATT01-00393	F2	50µg/L	J	202	8	5			
BATT01-00393	F2	50µg/L	J	203	9	5			
BATT01-00393	F2	50µg/L	J	204	8	6			
BATT01-00393	F2	50µg/L	J	205	6	6			
BATT01-00393	F2	50µg/L	J	206	8	7			
BATT01-00393	F2	50µg/L	J	207	6	4			
BATT01-00393	F2	50µg/L	J	208	8	5			
BATT01-00393	F2	50µg/L	J	209	9	7			
BATT01-00393	F2	50µg/L	J	210	10	8			
BATT01-00393	F2	50µg/L	J	211	6	5			
BATT01-00393	F2	50µg/L	J	212	4	4			
BATT01-00393	F2	50µg/L	J	213	3	3			
BATT01-00393	F2	50µg/L	J	214	7	7			
BATT01-00393	F2	50µg/L	J	215	8	6			
BATT01-00393	F2	50µg/L	J	216	9	5			
BATT01-00393	F2	50µg/L	J	217	7	3			
BATT01-00393	F2	50µg/L	J	197-217			6.571428571	4.76190476	
BATT01-00393	F2	50µg/L	K	197	0	0			
BATT01-00393	F2	50µg/L	K	198	0	0			
BATT01-00393	F2	50µg/L	K	199	7	5			
BATT01-00393	F2	50µg/L	K	200	8	8			
BATT01-00393	F2	50µg/L	K	201	9	6			
BATT01-00393	F2	50µg/L	K	202	10	10			
BATT01-00393	F2	50µg/L	K	203	9	9			
BATT01-00393	F2	50µg/L	K	204	10	8			
BATT01-00393	F2	50µg/L	K	205	7	7			
BATT01-00393	F2	50µg/L	K	206	8	6			
BATT01-00393	F2	50µg/L	K	207	9	5			
BATT01-00393	F2	50µg/L	K	208	7	4			
BATT01-00393	F2	50µg/L	K	209	8	6			
BATT01-00393	F2	50µg/L	K	210	10	7			
BATT01-00393	F2	50µg/L	K	211	9	6			
BATT01-00393	F2	50µg/L	K	212	5	3			
BATT01-00393	F2	50µg/L	K	213	11	6			
BATT01-00393	F2	50µg/L	K	214	9	7			
BATT01-00393	F2	50µg/L	K	215	5	5			
BATT01-00393	F2	50µg/L	K	216	6	3			
BATT01-00393	F2	50µg/L	K	217	7	4			
BATT01-00393	F2	50µg/L	K	197-217			7.333333333	5.47619048	
BATT01-00393	F2	50µg/L	L	197	0	0			
BATT01-00393	F2	50µg/L	L	198	6	6			
BATT01-00393	F2	50µg/L	L	199	4	4			
BATT01-00393	F2	50µg/L	L	200	5	2			
BATT01-00393	F2	50µg/L	L	201	8	5			
BATT01-00393	F2	50µg/L	L	202	9	7			
BATT01-00393	F2	50µg/L	L	203	7	4			
BATT01-00393	F2	50µg/L	L	204	8	6			
BATT01-00393	F2	50µg/L	L	205	9	9			
BATT01-00393	F2	50µg/L	L	206	5	2			
BATT01-00393	F2	50µg/L	L	207	6	3			
BATT01-00393	F2	50µg/L	L	208	7	3			
BATT01-00393	F2	50µg/L	L	209	8	6			
BATT01-00393	F2	50µg/L	L	210	9	9			
BATT01-00393	F2	50µg/L	L	211	7	5			
BATT01-00393	F2	50µg/L	L	212	4	3			
BATT01-00393	F2	50µg/L	L	213	6	4			
BATT01-00393	F2	50µg/L	L	214	8	5			
BATT01-00393	F2	50µg/L	L	215	9	7			
BATT01-00393	F2	50µg/L	L	216	10	8			
BATT01-00393	F2	50µg/L	L	217	10	7			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	50µg/L	L	197-217			6.904761905	5	
BATT01-00393	F2	100µg/L	A	197	0	0			
BATT01-00393	F2	100µg/L	A	198	0	0			
BATT01-00393	F2	100µg/L	A	199	0	0			
BATT01-00393	F2	100µg/L	A	200	0	0			
BATT01-00393	F2	100µg/L	A	201	5	1			
BATT01-00393	F2	100µg/L	A	202	6	3			
BATT01-00393	F2	100µg/L	A	203	7	3			
BATT01-00393	F2	100µg/L	A	204	8	5			
BATT01-00393	F2	100µg/L	A	205	4	2			
BATT01-00393	F2	100µg/L	A	206	5	2			
BATT01-00393	F2	100µg/L	A	207	7	2			
BATT01-00393	F2	100µg/L	A	208	5	3			
BATT01-00393	F2	100µg/L	A	209	4	1			
BATT01-00393	F2	100µg/L	A	210	6	2			
BATT01-00393	F2	100µg/L	A	211	8	6			
BATT01-00393	F2	100µg/L	A	212	5	3			
BATT01-00393	F2	100µg/L	A	213	6	4			
BATT01-00393	F2	100µg/L	A	214	7	2			
BATT01-00393	F2	100µg/L	A	215	8	4			
BATT01-00393	F2	100µg/L	A	216	10	6			
BATT01-00393	F2	100µg/L	A	217	5	1			
BATT01-00393	F2	100µg/L	A	197-217			5.047619048	2.38095238	
BATT01-00393	F2	100µg/L	B	197	0	0			
BATT01-00393	F2	100µg/L	B	198	0	0			
BATT01-00393	F2	100µg/L	B	199	4	2			
BATT01-00393	F2	100µg/L	B	200	6	2			
BATT01-00393	F2	100µg/L	B	201	5	1			
BATT01-00393	F2	100µg/L	B	202	7	5			
BATT01-00393	F2	100µg/L	B	203	6	2			
BATT01-00393	F2	100µg/L	B	204	7	4			
BATT01-00393	F2	100µg/L	B	205	6	2			
BATT01-00393	F2	100µg/L	B	206	5	3			
BATT01-00393	F2	100µg/L	B	207	4	2			
BATT01-00393	F2	100µg/L	B	208	6	4			
BATT01-00393	F2	100µg/L	B	209	7	3			
BATT01-00393	F2	100µg/L	B	210	5	2			
BATT01-00393	F2	100µg/L	B	211	8	5			
BATT01-00393	F2	100µg/L	B	212	9	5			
BATT01-00393	F2	100µg/L	B	213	4	1			
BATT01-00393	F2	100µg/L	B	214	6	4			
BATT01-00393	F2	100µg/L	B	215	5	5			
BATT01-00393	F2	100µg/L	B	216	6	3			
BATT01-00393	F2	100µg/L	B	217	8	4			
BATT01-00393	F2	100µg/L	B	197-217			5.428571429	2.80952381	
BATT01-00393	F2	100µg/L	C	197	0	0			
BATT01-00393	F2	100µg/L	C	198	0	0			
BATT01-00393	F2	100µg/L	C	199	0	0			
BATT01-00393	F2	100µg/L	C	200	7	3			
BATT01-00393	F2	100µg/L	C	201	8	4			
BATT01-00393	F2	100µg/L	C	202	5	4			
BATT01-00393	F2	100µg/L	C	203	6	3			
BATT01-00393	F2	100µg/L	C	204	8	5			
BATT01-00393	F2	100µg/L	C	205	4	1			
BATT01-00393	F2	100µg/L	C	206	5	2			
BATT01-00393	F2	100µg/L	C	207	5	3			
BATT01-00393	F2	100µg/L	C	208	7	3			
BATT01-00393	F2	100µg/L	C	209	6	4			
BATT01-00393	F2	100µg/L	C	210	5	2			
BATT01-00393	F2	100µg/L	C	211	7	3			
BATT01-00393	F2	100µg/L	C	212	9	8			
BATT01-00393	F2	100µg/L	C	213	6	2			
BATT01-00393	F2	100µg/L	C	214	8	5			
BATT01-00393	F2	100µg/L	C	215	4	3			
BATT01-00393	F2	100µg/L	C	216	6	2			
BATT01-00393	F2	100µg/L	C	217	7	3			
BATT01-00393	F2	100µg/L	C	197-217			5.380952381	2.85714286	

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	100µg/L	D	197	0	0			
BATT01-00393	F2	100µg/L	D	198	0	0			
BATT01-00393	F2	100µg/L	D	199	0	0			
BATT01-00393	F2	100µg/L	D	200	2	2			
BATT01-00393	F2	100µg/L	D	201	3	3			
BATT01-00393	F2	100µg/L	D	202	5	4			
BATT01-00393	F2	100µg/L	D	203	6	6			
BATT01-00393	F2	100µg/L	D	204	5	2			
BATT01-00393	F2	100µg/L	D	205	6	3			
BATT01-00393	F2	100µg/L	D	206	5	2			
BATT01-00393	F2	100µg/L	D	207	4	1			
BATT01-00393	F2	100µg/L	D	208	6	3			
BATT01-00393	F2	100µg/L	D	209	5	2			
BATT01-00393	F2	100µg/L	D	210	7	4			
BATT01-00393	F2	100µg/L	D	211	8	5			
BATT01-00393	F2	100µg/L	D	212	9	4			
BATT01-00393	F2	100µg/L	D	213	6	5			
BATT01-00393	F2	100µg/L	D	214	8	6			
BATT01-00393	F2	100µg/L	D	215	3	3			
BATT01-00393	F2	100µg/L	D	216	4	2			
BATT01-00393	F2	100µg/L	D	217	5	3			
BATT01-00393	F2	100µg/L	D	197-217			4.619047619	2.85714286	
BATT01-00393	F2	100µg/L	E	197	0	0			
BATT01-00393	F2	100µg/L	E	198	0	0			
BATT01-00393	F2	100µg/L	E	199	0	0			
BATT01-00393	F2	100µg/L	E	200	5	2			
BATT01-00393	F2	100µg/L	E	201	6	1			
BATT01-00393	F2	100µg/L	E	202	8	8			
BATT01-00393	F2	100µg/L	E	203	7	3			
BATT01-00393	F2	100µg/L	E	204	8	5			
BATT01-00393	F2	100µg/L	E	205	7	5			
BATT01-00393	F2	100µg/L	E	206	5	3			
BATT01-00393	F2	100µg/L	E	207	6	5			
BATT01-00393	F2	100µg/L	E	208	4	3			
BATT01-00393	F2	100µg/L	E	209	5	2			
BATT01-00393	F2	100µg/L	E	210	6	2			
BATT01-00393	F2	100µg/L	E	211	8	7			
BATT01-00393	F2	100µg/L	E	212	9	6			
BATT01-00393	F2	100µg/L	E	213	10	7			
BATT01-00393	F2	100µg/L	E	214	9	9			
BATT01-00393	F2	100µg/L	E	215	12	10			
BATT01-00393	F2	100µg/L	E	216	8	5			
BATT01-00393	F2	100µg/L	E	217	4	1			
BATT01-00393	F2	100µg/L	E	197-217			6.047619048	4	
BATT01-00393	F2	100µg/L	F	197	0	0			
BATT01-00393	F2	100µg/L	F	198	0	0			
BATT01-00393	F2	100µg/L	F	199	3	2			
BATT01-00393	F2	100µg/L	F	200	7	3			
BATT01-00393	F2	100µg/L	F	201	8	6			
BATT01-00393	F2	100µg/L	F	202	9	6			
BATT01-00393	F2	100µg/L	F	203	9	8			
BATT01-00393	F2	100µg/L	F	204	6	2			
BATT01-00393	F2	100µg/L	F	205	5	5			
BATT01-00393	F2	100µg/L	F	206	6	3			
BATT01-00393	F2	100µg/L	F	207	7	4			
BATT01-00393	F2	100µg/L	F	208	4	3			
BATT01-00393	F2	100µg/L	F	209	5	4			
BATT01-00393	F2	100µg/L	F	210	6	6			
BATT01-00393	F2	100µg/L	F	211	4	4			
BATT01-00393	F2	100µg/L	F	212	7	2			
BATT01-00393	F2	100µg/L	F	213	8	4			
BATT01-00393	F2	100µg/L	F	214	10	6			
BATT01-00393	F2	100µg/L	F	215	10	5			
BATT01-00393	F2	100µg/L	F	216	4	3			
BATT01-00393	F2	100µg/L	F	217	5	2			
BATT01-00393	F2	100µg/L	F	197-217			5.857142857	3.71428571	
BATT01-00393	F2	100µg/L	G	197	0	0			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	100µg/L	G	198	0	0			
BATT01-00393	F2	100µg/L	G	199	0	0			
BATT01-00393	F2	100µg/L	G	200	0	0			
BATT01-00393	F2	100µg/L	G	201	3	3			
BATT01-00393	F2	100µg/L	G	202	4	2			
BATT01-00393	F2	100µg/L	G	203	5	2			
BATT01-00393	F2	100µg/L	G	204	6	3			
BATT01-00393	F2	100µg/L	G	205	7	5			
BATT01-00393	F2	100µg/L	G	206	4	2			
BATT01-00393	F2	100µg/L	G	207	5	3			
BATT01-00393	F2	100µg/L	G	208	6	4			
BATT01-00393	F2	100µg/L	G	209	5	1			
BATT01-00393	F2	100µg/L	G	210	7	3			
BATT01-00393	F2	100µg/L	G	211	8	4			
BATT01-00393	F2	100µg/L	G	212	9	5			
BATT01-00393	F2	100µg/L	G	213	8	3			
BATT01-00393	F2	100µg/L	G	214	9	6			
BATT01-00393	F2	100µg/L	G	215	10	5			
BATT01-00393	F2	100µg/L	G	216	8	4			
BATT01-00393	F2	100µg/L	G	217	5	5			
BATT01-00393	F2	100µg/L	G	197-217			5.19047619	2.85714286	
BATT01-00393	F2	100µg/L	H	197	0	0			
BATT01-00393	F2	100µg/L	H	198	0	0			
BATT01-00393	F2	100µg/L	H	199	4	2			
BATT01-00393	F2	100µg/L	H	200	6	6			
BATT01-00393	F2	100µg/L	H	201	5	4			
BATT01-00393	F2	100µg/L	H	202	3	1			
BATT01-00393	F2	100µg/L	H	203	4	2			
BATT01-00393	F2	100µg/L	H	204	5	3			
BATT01-00393	F2	100µg/L	H	205	6	4			
BATT01-00393	F2	100µg/L	H	206	6	2			
BATT01-00393	F2	100µg/L	H	207	4	2			
BATT01-00393	F2	100µg/L	H	208	5	3			
BATT01-00393	F2	100µg/L	H	209	6	6			
BATT01-00393	F2	100µg/L	H	210	4	1			
BATT01-00393	F2	100µg/L	H	211	7	3			
BATT01-00393	F2	100µg/L	H	212	9	5			
BATT01-00393	F2	100µg/L	H	213	8	4			
BATT01-00393	F2	100µg/L	H	214	4	2			
BATT01-00393	F2	100µg/L	H	215	6	3			
BATT01-00393	F2	100µg/L	H	216	9	4			
BATT01-00393	F2	100µg/L	H	217	10	6			
BATT01-00393	F2	100µg/L	H	197-217			5.285714286	3	
BATT01-00393	F2	100µg/L	I	197	0	0			
BATT01-00393	F2	100µg/L	I	198	0	0			
BATT01-00393	F2	100µg/L	I	199	0	0			
BATT01-00393	F2	100µg/L	I	200	3	1			
BATT01-00393	F2	100µg/L	I	201	4	1			
BATT01-00393	F2	100µg/L	I	202	5	2			
BATT01-00393	F2	100µg/L	I	203	4	1			
BATT01-00393	F2	100µg/L	I	204	7	5			
BATT01-00393	F2	100µg/L	I	205	8	5			
BATT01-00393	F2	100µg/L	I	206	6	2			
BATT01-00393	F2	100µg/L	I	207	7	4			
BATT01-00393	F2	100µg/L	I	208	5	3			
BATT01-00393	F2	100µg/L	I	209	9	5			
BATT01-00393	F2	100µg/L	I	210	10	6			
BATT01-00393	F2	100µg/L	I	211	8	8			
BATT01-00393	F2	100µg/L	I	212	9	4			
BATT01-00393	F2	100µg/L	I	213	6	3			
BATT01-00393	F2	100µg/L	I	214	7	4			
BATT01-00393	F2	100µg/L	I	215	8	2			
BATT01-00393	F2	100µg/L	I	216	6	3			
BATT01-00393	F2	100µg/L	I	217	5	2			
BATT01-00393	F2	100µg/L	I	197-217			5.571428571	2.9047619	
BATT01-00393	F2	100µg/L	J	197	0	0			
BATT01-00393	F2	100µg/L	J	198	5	3			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Daily Fecundity	Daily Fertility	Mean Fecundity	Mean Fertility	Comments
BATT01-00393	F2	100µg/L	J	199	2	1			
BATT01-00393	F2	100µg/L	J	200	5	2			
BATT01-00393	F2	100µg/L	J	201	6	1			
BATT01-00393	F2	100µg/L	J	202	7	4			
BATT01-00393	F2	100µg/L	J	203	8	6			
BATT01-00393	F2	100µg/L	J	204	9	8			
BATT01-00393	F2	100µg/L	J	205	7	3			
BATT01-00393	F2	100µg/L	J	206	8	5			
BATT01-00393	F2	100µg/L	J	207	7	3			
BATT01-00393	F2	100µg/L	J	208	8	4			
BATT01-00393	F2	100µg/L	J	209	6	5			
BATT01-00393	F2	100µg/L	J	210	7	5			
BATT01-00393	F2	100µg/L	J	211	5	3			
BATT01-00393	F2	100µg/L	J	212	6	2			
BATT01-00393	F2	100µg/L	J	213	5	5			
BATT01-00393	F2	100µg/L	J	214	4	3			
BATT01-00393	F2	100µg/L	J	215	2	1			
BATT01-00393	F2	100µg/L	J	216	5	3			
BATT01-00393	F2	100µg/L	J	217	7	3			
BATT01-00393	F2	100µg/L	J	197-217			5.666666667	3.33333333	
BATT01-00393	F2	100µg/L	K	197	0	0			
BATT01-00393	F2	100µg/L	K	198	0	0			
BATT01-00393	F2	100µg/L	K	199	0	0			
BATT01-00393	F2	100µg/L	K	200	0	0			
BATT01-00393	F2	100µg/L	K	201	0	0			
BATT01-00393	F2	100µg/L	K	202	3	3			
BATT01-00393	F2	100µg/L	K	203	5	5			
BATT01-00393	F2	100µg/L	K	204	6	3			
BATT01-00393	F2	100µg/L	K	205	2	2			
BATT01-00393	F2	100µg/L	K	206	4	1			
BATT01-00393	F2	100µg/L	K	207	6	3			
BATT01-00393	F2	100µg/L	K	208	5	2			
BATT01-00393	F2	100µg/L	K	209	7	4			
BATT01-00393	F2	100µg/L	K	210	10	6			
BATT01-00393	F2	100µg/L	K	211	9	5			
BATT01-00393	F2	100µg/L	K	212	8	7			
BATT01-00393	F2	100µg/L	K	213	15	13			
BATT01-00393	F2	100µg/L	K	214	17	13			
BATT01-00393	F2	100µg/L	K	215	12	8			
BATT01-00393	F2	100µg/L	K	216	9	4			
BATT01-00393	F2	100µg/L	K	217	3	0			
BATT01-00393	F2	100µg/L	K	197-217			5.761904762	3.76190476	
BATT01-00393	F2	100µg/L	L	197	0	0			
BATT01-00393	F2	100µg/L	L	198	0	0			
BATT01-00393	F2	100µg/L	L	199	3	1			
BATT01-00393	F2	100µg/L	L	200	4	2			
BATT01-00393	F2	100µg/L	L	201	5	3			
BATT01-00393	F2	100µg/L	L	202	6	5			
BATT01-00393	F2	100µg/L	L	203	7	5			
BATT01-00393	F2	100µg/L	L	204	5	3			
BATT01-00393	F2	100µg/L	L	205	6	3			
BATT01-00393	F2	100µg/L	L	206	5	2			
BATT01-00393	F2	100µg/L	L	207	8	5			
BATT01-00393	F2	100µg/L	L	208	6	2			
BATT01-00393	F2	100µg/L	L	209	7	4			
BATT01-00393	F2	100µg/L	L	210	8	3			
BATT01-00393	F2	100µg/L	L	211	4	1			
BATT01-00393	F2	100µg/L	L	212	6	3			
BATT01-00393	F2	100µg/L	L	213	2	1			
BATT01-00393	F2	100µg/L	L	214	4	0			
BATT01-00393	F2	100µg/L	L	215	3	2			
BATT01-00393	F2	100µg/L	L	216	5	1			
BATT01-00393	F2	100µg/L	L	217	7	2			
BATT01-00393	F2	100µg/L	L	197-217			4.80952381	2.28571429	

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	A	22	23	23				"-" notates all previously eggs hatched
				29			0	7		Eggs Collected and Viable Eggs designated as F0 Generation. Eggs Hatched, Time to Hatch, and Hatch (%) designated as F1 Generation.
				30			7	8		
				31			8	9		
				32			3	10		
				33			5	11		
				34			-	12		
				35			-	13		
				36			-	14		
						23	23		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	A	23	26	26				
				30			0	7		
				31			7	8		
				32			4	9		
				33			8	10		
				34			3	11		
				35			4	12		
				36			-	13		
				37			-	14		
						26	26		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	B	22	25	25				
				29			0	7		
				30			5	8		
				31			0	9		
				32			10	10		
				33			3	11		
				34			7	12		
				35			-	13		
				36			-	14		
						25	25		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	B	23	29	29				
				30			0	7		
				31			0	8		
				32			12	9		
				33			10	10		
				34			6	11		
				35			0	12		
				36			1	13		
				37			-	14		
						29	29		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	C	22	26	26				
				29			0	7		
				30			0	8		
				31			10	9		
				32			11	10		
				33			0	11		
				34			5	12		
				35			-	13		
				36			-	14		
						26	26		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	C	23	24	24				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				30			0	7		
				31			5	8		
				32			5	9		
				33			7	10		
				34			7	11		
				35			-	12		
				36			-	13		
				37			-	14		
						24	24		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	D	22	28	28				
				29			0	7		
				30			9	8		
				31			11	9		
				32			0	10		
				33			5	11		
				34			2	12		
				35			1	13		
				36			-	14		
						28	28		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	D	23	35	35				
				30			0	7		
				31			6	8		
				32			9	9		
				33			10	10		
				34			2	11		
				35			5	12		
				36			3	13		
				37			-	14		
						35	35		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	E	22	29	29				
				29			0	7		
				30			0	8		
				31			13	9		
				32			10	10		
				33			5	11		
				34			1	12		
				35			-	13		
				36			-	14		
						29	29		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	E	23	33	33				
				30			0	7		
				31			10	8		
				32			6	9		
				33			7	10		
				34			6	11		
				35			4	12		
				36			-	13		
				37			-	14		
						33	33		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	F	22	31	31				
				29			0	7		
				30			10	8		
				31			8	9		
				32			2	10		
				33			10	11		
				34			0	12		
				35			1	13		
				36			-	14		
						31	31		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	F	23	26	26				
				30			0	7		
				31			8	8		
				32			10	9		
				33			2	10		
				34			3	11		
				35			0	12		
				36			3	13		
				37			-	14		
						26	26		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	G	22	30	30				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				29			0	7		
				30			10	8		
				31			8	9		
				32			7	10		
				33			3	11		
				34			2	12		
				35			-	13		
				36			-	14		
						30	30		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	G	23	28	28				
				30			0	7		
				31			0	8		
				32			13	9		
				33			8	10		
				34			6	11		
				35			1	12		
				36			-	13		
				37			-	14		
						28	28		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	H	22	39	39				
				29			0	7		
				30			0	8		
				31			13	9		
				32			15	10		
				33			10	11		
				34			1	12		
				35			-	13		
				36			-	14		
						39	39		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	H	23	26	26				
				30			0	7		
				31			5	8		
				32			7	9		
				33			10	10		
				34			4	11		
				35			-	12		
				36			-	13		
				37			-	14		
						26	26		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	I	22	28	28				
				29			0	7		
				30			5	8		
				31			10	9		
				32			13	10		
				33			-	11		
				34			-	12		
				35			-	13		
				36			-	14		
						28	28		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	I	23	37	37				
				30			0	7		
				31			10	8		
				32			15	9		
				33			6	10		
				34			3	11		
				35			2	12		
				36			1	13		
				37			-	14		
						37	37		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	J	22	43	43				
				29			0	7		
				30			10	8		
				31			12	9		
				32			18	10		
				33			0	11		
				34			3	12		
				35			-	13		
				36			-	14		
						43	43		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	J	23	25	25				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				30			0	7		
				31			9	8		
				32			6	9		
				33			5	10		
				34			2	11		
				35			3	12		
				36			-	13		
				37			-	14		
						25	25		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	K	22	28	28				
				29			0	7		
				30			0	8		
				31			0	9		
				32			8	10		
				33			10	11		
				34			7	12		
				35			3	13		
				36			-	14		
						28	28		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	K	23	37	37				
				30			0	7		
				31			13	8		
				32			12	9		
				33			5	10		
				34			3	11		
				35			4	12		
				36			-	13		
				37			-	14		
						37	37		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	L	22	33	33				
				29			0	7		
				30			12	8		
				31			10	9		
				32			8	10		
				33			2	11		
				34			0	12		
				35			1	13		
				36			-	14		
						33	33		100%	
BATT01-00393	F0/F1	(Ctrl) 0.0µg/L	L	23	27	27				
				30			0	7		
				31			10	8		
				32			6	9		
				33			1	10		
				34			3	11		
				35			5	12		
				36			2	13		
				37			-	14		
						27	27		100%	
BATT01-00393	F0/F1	6.3µg/L	A	22	26	26				
				29			5	7		
				30			0	8		
				31			0	9		
				32			7	10		
				33			4	11		
				34			0	12		
				35			3	13		
				36			4	14		
						26	23		88%	
BATT01-00393	F0/F1	6.3µg/L	A	23	26	26				
				30			0	7		
				31			0	8		
				32			6	9		
				33			4	10		
				34			5	11		
				35			3	12		
				36			4	13		
				37			2	14		
						26	24		92%	
BATT01-00393	F0/F1	6.3µg/L	B	22	27	27				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				29			0	7		
				30			0	8		
				31			8	9		
				32			10	10		
				33			0	11		
				34			2	12		
				35			2	13		
				36			2	14		
						27	24		89%	
BATT01-00393	F0/F1	6.3µg/L	B	23	30	30				
				30			0	7		
				31			8	8		
				32			4	9		
				33			2	10		
				34			6	11		
				35			0	12		
				36			3	13		
				37			4	14		
						30	27		90%	
BATT01-00393	F0/F1	6.3µg/L	C	22	24	24				
				29			0	7		
				30			0	8		
				31			0	9		
				32			9	10		
				33			6	11		
				34			5	12		
				35			0	13		
				36			2	14		
						24	22		92%	
BATT01-00393	F0/F1	6.3µg/L	C	23	20	20				
				30			0	7		
				31			0	8		
				32			0	9		
				33			5	10		
				34			7	11		
				35			0	12		
				36			3	13		
				37			2	14		
						20	17		85%	
BATT01-00393	F0/F1	6.3µg/L	D	22	20	20				
				29			8	7		
				30			0	8		
				31			6	9		
				32			2	10		
				33			0	11		
				34			0	12		
				35			0	13		
				36			4	14		
						20	20		100%	
BATT01-00393	F0/F1	6.3µg/L	D	23	23	23				
				30			0	7		
				31			0	8		
				32			8	9		
				33			8	10		
				34			0	11		
				35			4	12		
				36			0	13		
				37			2	14		
						23	22		96%	
BATT01-00393	F0/F1	6.3µg/L	E	22	30	30				
				29			0	7		
				30			0	8		
				31			5	9		
				32			5	10		
				33			10	11		
				34			0	12		
				35			3	13		
				36			3	14		
						30	26		87%	
BATT01-00393	F0/F1	6.3µg/L	E	23	23	23				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				30			0	7		
				31			0	8		
				32			7	9		
				33			5	10		
				34			7	11		
				35			0	12		
				36			0	13		
				37			2	14		
						23	21		91%	
BATT01-00393	F0/F1	6.3µg/L	F	22	24	24				
				29			0	7		
				30			7	8		
				31			0	9		
				32			0	10		
				33			7	11		
				34			0	12		
				35			0	13		
				36			7	14		
						24	21		88%	
BATT01-00393	F0/F1	6.3µg/L	F	23	31	31				
				30			0	7		
				31			6	8		
				32			5	9		
				33			4	10		
				34			8	11		
				35			4	12		
				36			0	13		
				37			2	14		
						31	29		94%	
BATT01-00393	F0/F1	12.5µg/L	A	22	21	21				
				29			0	7		
				30			0	8		
				31			8	9		
				32			2	10		
				33			0	11		
				34			3	12		
				35			2	13		
				36			5	14		
						21	20		95%	
BATT01-00393	F0/F1	12.5µg/L	A	23	23	23				
				30			0	7		
				31			0	8		
				32			5	9		
				33			6	10		
				34			4	11		
				35			0	12		
				36			2	13		
				37			4	14		
						23	21		91%	
BATT01-00393	F0/F1	12.5µg/L	B	22	20	20				
				29			0	7		
				30			0	8		
				31			0	9		
				32			7	10		
				33			3	11		
				34			5	12		
				35			2	13		
				36			1	14		
						20	18		90%	
BATT01-00393	F0/F1	12.5µg/L	B	23	22	22				
				30			0	7		
				31			0	8		
				32			4	9		
				33			3	10		
				34			3	11		
				35			5	12		
				36			3	13		
				37			2	14		
						22	20		91%	
BATT01-00393	F0/F1	12.5µg/L	C	22	21	21				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				29			0	7		
				30			8	8		
				31			5	9		
				32			5	10		
				33			0	11		
				34			0	12		
				35			0	13		
				36			1	14		
						21	19		90%	
BATT01-00393	F0/F1	12.5µg/L	C	23	19	19				
				30			0	7		
				31			0	8		
				32			0	9		
				33			7	10		
				34			8	11		
				35			0	12		
				36			0	13		
				37			2	14		
						19	17		89%	
BATT01-00393	F0/F1	12.5µg/L	D	22	24	24				
				29			0	7		
				30			0	8		
				31			0	9		
				32			6	10		
				33			4	11		
				34			5	12		
				35			3	13		
				36			3	14		
						24	21		88%	
BATT01-00393	F0/F1	12.5µg/L	D	23	21	21				
				30			0	7		
				31			9	8		
				32			3	9		
				33			0	10		
				34			0	11		
				35			0	12		
				36			4	13		
				37			2	14		
						21	18		86%	
BATT01-00393	F0/F1	12.5µg/L	E	22	18	18				
				29			0	7		
				30			0	8		
				31			8	9		
				32			0	10		
				33			0	11		
				34			4	12		
				35			3	13		
				36			1	14		
						18	16		89%	
BATT01-00393	F0/F1	12.5µg/L	E	23	19	19				
				30			0	7		
				31			0	8		
				32			0	9		
				33			0	10		
				34			9	11		
				35			5	12		
				36			0	13		
				37			3	14		
						19	17		89%	
BATT01-00393	F0/F1	12.5µg/L	F	22	25	25				
				29			0	7		
				30			0	8		
				31			2	9		
				32			8	10		
				33			4	11		
				34			2	12		
				35			3	13		
				36			3	14		
						25	22		88%	
BATT01-00393	F0/F1	12.5µg/L	F	23	20	20				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				30			0	7		
				31			6	8		
				32			6	9		
				33			0	10		
				34			2	11		
				35			3	12		
				36			1	13		
				37			1	14		
						20	19		95%	
BATT01-00393	F0/F1	25µg/L	A	22	9	9				
				29			0	7		
				30			0	8		
				31			2	9		
				32			3	10		
				33			1	11		
				34			3	12		
				35			-	13		
				36			-	14		
						9	9		100%	
BATT01-00393	F0/F1	25µg/L	A	23	22	22				
				30			0	7		
				31			0	8		
				32			0	9		
				33			7	10		
				34			10	11		
				35			2	12		
				36			0	13		
				37			0	14		
						22	19		86%	
BATT01-00393	F0/F1	25µg/L	B	22	12	12				
				29			0	7		
				30			0	8		
				31			2	9		
				32			9	10		
				33			1	11		
				34			-	12		
				35			-	13		
				36			-	14		
						12	12		100%	
BATT01-00393	F0/F1	25µg/L	B	23	19	19				
				30			0	7		
				31			0	8		
				32			0	9		
				33			9	10		
				34			10	11		
				35			-	12		
				36			-	13		
				37			-	14		
						19	19		100%	
BATT01-00393	F0/F1	25µg/L	C	22	6	6				
				29			0	7		
				30			0	8		
				31			3	9		
				32			2	10		
				33			1	11		
				34			-	12		
				35			-	13		
				36			-	14		
						6	6		100%	
BATT01-00393	F0/F1	25µg/L	C	23	16	16				
				30			0	7		
				31			0	8		
				32			0	9		
				33			10	10		
				34			5	11		
				35			1	12		
				36			-	13		
				37			-	14		
						16	16		100%	
BATT01-00393	F0/F1	25µg/L	D	22	13	13				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				29			0	7		
				30			0	8		
				31			1	9		
				32			10	10		
				33			2	11		
				34			-	12		
				35			-	13		
				36			-	14		
						13	13		100%	
BATT01-00393	F0/F1	25µg/L	D	23	27	27				
				30			0	7		
				31			0	8		
				32			0	9		
				33			6	10		
				34			10	11		
				35			9	12		
				36			0	13		
				37			0	14		
						27	25		93%	
BATT01-00393	F0/F1	25µg/L	E	22	18	18				
				29			0	7		
				30			0	8		
				31			0	9		
				32			7	10		
				33			3	11		
				34			5	12		
				35			0	13		
				36			0	14		
						18	15		83%	
BATT01-00393	F0/F1	25µg/L	E	23	28	28				
				30			0	7		
				31			0	8		
				32			0	9		
				33			4	10		
				34			15	11		
				35			8	12		
				36			0	13		
				37			0	14		
						28	27		96%	
BATT01-00393	F0/F1	25µg/L	F	22	5	5				
				29			0	7		
				30			0	8		
				31			4	9		
				32			0	10		
				33			1	11		
				34			-	12		
				35			-	13		
				36			-	14		
						5	5		100%	
BATT01-00393	F0/F1	25µg/L	F	23	17	17				
				30			0	7		
				31			0	8		
				32			0	9		
				33			8	10		
				34			6	11		
				35			3	12		
				36			-	13		
				37			-	14		
						17	17		100%	
BATT01-00393	F0/F1	50µg/L	A	22	12	12				
				29			0	7		
				30			0	8		
				31			3	9		
				32			6	10		
				33			1	11		
				34			2	12		
				35			-	13		
				36			-	14		
						12	12		100%	
BATT01-00393	F0/F1	50µg/L	A	23	19	19				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				30			0	7		
				31			0	8		
				32			0	9		
				33			9	10		
				34			7	11		
				35			3	12		
				36			-	13		
				37			-	14		
						19	19		100%	
BATT01-00393	F0/F1	50µg/L	B	22	9	9				
				29			2	7		
				30			0	8		
				31			3	9		
				32			3	10		
				33			1	11		
				34			-	12		
				35			-	13		
				36			-	14		
						9	9		100%	
BATT01-00393	F0/F1	50µg/L	B	23	18	18				
				30			0	7		
				31			0	8		
				32			0	9		
				33			9	10		
				34			5	11		
				35			2	12		
				36			0	13		
				37			0	14		
						18	16		89%	
BATT01-00393	F0/F1	50µg/L	C	22	9	9				
				29			0	7		
				30			0	8		
				31			2	9		
				32			2	10		
				33			2	11		
				34			3	12		
				35			0	13		
				36			0	14		
						9	9		100%	
BATT01-00393	F0/F1	50µg/L	C	23	16	16				
				30			0	7		
				31			0	8		
				32			0	9		
				33			7	10		
				34			4	11		
				35			5	12		
				36			-	13		
				37			-	14		
						16	16		100%	
BATT01-00393	F0/F1	50µg/L	D	22	4	4				
				29			0	7		
				30			0	8		
				31			0	9		
				32			2	10		
				33			2	11		
				34			-	12		
				35			-	13		
				36			-	14		
						4	4		100%	
BATT01-00393	F0/F1	50µg/L	D	23	25	25				
				30			0	7		
				31			0	8		
				32			0	9		
				33			11	10		
				34			10	11		
				35			3	12		
				36			0	13		
				37			0	14		
						25	24		96%	
BATT01-00393	F0/F1	50µg/L	E	22	8	8				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				29			0	7		
				30			0	8		
				31			4	9		
				32			3	10		
				33			1	11		
				34			-	12		
				35			-	13		
				36			-	14		
						8	8		100%	
BATT01-00393	F0/F1	50µg/L	E	23	19	19				
				30			0	7		
				31			0	8		
				32			0	9		
				33			10	10		
				34			6	11		
				35			1	12		
				36			-	13		
				37			-	14		
						19	17		89%	
BATT01-00393	F0/F1	50µg/L	F	22	12	12				
				29			0	7		
				30			0	8		
				31			2	9		
				32			3	10		
				33			4	11		
				34			3	12		
				35			-	13		
				36			-	14		
						12	12		100%	
BATT01-00393	F0/F1	50µg/L	F	23	32	32				
				30			0	7		
				31			0	8		
				32			0	9		
				33			7	10		
				34			16	11		
				35			5	12		
				36			0	13		
				37			0	14		
						32	28		88%	
BATT01-00393	F0/F1	100µg/L	A	22	5	5				
				29			0	7		
				30			0	8		
				31			2	9		
				32			2	10		
				33			1	11		
				34			-	12		
				35			-	13		
				36			-	14		
						5	5		100%	
BATT01-00393	F0/F1	100µg/L	A	23	27	27				
				30			0	7		
				31			0	8		
				32			2	9		
				33			7	10		
				34			10	11		
				35			3	12		
				36			0	13		
				37			0	14		
						27	22		81%	
BATT01-00393	F0/F1	100µg/L	B	22	7	7				
				29			0	7		
				30			0	8		
				31			2	9		
				32			2	10		
				33			2	11		
				34			1	12		
				35			-	13		
				36			-	14		
						7	7		100%	
BATT01-00393	F0/F1	100µg/L	B	23	19	19				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				30			0	7		
				31			0	8		
				32			1	9		
				33			8	10		
				34			7	11		
				35			1	12		
				36			0	13		
				37			0	14		
						19	17		89%	
BATT01-00393	F0/F1	100µg/L	C	22	11	11				
				29			0	7		
				30			0	8		
				31			1	9		
				32			8	10		
				33			2	11		
				34			-	12		
				35			-	13		
				36			-	14		
						11	11		100%	
BATT01-00393	F0/F1	100µg/L	C	23	27	27				
				30			0	7		
				31			0	8		
				32			0	9		
				33			11	10		
				34			12	11		
				35			3	12		
				36			0	13		
				37			0	14		
						27	26		96%	
BATT01-00393	F0/F1	100µg/L	D	22	6	6				
				29			0	7		
				30			0	8		
				31			3	9		
				32			2	10		
				33			1	11		
				34			-	12		
				35			-	13		
				36			-	14		
						6	6		100%	
BATT01-00393	F0/F1	100µg/L	D	23	30	30				
				30			0	7		
				31			0	8		
				32			1	9		
				33			7	10		
				34			11	11		
				35			2	12		
				36			5	13		
				37			0	14		
						30	26		87%	
BATT01-00393	F0/F1	100µg/L	E	22	9	9				
				29			0	7		
				30			0	8		
				31			2	9		
				32			3	10		
				33			1	11		
				34			3	12		
				35			-	13		
				36			-	14		
						9	9		100%	
BATT01-00393	F0/F1	100µg/L	E	23	17	17				
				30			0	7		
				31			0	8		
				32			0	9		
				33			12	10		
				34			5	11		
				35			-	12		
				36			-	13		
				37			-	14		
						17	17		100%	
BATT01-00393	F0/F1	100µg/L	F	22	10	10				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				29			0	7		
				30			0	8		
				31			2	9		
				32			4	10		
				33			4	11		
				34			-	12		
				35			-	13		
				36			-	14		
						10	10		100%	
BATT01-00393	F0/F1	100µg/L	F	23	18	18				
				30			0	7		
				31			0	8		
				32			3	9		
				33			6	10		
				34			7	11		
				35			0	12		
				36			0	13		
				37			0	14		
						18	16		89%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	A	120	27	27				Eggs Collected and Viable Eggs designated as F0 Generation. Eggs Hatched, Time to Hatch, and Hatch (%) designated as F1 Generation.
				127			0	7		
				128			0	8		
				129			7	9		
				130			8	10		
				131			10	11		
				132			0	12		
				133			0	13		
				134			0	14		
						27	25		93%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	A	121	29	29				
				128			0	7		
				129			0	8		
				130			8	9		
				131			7	10		
				132			8	11		
				133			0	12		
				134			0	13		
				135			3	14		
						29	26		90%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	B	120	31	31				
				127			0	7		
				128			0	8		
				129			5	9		
				130			10	10		
				131			8	11		
				132			4	12		
				133			0	13		
				134			0	14		
						31	27		87%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	B	121	25	25				
				128			0	7		
				129			0	8		
				130			0	9		
				131			9	10		
				132			1	11		
				133			8	12		
				134			0	13		
				135			4	14		
						25	22		88%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	C	120	27	27				
				127			0	7		
				128			0	8		
				129			0	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			8	10		
				131			7	11		
				132			1	12		
				133			6	13		
				134			2	14		
						27	24		89%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	C	121	24	24				
				128			0	7		
				129			2	8		
				130			8	9		
				131			4	10		
				132			0	11		
				133			0	12		
				134			4	13		
				135			3	14		
						24	21		88%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	D	120	33	33				
				127			0	7		
				128			2	8		
				129			5	9		
				130			10	10		
				131			11	11		
				132			0	12		
				133			0	13		
				134			1	14		
						33	29		88%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	D	121	28	28				
				128			0	7		
				129			0	8		
				130			0	9		
				131			6	10		
				132			14	11		
				133			2	12		
				134			3	13		
				135			2	14		
						28	27		96%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	E	120	25	25				
				127			0	7		
				128			0	8		
				129			8	9		
				130			2	10		
				131			9	11		
				132			2	12		
				133			2	13		
				134			0	14		
						25	23		92%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	E	121	23	23				
				128			0	7		
				129			0	8		
				130			0	9		
				131			0	10		
				132			6	11		
				133			10	12		
				134			2	13		
				135			2	14		
						23	20		87%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	F	120	34	34				
				127			0	7		
				128			0	8		
				129			6	9		
				130			4	10		
				131			9	11		
				132			1	12		
				133			5	13		
				134			5	14		
						34	30		88%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	F	121	28	28				
				128			0	7		
				129			8	8		
				130			5	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			5	10		
				132			0	11		
				133			2	12		
				134			3	13		
				135			2	14		
						28	25		89%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	G	120	34	34				
				127			0	7		
				128			0	8		
				129			10	9		
				130			8	10		
				131			4	11		
				132			3	12		
				133			2	13		
				134			4	14		
						34	31		91%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	G	121	31	31				
				128			0	7		
				129			0	8		
				130			10	9		
				131			12	10		
				132			0	11		
				133			2	12		
				134			4	13		
				135			2	14		
						31	30		97%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	H	120	21	21				
				127			0	7		
				128			0	8		
				129			6	9		
				130			5	10		
				131			4	11		
				132			2	12		
				133			2	13		
				134			2	14		
						21	21		100%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	H	121	28	28				
				128			0	7		
				129			6	8		
				130			4	9		
				131			8	10		
				132			0	11		
				133			4	12		
				134			0	13		
				135			3	14		
						28	25		89%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	I	120	36	36				
				127			0	7		
				128			0	8		
				129			12	9		
				130			0	10		
				131			6	11		
				132			10	12		
				133			5	13		
				134			0	14		
						36	33		92%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	I	121	28	28				
				128			0	7		
				129			0	8		
				130			0	9		
				131			10	10		
				132			9	11		
				133			2	12		
				134			3	13		
				135			2	14		
						28	26		93%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	J	120	33	33				
				127			0	7		
				128			0	8		
				129			0	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			9	10		
				131			12	11		
				132			10	12		
				133			0	13		
				134			1	14		
						33	32		97%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	J	121	27	27				
				128			0	7		
				129			0	8		
				130			10	9		
				131			12	10		
				132			0	11		
				133			2	12		
				134			0	13		
				135			0	14		
						27	24		89%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	K	120	22	22				
				127			0	7		
				128			0	8		
				129			0	9		
				130			0	10		
				131			6	11		
				132			5	12		
				133			5	13		
				134			4	14		
						22	20		91%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	K	121	38	38				
				128			0	7		
				129			11	8		
				130			19	9		
				131			0	10		
				132			0	11		
				133			3	12		
				134			0	13		
				135			1	14		
						38	34		89%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	L	120	29	29				
				127			0	7		
				128			0	8		
				129			0	9		
				130			8	10		
				131			7	11		
				132			5	12		
				133			4	13		
				134			5	14		
						29	29		100%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	L	121	25	25				
				128			0	7		
				129			0	8		
				130			0	9		
				131			11	10		
				132			0	11		
				133			5	12		
				134			0	13		
				135			6	14		
						25	22		88%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	M	120	28	28				
				127			0	7		
				128			0	8		
				129			6	9		
				130			9	10		
				131			8	11		
				132			0	12		
				133			0	13		
				134			2	14		
						28	25		89%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	M	121	21	21				
				128			0	7		
				129			0	8		
				130			7	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			8	10		
				132			0	11		
				133			0	12		
				134			3	13		
				135			0	14		
						21	18		86%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	N	120	39	39				
				127			0	7		
				128			0	8		
				129			0	9		
				130			10	10		
				131			12	11		
				132			11	12		
				133			0	13		
				134			3	14		
						39	36		92%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	N	121	31	31				
				128			0	7		
				129			0	8		
				130			9	9		
				131			11	10		
				132			3	11		
				133			2	12		
				134			0	13		
				135			5	14		
						31	30		97%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	O	120	42	42				
				127			0	7		
				128			0	8		
				129			10	9		
				130			12	10		
				131			8	11		
				132			5	12		
				133			4	13		
				134			2	14		
						42	41		98%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	O	121	28	28				
				128			0	7		
				129			5	8		
				130			10	9		
				131			10	10		
				132			0	11		
				133			0	12		
				134			0	13		
				135			3	14		
						28	28		100%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	P	120	23	23				
				127			0	7		
				128			0	8		
				129			0	9		
				130			9	10		
				131			2	11		
				132			0	12		
				133			5	13		
				134			5	14		
						23	21		91%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	P	121	35	35				
				128			0	7		
				129			0	8		
				130			12	9		
				131			8	10		
				132			9	11		
				133			0	12		
				134			2	13		
				135			2	14		
						35	33		94%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	Q	120	34	34				
				127			0	7		
				128			8	8		
				129			2	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			0	10		
				131			0	11		
				132			9	12		
				133			5	13		
				134			6	14		
						34	30		88%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	Q	121	32	32				
				128			0	7		
				129			0	8		
				130			0	9		
				131			12	10		
				132			8	11		
				133			9	12		
				134			1	13		
				135			1	14		
						32	31		97%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	R	120	23	23				
				127			0	7		
				128			0	8		
				129			0	9		
				130			0	10		
				131			9	11		
				132			3	12		
				133			5	13		
				134			3	14		
						23	20		87%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	R	121	36	36				
				128			0	7		
				129			0	8		
				130			11	9		
				131			11	10		
				132			9	11		
				133			0	12		
				134			0	13		
				135			5	14		
						36	36		100%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	S	120	24	24				
				127			0	7		
				128			0	8		
				129			0	9		
				130			6	10		
				131			9	11		
				132			3	12		
				133			3	13		
				134			1	14		
						24	22		92%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	S	121	26	26				
				128			5	7		
				129			0	8		
				130			0	9		
				131			8	10		
				132			2	11		
				133			0	12		
				134			8	13		
				135			2	14		
						26	25		96%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	T	120	28	28				
				127			0	7		
				128			0	8		
				129			4	9		
				130			7	10		
				131			8	11		
				132			2	12		
				133			2	13		
				134			2	14		
						28	25		89%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	T	121	34	34				
				128			0	7		
				129			0	8		
				130			9	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			11	10		
				132			10	11		
				133			0	12		
				134			1	13		
				135			1	14		
						34	32		94%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	U	120	23	23				
				127			0	7		
				128			5	8		
				129			0	9		
				130			0	10		
				131			7	11		
				132			3	12		
				133			2	13		
				134			3	14		
						23	20		87%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	U	121	20	20				
				128			0	7		
				129			0	8		
				130			0	9		
				131			0	10		
				132			7	11		
				133			10	12		
				134			0	13		
				135			1	14		
						20	18		90%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	V	120	41	41				
				127			0	7		
				128			0	8		
				129			12	9		
				130			18	10		
				131			0	11		
				132			6	12		
				133			1	13		
				134			3	14		
						41	40		98%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	V	121	35	35				
				128			0	7		
				129			0	8		
				130			15	9		
				131			5	10		
				132			4	11		
				133			0	12		
				134			3	13		
				135			4	14		
						35	31		89%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	W	120	30	30				
				127			0	7		
				128			10	8		
				129			12	9		
				130			1	10		
				131			0	11		
				132			0	12		
				133			4	13		
				134			1	14		
						30	28		93%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	W	121	20	20				
				128			0	7		
				129			0	8		
				130			13	9		
				131			7	10		
				132			-	11		
				133			-	12		
				134			-	13		
				135			-	14		
						20	20		100%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	X	120	31	31				
				127			0	7		
				128			0	8		
				129			8	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			10	10		
				131			2	11		
				132			2	12		
				133			1	13		
				134			4	14		
						31	27		87%	
BATT01-00393	F1/F2	(Ctrl) 0.0µg/L	X	121	26	26				
				128			0	7		
				129			0	8		
				130			5	9		
				131			8	10		
				132			5	11		
				133			0	12		
				134			3	13		
				135			5	14		
						26	26		100%	
BATT01-00393	F1/F2	6.3µg/L	A	120	10	10				
				127			0	7		
				128			0	8		
				129			0	9		
				130			6	10		
				131			1	11		
				132			3	12		
				133			-	13		
				134			-	14		
						10	10		100%	
BATT01-00393	F1/F2	6.3µg/L	A	121	13	13				
				128			0	7		
				129			0	8		
				130			8	9		
				131			2	10		
				132			3	11		
				133			-	12		
				134			-	13		
				135			-	14		
						13	13		100%	
BATT01-00393	F1/F2	6.3µg/L	B	120	7	7				
				127			0	7		
				128			0	8		
				129			5	9		
				130			2	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						7	7		100%	
BATT01-00393	F1/F2	6.3µg/L	B	121	16	16				
				128			0	7		
				129			0	8		
				130			5	9		
				131			2	10		
				132			2	11		
				133			3	12		
				134			0	13		
				135			0	14		
						16	12		75%	
BATT01-00393	F1/F2	6.3µg/L	C	120	9	9				
				127			0	7		
				128			0	8		
				129			0	9		
				130			5	10		
				131			2	11		
				132			2	12		
				133			-	13		
				134			-	14		
						9	9		100%	
BATT01-00393	F1/F2	6.3µg/L	C	121	13	13				
				128			0	7		
				129			0	8		
				130			6	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			2	10		
				132			5	11		
				133			-	12		
				134			-	13		
				135			-	14		
						13	13		100%	
BATT01-00393	F1/F2	6.3µg/L	D	120	12	12				
				127			0	7		
				128			0	8		
				129			6	9		
				130			3	10		
				131			1	11		
				132			2	12		
				133			-	13		
				134			-	14		
						12	12		100%	
BATT01-00393	F1/F2	6.3µg/L	D	121	14	14				
				128			0	7		
				129			0	8		
				130			8	9		
				131			2	10		
				132			4	11		
				133			-	12		
				134			-	13		
				135			-	14		
						14	14		100%	
BATT01-00393	F1/F2	6.3µg/L	E	120	16	16				
				127			0	7		
				128			0	8		
				129			0	9		
				130			9	10		
				131			2	11		
				132			3	12		
				133			2	13		
				134			-	14		
						16	16		100%	
BATT01-00393	F1/F2	6.3µg/L	E	121	14	14				
				128			0	7		
				129			0	8		
				130			5	9		
				131			3	10		
				132			2	11		
				133			4	12		
				134			-	13		
				135			-	14		
						14	14		100%	
BATT01-00393	F1/F2	6.3µg/L	F	120	8	8				
				127			0	7		
				128			2	8		
				129			2	9		
				130			4	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						8	8		100%	
BATT01-00393	F1/F2	6.3µg/L	F	121	17	17				
				128			0	7		
				129			9	8		
				130			0	9		
				131			2	10		
				132			6	11		
				133			-	12		
				134			-	13		
				135			-	14		
						17	17		100%	
BATT01-00393	F1/F2	6.3µg/L	G	120	0	0				
				127			-	7		
				128			-	8		
				129			-	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			-	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						0	0		#DIV/0!	
BATT01-00393	F1/F2	6.3µg/L	G	121	0	0				
				128			-	7		
				129			-	8		
				130			-	9		
				131			-	10		
				132			-	11		
				133			-	12		
				134			-	13		
				135			-	14		
						0	0		#DIV/0!	
BATT01-00393	F1/F2	6.3µg/L	H	120	9	9				
				127			0	7		
				128			0	8		
				129			5	9		
				130			0	10		
				131			4	11		
				132			-	12		
				133			-	13		
				134			-	14		
						9	9		100%	
BATT01-00393	F1/F2	6.3µg/L	H	121	15	15				
				128			0	7		
				129			0	8		
				130			5	9		
				131			5	10		
				132			0	11		
				133			5	12		
				134			-	13		
				135			-	14		
						15	15		100%	
BATT01-00393	F1/F2	6.3µg/L	I	120	12	12				
				127			0	7		
				128			0	8		
				129			7	9		
				130			4	10		
				131			0	11		
				132			0	12		
				133			1	13		
				134			-	14		
						12	12		100%	
BATT01-00393	F1/F2	6.3µg/L	I	121	11	11				
				128			0	7		
				129			0	8		
				130			4	9		
				131			2	10		
				132			5	11		
				133			-	12		
				134			-	13		
				135			-	14		
						11	11		100%	
BATT01-00393	F1/F2	6.3µg/L	J	120	14	14				
				127			0	7		
				128			0	8		
				129			10	9		
				130			2	10		
				131			0	11		
				132			2	12		
				133			-	13		
				134			-	14		
						14	14		100%	
BATT01-00393	F1/F2	6.3µg/L	J	121	11	11				
				128			0	7		
				129			0	8		
				130			6	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			3	10		
				132			1	11		
				133			0	12		
				134			0	13		
				135			0	14		
						11	10		91%	
BATT01-00393	F1/F2	6.3µg/L	K	120	15	15				
				127			0	7		
				128			0	8		
				129			0	9		
				130			7	10		
				131			8	11		
				132			-	12		
				133			-	13		
				134			-	14		
						15	15		100%	
BATT01-00393	F1/F2	6.3µg/L	K	121	12	12				
				128			0	7		
				129			0	8		
				130			5	9		
				131			2	10		
				132			5	11		
				133			-	12		
				134			-	13		
				135			-	14		
						12	12		100%	
BATT01-00393	F1/F2	6.3µg/L	L	120	16	16				
				127			0	7		
				128			0	8		
				129			9	9		
				130			4	10		
				131			1	11		
				132			2	12		
				133			-	13		
				134			-	14		
						16	16		100%	
BATT01-00393	F1/F2	6.3µg/L	L	121	13	13				
				128			0	7		
				129			0	8		
				130			3	9		
				131			6	10		
				132			2	11		
				133			0	12		
				134			0	13		
				135			0	14		
						13	11		85%	
BATT01-00393	F1/F2	12.5µg/L	A	120	11	11				
				127			0	7		
				128			0	8		
				129			0	9		
				130			6	10		
				131			2	11		
				132			3	12		
				133			-	13		
				134			-	14		
						11	11		100%	
BATT01-00393	F1/F2	12.5µg/L	A	121	10	10				
				128			0	7		
				129			0	8		
				130			4	9		
				131			2	10		
				132			3	11		
				133			0	12		
				134			0	13		
				135			0	14		
						10	9		90%	
BATT01-00393	F1/F2	12.5µg/L	B	120	13	13				
				127			0	7		
				128			0	8		
				129			5	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			2	10		
				131			4	11		
				132			0	12		
				133			2	13		
				134			-	14		
						13	13		100%	
BATT01-00393	F1/F2	12.5µg/L	B	121	11	11				
				128			0	7		
				129			0	8		
				130			5	9		
				131			5	10		
				132			1	11		
				133			-	12		
				134			-	13		
				135			-	14		
						11	11		100%	
BATT01-00393	F1/F2	12.5µg/L	C	120	14	14				
				127			0	7		
				128			3	8		
				129			0	9		
				130			6	10		
				131			2	11		
				132			0	12		
				133			3	13		
				134			-	14		
						14	14		100%	
BATT01-00393	F1/F2	12.5µg/L	C	121	10	10				
				128			0	7		
				129			3	8		
				130			0	9		
				131			2	10		
				132			3	11		
				133			2	12		
				134			-	13		
				135			-	14		
						10	10		100%	
BATT01-00393	F1/F2	12.5µg/L	D	120	15	15				
				127			0	7		
				128			0	8		
				129			5	9		
				130			4	10		
				131			5	11		
				132			1	12		
				133			-	13		
				134			-	14		
						15	15		100%	
BATT01-00393	F1/F2	12.5µg/L	D	121	11	11				
				128			0	7		
				129			0	8		
				130			5	9		
				131			5	10		
				132			0	11		
				133			0	12		
				134			0	13		
				135			0	14		
						11	10		91%	
BATT01-00393	F1/F2	12.5µg/L	E	120	7	7				
				127			0	7		
				128			0	8		
				129			2	9		
				130			0	10		
				131			2	11		
				132			3	12		
				133			-	13		
				134			-	14		
						7	7		100%	
BATT01-00393	F1/F2	12.5µg/L	E	121	13	13				
				128			0	7		
				129			0	8		
				130			2	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			3	10		
				132			6	11		
				133			0	12		
				134			0	13		
				135			0	14		
						13	11		85%	
BATT01-00393	F1/F2	12.5µg/L	F	120	9	9				
				127			0	7		
				128			0	8		
				129			4	9		
				130			5	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						9	9		100%	
BATT01-00393	F1/F2	12.5µg/L	F	121	15	15				
				128			0	7		
				129			0	8		
				130			7	9		
				131			2	10		
				132			3	11		
				133			2	12		
				134			0	13		
				135			0	14		
						15	14		93%	
BATT01-00393	F1/F2	12.5µg/L	G	120	16	16				
				127			0	7		
				128			0	8		
				129			7	9		
				130			5	10		
				131			2	11		
				132			2	12		
				133			-	13		
				134			-	14		
						16	16		100%	
BATT01-00393	F1/F2	12.5µg/L	G	121	11	11				
				128			0	7		
				129			0	8		
				130			5	9		
				131			2	10		
				132			4	11		
				133			-	12		
				134			-	13		
				135			-	14		
						11	11		100%	
BATT01-00393	F1/F2	12.5µg/L	H	120	12	12				
				127			0	7		
				128			0	8		
				129			6	9		
				130			0	10		
				131			5	11		
				132			0	12		
				133			1	13		
				134			-	14		
						12	12		100%	
BATT01-00393	F1/F2	12.5µg/L	H	121	11	11				
				128			0	7		
				129			7	8		
				130			0	9		
				131			2	10		
				132			2	11		
				133			-	12		
				134			-	13		
				135			-	14		
						11	11		100%	
BATT01-00393	F1/F2	12.5µg/L	I	120	14	14				
				127			0	7		
				128			7	8		
				129			0	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			2	10		
				131			4	11		
				132			1	12		
				133			-	13		
				134			-	14		
						14	14		100%	
BATT01-00393	F1/F2	12.5µg/L	I	121	12	12				
				128			0	7		
				129			4	8		
				130			0	9		
				131			0	10		
				132			0	11		
				133			3	12		
				134			4	13		
				135			0	14		
						12	11		92%	
BATT01-00393	F1/F2	12.5µg/L	J	120	13	13				
				127			0	7		
				128			3	8		
				129			0	9		
				130			4	10		
				131			5	11		
				132			0	12		
				133			0	13		
				134			0	14		
						13	12		92%	
BATT01-00393	F1/F2	12.5µg/L	J	121	12	12				
				128			0	7		
				129			0	8		
				130			6	9		
				131			6	10		
				132			-	11		
				133			-	12		
				134			-	13		
				135			-	14		
						12	12		100%	
BATT01-00393	F1/F2	12.5µg/L	K	120	11	11				
				127			0	7		
				128			5	8		
				129			4	9		
				130			0	10		
				131			2	11		
				132			-	12		
				133			-	13		
				134			-	14		
						11	11		100%	
BATT01-00393	F1/F2	12.5µg/L	K	121	14	14				
				128			0	7		
				129			0	8		
				130			6	9		
				131			3	10		
				132			3	11		
				133			1	12		
				134			0	13		
				135			0	14		
						14	13		93%	
BATT01-00393	F1/F2	12.5µg/L	L	120	17	17				
				127			0	7		
				128			2	8		
				129			0	9		
				130			8	10		
				131			2	11		
				132			3	12		
				133			0	13		
				134			0	14		
						17	15		88%	
BATT01-00393	F1/F2	12.5µg/L	L	121	11	11				
				128			0	7		
				129			0	8		
				130			5	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			2	10		
				132			3	11		
				133			0	12		
				134			0	13		
				135			0	14		
						11	10		91%	
BATT01-00393	F1/F2	25µg/L	A	120	10	10				
				127			0	7		
				128			5	8		
				129			0	9		
				130			0	10		
				131			3	11		
				132			0	12		
				133			1	13		
				134			0	14		
						10	9		90%	
BATT01-00393	F1/F2	25µg/L	A	121	11	11				
				128			0	7		
				129			0	8		
				130			5	9		
				131			2	10		
				132			3	11		
				133			0	12		
				134			0	13		
				135			0	14		
						11	10		91%	
BATT01-00393	F1/F2	25µg/L	B	120	7	7				
				127			0	7		
				128			0	8		
				129			2	9		
				130			5	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						7	7		100%	
BATT01-00393	F1/F2	25µg/L	B	121	14	14				
				128			0	7		
				129			0	8		
				130			6	9		
				131			2	10		
				132			3	11		
				133			0	12		
				134			0	13		
				135			0	14		
						14	11		79%	
BATT01-00393	F1/F2	25µg/L	C	120	16	16				
				127			0	7		
				128			0	8		
				129			4	9		
				130			0	10		
				131			5	11		
				132			5	12		
				133			0	13		
				134			0	14		
						16	14		88%	
BATT01-00393	F1/F2	25µg/L	C	121	10	10				
				128			0	7		
				129			4	8		
				130			0	9		
				131			2	10		
				132			4	11		
				133			-	12		
				134			-	13		
				135			-	14		
						10	10		100%	
BATT01-00393	F1/F2	25µg/L	D	120	15	15				
				127			0	7		
				128			7	8		
				129			0	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			5	10		
				131			2	11		
				132			0	12		
				133			0	13		
				134			0	14		
						15	14		93%	
BATT01-00393	F1/F2	25µg/L	D	121	12	12				
				128			0	7		
				129			0	8		
				130			3	9		
				131			3	10		
				132			2	11		
				133			0	12		
				134			4	13		
				135			-	14		
						12	12		100%	
BATT01-00393	F1/F2	25µg/L	E	120	9	9				
				127			0	7		
				128			0	8		
				129			2	9		
				130			2	10		
				131			3	11		
				132			0	12		
				133			2	13		
				134			-	14		
						9	9		100%	
BATT01-00393	F1/F2	25µg/L	E	121	10	10				
				128			0	7		
				129			0	8		
				130			0	9		
				131			1	10		
				132			6	11		
				133			1	12		
				134			0	13		
				135			0	14		
						10	8		80%	
BATT01-00393	F1/F2	25µg/L	F	120	9	9				
				127			0	7		
				128			4	8		
				129			0	9		
				130			5	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						9	9		100%	
BATT01-00393	F1/F2	25µg/L	F	121	13	13				
				128			0	7		
				129			0	8		
				130			0	9		
				131			5	10		
				132			6	11		
				133			2	12		
				134			-	13		
				135			-	14		
						13	13		100%	
BATT01-00393	F1/F2	25µg/L	G	120	11	11				
				127			0	7		
				128			0	8		
				129			5	9		
				130			0	10		
				131			5	11		
				132			1	12		
				133			-	13		
				134			-	14		
						11	11		100%	
BATT01-00393	F1/F2	25µg/L	G	121	13	13				
				128			0	7		
				129			0	8		
				130			6	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			5	10		
				132			0	11		
				133			0	12		
				134			2	13		
				135			-	14		
						13	13		100%	
BATT01-00393	F1/F2	25µg/L	H	120	13	13				
				127			0	7		
				128			0	8		
				129			6	9		
				130			4	10		
				131			2	11		
				132			0	12		
				133			0	13		
				134			0	14		
						13	12		92%	
BATT01-00393	F1/F2	25µg/L	H	121	12	12				
				128			0	7		
				129			4	8		
				130			0	9		
				131			5	10		
				132			2	11		
				133			1	12		
				134			-	13		
				135			-	14		
						12	12		100%	
BATT01-00393	F1/F2	25µg/L	I	120	17	17				
				127			0	7		
				128			0	8		
				129			5	9		
				130			8	10		
				131			2	11		
				132			0	12		
				133			0	13		
				134			0	14		
						17	15		88%	
BATT01-00393	F1/F2	25µg/L	I	121	9	9				
				128			0	7		
				129			0	8		
				130			5	9		
				131			4	10		
				132			-	11		
				133			-	12		
				134			-	13		
				135			-	14		
						9	9		100%	
BATT01-00393	F1/F2	25µg/L	J	120	10	10				
				127			0	7		
				128			0	8		
				129			3	9		
				130			0	10		
				131			4	11		
				132			2	12		
				133			1	13		
				134			-	14		
						10	10		100%	
BATT01-00393	F1/F2	25µg/L	J	121	12	12				
				128			0	7		
				129			2	8		
				130			0	9		
				131			8	10		
				132			0	11		
				133			0	12		
				134			0	13		
				135			0	14		
						12	10		83%	
BATT01-00393	F1/F2	25µg/L	K	120	12	12				
				127			0	7		
				128			4	8		
				129			0	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			2	10		
				131			3	11		
				132			3	12		
				133			-	13		
				134			-	14		
						12	12		100%	
BATT01-00393	F1/F2	25µg/L	K	121	14	14				
				128			0	7		
				129			0	8		
				130			7	9		
				131			7	10		
				132			-	11		
				133			-	12		
				134			-	13		
				135			-	14		
						14	14		100%	
BATT01-00393	F1/F2	25µg/L	L	120	12	12				
				127			0	7		
				128			0	8		
				129			5	9		
				130			7	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						12	12		100%	
BATT01-00393	F1/F2	25µg/L	L	121	13	13				
				128			0	7		
				129			4	8		
				130			6	9		
				131			0	10		
				132			0	11		
				133			2	12		
				134			0	13		
				135			0	14		
						13	12		92%	
BATT01-00393	F1/F2	50µg/L	A	120	9	9				
				127			0	7		
				128			3	8		
				129			0	9		
				130			5	10		
				131			1	11		
				132			-	12		
				133			-	13		
				134			-	14		
						9	9		100%	
BATT01-00393	F1/F2	50µg/L	A	121	12	12				
				128			0	7		
				129			0	8		
				130			5	9		
				131			5	10		
				132			0	11		
				133			2	12		
				134			-	13		
				135			-	14		
						12	12		100%	
BATT01-00393	F1/F2	50µg/L	B	120	13	13				
				127			0	7		
				128			0	8		
				129			0	9		
				130			5	10		
				131			2	11		
				132			2	12		
				133			2	13		
				134			1	14		
						13	12		92%	
BATT01-00393	F1/F2	50µg/L	B	121	11	11				
				128			0	7		
				129			0	8		
				130			7	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			0	10		
				132			2	11		
				133			0	12		
				134			0	13		
				135			0	14		
						11	9		82%	
BATT01-00393	F1/F2	50µg/L	C	120	7	7				
				127			0	7		
				128			2	8		
				129			0	9		
				130			5	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						7	7		100%	
BATT01-00393	F1/F2	50µg/L	C	121	13	13				
				128			0	7		
				129			0	8		
				130			2	9		
				131			3	10		
				132			5	11		
				133			2	12		
				134			0	13		
				135			0	14		
						13	12		92%	
BATT01-00393	F1/F2	50µg/L	D	120	15	15				
				127			0	7		
				128			0	8		
				129			4	9		
				130			6	10		
				131			3	11		
				132			0	12		
				133			0	13		
				134			0	14		
						15	13		87%	
BATT01-00393	F1/F2	50µg/L	D	121	7	7				
				128			0	7		
				129			3	8		
				130			0	9		
				131			2	10		
				132			0	11		
				133			1	12		
				134			0	13		
				135			0	14		
						7	6		86%	
BATT01-00393	F1/F2	50µg/L	E	120	9	9				
				127			0	7		
				128			2	8		
				129			2	9		
				130			0	10		
				131			2	11		
				132			2	12		
				133			0	13		
				134			0	14		
						9	8		89%	
BATT01-00393	F1/F2	50µg/L	E	121	13	13				
				128			0	7		
				129			6	8		
				130			5	9		
				131			2	10		
				132			-	11		
				133			-	12		
				134			-	13		
				135			-	14		
						13	13		100%	
BATT01-00393	F1/F2	50µg/L	F	120	8	8				
				127			0	7		
				128			0	8		
				129			3	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			4	10		
				131			0	11		
				132			0	12		
				133			0	13		
				134			0	14		
						8	7		88%	
BATT01-00393	F1/F2	50µg/L	F	121	10	10				
				128			0	7		
				129			0	8		
				130			3	9		
				131			3	10		
				132			2	11		
				133			1	12		
				134			1	13		
				135			-	14		
						10	10		100%	
BATT01-00393	F1/F2	50µg/L	G	120	12	12				
				127			0	7		
				128			5	8		
				129			0	9		
				130			3	10		
				131			2	11		
				132			0	12		
				133			2	13		
				134			-	14		
						12	12		100%	
BATT01-00393	F1/F2	50µg/L	G	121	7	7				
				128			0	7		
				129			2	8		
				130			0	9		
				131			5	10		
				132			-	11		
				133			-	12		
				134			-	13		
				135			-	14		
						7	7		100%	
BATT01-00393	F1/F2	50µg/L	H	120	16	16				
				127			0	7		
				128			0	8		
				129			4	9		
				130			4	10		
				131			5	11		
				132			0	12		
				133			0	13		
				134			0	14		
						16	13		81%	
BATT01-00393	F1/F2	50µg/L	H	121	10	10				
				128			0	7		
				129			0	8		
				130			6	9		
				131			2	10		
				132			0	11		
				133			0	12		
				134			0	13		
				135			0	14		
						10	8		80%	
BATT01-00393	F1/F2	50µg/L	I	120	10	10				
				127			0	7		
				128			0	8		
				129			0	9		
				130			2	10		
				131			5	11		
				132			2	12		
				133			0	13		
				134			0	14		
						10	9		90%	
BATT01-00393	F1/F2	50µg/L	I	121	7	7				
				128			0	7		
				129			3	8		
				130			0	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			3	10		
				132			0	11		
				133			1	12		
				134			-	13		
				135			-	14		
						7	7		100%	
BATT01-00393	F1/F2	50µg/L	J	120	15	15				
				127			0	7		
				128			0	8		
				129			6	9		
				130			5	10		
				131			2	11		
				132			0	12		
				133			0	13		
				134			0	14		
						15	13		87%	
BATT01-00393	F1/F2	50µg/L	J	121	13	13				
				128			0	7		
				129			0	8		
				130			7	9		
				131			5	10		
				132			1	11		
				133			-	12		
				134			-	13		
				135			-	14		
						13	13		100%	
BATT01-00393	F1/F2	50µg/L	K	120	12	12				
				127			0	7		
				128			0	8		
				129			3	9		
				130			6	10		
				131			3	11		
				132			-	12		
				133			-	13		
				134			-	14		
						12	12		100%	
BATT01-00393	F1/F2	50µg/L	K	121	14	14				
				128			0	7		
				129			0	8		
				130			8	9		
				131			6	10		
				132			-	11		
				133			-	12		
				134			-	13		
				135			-	14		
						14	14		100%	
BATT01-00393	F1/F2	50µg/L	L	120	15	15				
				127			0	7		
				128			7	8		
				129			4	9		
				130			0	10		
				131			3	11		
				132			0	12		
				133			0	13		
				134			0	14		
						15	14		93%	
BATT01-00393	F1/F2	50µg/L	L	121	11	11				
				128			0	7		
				129			0	8		
				130			3	9		
				131			4	10		
				132			3	11		
				133			0	12		
				134			0	13		
				135			0	14		
						11	10		91%	
BATT01-00393	F1/F2	100µg/L	A	120	9	9				
				127			0	7		
				128			0	8		
				129			0	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			4	10		
				131			2	11		
				132			0	12		
				133			0	13		
				134			0	14		
						9	6		67%	
BATT01-00393	F1/F2	100µg/L	A	121	8	8				
				128			0	7		
				129			0	8		
				130			0	9		
				131			5	10		
				132			2	11		
				133			1	12		
				134			-	13		
				135			-	14		
						8	8		100%	
BATT01-00393	F1/F2	100µg/L	B	120	12	12				
				127			0	7		
				128			0	8		
				129			5	9		
				130			0	10		
				131			3	11		
				132			3	12		
				133			0	13		
				134			0	14		
						12	11		92%	
BATT01-00393	F1/F2	100µg/L	B	121	10	10				
				128			0	7		
				129			0	8		
				130			3	9		
				131			2	10		
				132			2	11		
				133			0	12		
				134			0	13		
				135			0	14		
						10	7		70%	
BATT01-00393	F1/F2	100µg/L	C	120	12	11				
				127			0	7		
				128			0	8		
				129			6	9		
				130			5	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						11	11		100%	
BATT01-00393	F1/F2	100µg/L	C	121	13	12				
				128			0	7		
				129			0	8		
				130			0	9		
				131			5	10		
				132			3	11		
				133			2	12		
				134			0	13		
				135			0	14		
						12	10		83%	
BATT01-00393	F1/F2	100µg/L	D	120	7	7				
				127			0	7		
				128			3	8		
				129			0	9		
				130			4	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						7	7		100%	
BATT01-00393	F1/F2	100µg/L	D	121	8	8				
				128			0	7		
				129			0	8		
				130			0	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			3	10		
				132			3	11		
				133			1	12		
				134			0	13		
				135			0	14		
						8	7		88%	
BATT01-00393	F1/F2	100µg/L	E	120	10	9				
				127			0	7		
				128			2	8		
				129			2	9		
				130			0	10		
				131			1	11		
				132			1	12		
				133			1	13		
				134			0	14		
						9	7		78%	
BATT01-00393	F1/F2	100µg/L	E	121	11	9				
				128			0	7		
				129			0	8		
				130			4	9		
				131			5	10		
				132			-	11		
				133			-	12		
				134			-	13		
				135			-	14		
						9	9		100%	
BATT01-00393	F1/F2	100µg/L	F	120	7	7				
				127			0	7		
				128			0	8		
				129			0	9		
				130			3	10		
				131			1	11		
				132			1	12		
				133			0	13		
				134			0	14		
						7	5		71%	
BATT01-00393	F1/F2	100µg/L	F	121	10	9				
				128			0	7		
				129			0	8		
				130			5	9		
				131			3	10		
				132			0	11		
				133			0	12		
				134			0	13		
				135			0	14		
						9	8		89%	
BATT01-00393	F1/F2	100µg/L	G	120	6	6				
				127			0	7		
				128			0	8		
				129			0	9		
				130			3	10		
				131			2	11		
				132			0	12		
				133			0	13		
				134			0	14		
						6	5		83%	
BATT01-00393	F1/F2	100µg/L	G	121	11	9				
				128			0	7		
				129			0	8		
				130			6	9		
				131			1	10		
				132			0	11		
				133			0	12		
				134			0	13		
				135			0	14		
						9	7		78%	
BATT01-00393	F1/F2	100µg/L	H	120	11	11				
				127			0	7		
				128			5	8		
				129			0	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				130			6	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						11	11		100%	
BATT01-00393	F1/F2	100µg/L	H	121	12	12				
				128			0	7		
				129			0	8		
				130			4	9		
				131			3	10		
				132			2	11		
				133			0	12		
				134			0	13		
				135			0	14		
						12	9		75%	
BATT01-00393	F1/F2	100µg/L	I	120	9	8				
				127			0	7		
				128			0	8		
				129			4	9		
				130			3	10		
				131			1	11		
				132			-	12		
				133			-	13		
				134			-	14		
						8	8		100%	
BATT01-00393	F1/F2	100µg/L	I	121	6	6				
				128			0	7		
				129			0	8		
				130			0	9		
				131			2	10		
				132			3	11		
				133			0	12		
				134			1	13		
				135			-	14		
						6	6		100%	
BATT01-00393	F1/F2	100µg/L	J	120	10	9				
				127			0	7		
				128			5	8		
				129			0	9		
				130			0	10		
				131			2	11		
				132			1	12		
				133			0	13		
				134			0	14		
						9	8		89%	
BATT01-00393	F1/F2	100µg/L	J	121	11	10				
				128			0	7		
				129			0	8		
				130			0	9		
				131			3	10		
				132			4	11		
				133			2	12		
				134			0	13		
				135			0	14		
						10	9		90%	
BATT01-00393	F1/F2	100µg/L	K	120	6	6				
				127			0	7		
				128			0	8		
				129			3	9		
				130			3	10		
				131			-	11		
				132			-	12		
				133			-	13		
				134			-	14		
						6	6		100%	
BATT01-00393	F1/F2	100µg/L	K	121	8	8				
				128			0	7		
				129			0	8		
				130			2	9		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Eggs Collected	Viable Eggs	Eggs Hatched	Time to Hatch	Hatch (%)	Comments
				131			3	10		
				132			0	11		
				133			2	12		
				134			0	13		
				135			0	14		
						8	7		88%	
BATT01-00393	F1/F2	100µg/L	L	120	11	11				
				127			0	7		
				128			4	8		
				129			0	9		
				130			2	10		
				131			3	11		
				132			0	12		
				133			0	13		
				134			0	14		
						11	9		82%	
BATT01-00393	F1/F2	100µg/L	L	121	8	8				
				128			0	7		
				129			0	8		
				130			0	9		
				131			5	10		
				132			2	11		
				133			1	12		
				134			-	13		
				135			-	14		
						8	8		100%	

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability - Survival from SD0 to SD21 (%)	Comments
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	A	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	A				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	B	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	B				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	C	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	C				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	D	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	D				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	E	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	E				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	F	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	F				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	G	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	G				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	H	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	H				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	I	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	I				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	J	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	J				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	K	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	K				100%	
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	21	M	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	L	21	F	0		
BATT01-00393	F0	(Ctrl) 0.0µg/L	L				100%	
BATT01-00393	F0	6.3µg/L	A	21	M	0		
BATT01-00393	F0	6.3µg/L	A	21	F	0		
BATT01-00393	F0	6.3µg/L	A				100%	
BATT01-00393	F0	6.3µg/L	B	21	M	0		
BATT01-00393	F0	6.3µg/L	B	21	F	0		
BATT01-00393	F0	6.3µg/L	B				100%	
BATT01-00393	F0	6.3µg/L	C	21	M	0		
BATT01-00393	F0	6.3µg/L	C	21	F	0		
BATT01-00393	F0	6.3µg/L	C				100%	
BATT01-00393	F0	6.3µg/L	D	21	M	0		
BATT01-00393	F0	6.3µg/L	D	21	F	0		
BATT01-00393	F0	6.3µg/L	D				100%	
BATT01-00393	F0	6.3µg/L	E	21	M	0		
BATT01-00393	F0	6.3µg/L	E	21	F	0		
BATT01-00393	F0	6.3µg/L	E				100%	
BATT01-00393	F0	6.3µg/L	F	21	M	0		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability - Survival from SD0 to SD21 (%)	Comments
BATT01-00393	F0	6.3µg/L	F	21	F	0		
BATT01-00393	F0	6.3µg/L	F				100%	
BATT01-00393	F0	12.5µg/L	A	21	M	0		
BATT01-00393	F0	12.5µg/L	A	21	F	0		
BATT01-00393	F0	12.5µg/L	A				100%	
BATT01-00393	F0	12.5µg/L	B	21	M	0		
BATT01-00393	F0	12.5µg/L	B	21	F	0		
BATT01-00393	F0	12.5µg/L	B				100%	
BATT01-00393	F0	12.5µg/L	C	21	M	0		
BATT01-00393	F0	12.5µg/L	C	21	F	0		
BATT01-00393	F0	12.5µg/L	C				100%	
BATT01-00393	F0	12.5µg/L	D	21	M	0		
BATT01-00393	F0	12.5µg/L	D	21	F	0		
BATT01-00393	F0	12.5µg/L	D				100%	
BATT01-00393	F0	12.5µg/L	E	21	M	0		
BATT01-00393	F0	12.5µg/L	E	21	F	0		
BATT01-00393	F0	12.5µg/L	E				100%	
BATT01-00393	F0	12.5µg/L	F	21	M	0		
BATT01-00393	F0	12.5µg/L	F	21	F	0		
BATT01-00393	F0	12.5µg/L	F				100%	
BATT01-00393	F0	25µg/L	A	21	M	0		
BATT01-00393	F0	25µg/L	A	21	F	0		
BATT01-00393	F0	25µg/L	A				100%	
BATT01-00393	F0	25µg/L	B	21	M	0		
BATT01-00393	F0	25µg/L	B	21	F	0		
BATT01-00393	F0	25µg/L	B				100%	
BATT01-00393	F0	25µg/L	C	21	M	0		
BATT01-00393	F0	25µg/L	C	21	F	0		
BATT01-00393	F0	25µg/L	C				100%	
BATT01-00393	F0	25µg/L	D	21	M	0		
BATT01-00393	F0	25µg/L	D	21	F	0		
BATT01-00393	F0	25µg/L	D				100%	
BATT01-00393	F0	25µg/L	E	21	M	0		
BATT01-00393	F0	25µg/L	E	21	F	0		
BATT01-00393	F0	25µg/L	E				100%	
BATT01-00393	F0	25µg/L	F	21	M	0		
BATT01-00393	F0	25µg/L	F	21	F	0		
BATT01-00393	F0	25µg/L	F				100%	
BATT01-00393	F0	50µg/L	A	21	M	0		
BATT01-00393	F0	50µg/L	A	21	F	0		
BATT01-00393	F0	50µg/L	A				100%	
BATT01-00393	F0	50µg/L	B	21	M	0		
BATT01-00393	F0	50µg/L	B	21	F	0		
BATT01-00393	F0	50µg/L	B				100%	
BATT01-00393	F0	50µg/L	C	21	M	0		
BATT01-00393	F0	50µg/L	C	21	F	0		
BATT01-00393	F0	50µg/L	C				100%	
BATT01-00393	F0	50µg/L	D	21	M	0		
BATT01-00393	F0	50µg/L	D	21	F	0		
BATT01-00393	F0	50µg/L	D				100%	
BATT01-00393	F0	50µg/L	E	21	M	0		
BATT01-00393	F0	50µg/L	E	21	F	0		

DESt BATT01-00393 F0 Survivability

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability - Survival from SD0 to SD21 (%)	Comments
BATT01-00393	F0	50µg/L	E				100%	
BATT01-00393	F0	50µg/L	F	21	M	0		
BATT01-00393	F0	50µg/L	F	21	F	0		
BATT01-00393	F0	50µg/L	F				100%	
BATT01-00393	F0	100µg/L	A	21	M	0		
BATT01-00393	F0	100µg/L	A	21	F	0		
BATT01-00393	F0	100µg/L	A				100%	
BATT01-00393	F0	100µg/L	B	21	M	0		
BATT01-00393	F0	100µg/L	B	21	F	0		
BATT01-00393	F0	100µg/L	B				100%	
BATT01-00393	F0	100µg/L	C	21	M	0		
BATT01-00393	F0	100µg/L	C	21	F	0		
BATT01-00393	F0	100µg/L	C				100%	
BATT01-00393	F0	100µg/L	D	21	M	0		
BATT01-00393	F0	100µg/L	D	21	F	0		
BATT01-00393	F0	100µg/L	D				100%	
BATT01-00393	F0	100µg/L	E	21	M	0		
BATT01-00393	F0	100µg/L	E	21	F	0		
BATT01-00393	F0	100µg/L	E				100%	
BATT01-00393	F0	100µg/L	F	21	M	0		
BATT01-00393	F0	100µg/L	F	21	F	0		
BATT01-00393	F0	100µg/L	F				100%	

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
BATT01-00393	F1	(Ctrl) 0.0µg/L	A		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	B		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	C		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	D		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	E		Larvae	0	100%			
				80	M	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	F		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	G		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	H		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	I		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	J		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	K		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	(Ctrl) 0.0µg/L	L		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	6.3µg/L	A		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	6.3µg/L	B		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	6.3µg/L	C		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	6.3µg/L	D		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	6.3µg/L	E		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	6.3µg/L	F		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	12.5µg/L	A		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	12.5µg/L	B		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	12.5µg/L	C		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	12.5µg/L	D		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
						0		100%		
				122	M	0				
				122	F	0				
						0			100%	
BATT01-00393	F1	12.5µg/L	E		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	12.5µg/L	F		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	25µg/L	A		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	25µg/L	B		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	25µg/L	C		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	25µg/L	D		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	25µg/L	E		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	25µg/L	F		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	50µg/L	A		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	50µg/L	B		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	50µg/L	C		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
									100%	
BATT01-00393	F1	50µg/L	D		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	50µg/L	E		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	50µg/L	F		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	100µg/L	A		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	100µg/L	B		Larvae	0	100%			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	100µg/L	C		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	100µg/L	D		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	100µg/L	E		Larvae	0	100%			
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	
BATT01-00393	F1	100µg/L	F		Larvae	0	100%			
				80	M	0				
				80	M	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				80	M	0				
				80	M	0				
				80	M	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
				80	F	0				
								100%		
				122	M	0				
				122	F	0				
									100%	

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
BATT01-00393	F2	(Ctrl) 0.0µg/L	A		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	B		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	C		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	D		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	E		Larvae	0	100%			
				179	M	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	F		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	G		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	H		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	I		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	J		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	K		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	(Ctrl) 0.0µg/L	L		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	6.3µg/L	A		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	6.3µg/L	B		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	6.3µg/L	C		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	6.3µg/L	D		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	6.3µg/L	E		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	6.3µg/L	F		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	12.5µg/L	A		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	12.5µg/L	B		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	12.5µg/L	C		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	12.5µg/L	D		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	12.5µg/L	E		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	12.5µg/L	F		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	25µg/L	A		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	25µg/L	B		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	25µg/L	C		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	25µg/L	D		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	25µg/L	E		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
						0		100%		

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	25µg/L	F		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	50µg/L	A		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	50µg/L	B		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	50µg/L	C		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
						0			100%	
BATT01-00393	F2	50µg/L	D		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	50µg/L	E		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	50µg/L	F		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	100µg/L	A		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	100µg/L	B		Larvae	0	100%			

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	100µg/L	C		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	100µg/L	D		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	M	0				
				179	M	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	100µg/L	E		Larvae	0	100%			
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	M	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	
BATT01-00393	F2	100µg/L	F		Larvae	0	100%			
				179	M	0				
				179	M	0				

Study ID	Generation	Name of Treatment Group	Replicate ID	Study Day	Genotypic Sex (M or F)	Individual Mortalities (# dead)	Survivability			Comments
							Survival to 4 WPF (%)	Survival from 4 to 9 WPF (%)	Survival from 9 to 15 WPF (%)	
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	F	0				
				179	M	0				
				179	F	0				
						0		100%		
				217	M	0				
				217	F	0				
						0			100%	

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	A	1	F	-	-	-	-	-	-	0.408	37.0	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	A	2	M	-	-	-	-	-	-	0.325	35.3	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	B	1	F	-	-	-	-	-	-	0.372	36.5	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	B	2	M	-	-	-	-	-	-	0.467	37.7	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	C	1	F	-	-	-	-	-	-	0.419	37.4	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	C	2	M	-	-	-	-	-	-	0.299	32.5	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	D	1	F	-	-	-	-	-	-	0.572	40.5	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	D	2	M	-	-	-	-	-	-	0.381	36.8	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	E	1	F	-	-	-	-	-	-	0.389	36.7	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	E	2	M	-	-	-	-	-	-	0.342	34.0	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	F	1	F	-	-	-	-	-	-	0.552	39.9	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	F	2	M	-	-	-	-	-	-	0.265	31.6	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	G	1	F	-	-	-	-	-	-	0.420	36.9	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	G	2	M	-	-	-	-	-	-	0.360	33.9	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	H	1	F	-	-	-	-	-	-	0.401	35.7	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	H	2	M	-	-	-	-	-	-	0.292	31.5	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	I	1	F	-	-	-	-	-	-	0.485	36.4	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	I	2	M	-	-	-	-	-	-	0.331	34.3	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	J	1	F	-	-	-	-	-	-	0.371	36.5	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	J	2	M	-	-	-	-	-	-	0.385	36.4	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	K	1	F	-	-	-	-	-	-	0.393	36.6	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	K	2	M	-	-	-	-	-	-	0.373	34.7	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	L	1	F	-	-	-	-	-	-	0.466	37.7	-	
BATT01 - 00393	F0	(Ctrl) 0.0µg/L	L	2	M	-	-	-	-	-	-	0.323	34.6	-	
BATT01 - 00393	F0	6.3µg/L	A	1	F	-	-	-	-	-	-	0.539	38.6	-	
BATT01 - 00393	F0	6.3µg/L	A	2	M	-	-	-	-	-	-	0.381	36.5	-	
BATT01 - 00393	F0	6.3µg/L	B	1	F	-	-	-	-	-	-	0.360	35.1	-	
BATT01 - 00393	F0	6.3µg/L	B	2	M	-	-	-	-	-	-	0.361	36.5	-	
BATT01 - 00393	F0	6.3µg/L	C	1	F	-	-	-	-	-	-	0.409	36.3	-	
BATT01 - 00393	F0	6.3µg/L	C	2	M	-	-	-	-	-	-	0.381	35.9	-	
BATT01 - 00393	F0	6.3µg/L	D	1	F	-	-	-	-	-	-	0.436	37.0	-	
BATT01 - 00393	F0	6.3µg/L	D	2	M	-	-	-	-	-	-	0.446	36.5	-	
BATT01 - 00393	F0	6.3µg/L	E	1	F	-	-	-	-	-	-	0.442	36.6	-	
BATT01 - 00393	F0	6.3µg/L	E	2	M	-	-	-	-	-	-	0.433	35.4	-	
BATT01 - 00393	F0	6.3µg/L	F	1	F	-	-	-	-	-	-	0.376	34.7	-	
BATT01 - 00393	F0	6.3µg/L	F	2	M	-	-	-	-	-	-	0.405	36.3	-	
BATT01 - 00393	F0	12.5µg/L	A	1	F	-	-	-	-	-	-	0.431	34.0	-	
BATT01 - 00393	F0	12.5µg/L	A	2	M	-	-	-	-	-	-	0.339	31.6	-	
BATT01 - 00393	F0	12.5µg/L	B	1	F	-	-	-	-	-	-	0.502	35.2	-	

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F0	12.5µg/L	B	2	M	-	-	-	-	-	-	0.421	34.5	-	
BATT01 - 00393	F0	12.5µg/L	C	1	F	-	-	-	-	-	-	0.379	33.1	-	
BATT01 - 00393	F0	12.5µg/L	C	2	M	-	-	-	-	-	-	0.361	33.3	-	
BATT01 - 00393	F0	12.5µg/L	D	1	F	-	-	-	-	-	-	0.373	35.1	-	
BATT01 - 00393	F0	12.5µg/L	D	2	M	-	-	-	-	-	-	0.557	34.0	-	
BATT01 - 00393	F0	12.5µg/L	E	1	F	-	-	-	-	-	-	0.347	32.2	-	
BATT01 - 00393	F0	12.5µg/L	E	2	M	-	-	-	-	-	-	0.456	34.3	-	
BATT01 - 00393	F0	12.5µg/L	F	1	F	-	-	-	-	-	-	0.323	32.9	-	
BATT01 - 00393	F0	12.5µg/L	F	2	M	-	-	-	-	-	-	0.451	34.3	-	
BATT01 - 00393	F0	25µg/L	A	1	F	-	-	-	-	-	-	0.507	33.9	-	
BATT01 - 00393	F0	25µg/L	A	2	M	-	-	-	-	-	-	0.251	27.8	-	
BATT01 - 00393	F0	25µg/L	B	1	F	-	-	-	-	-	-	0.401	33.1	-	
BATT01 - 00393	F0	25µg/L	B	2	M	-	-	-	-	-	-	0.409	34.1	-	
BATT01 - 00393	F0	25µg/L	C	1	F	-	-	-	-	-	-	0.331	32.7	-	
BATT01 - 00393	F0	25µg/L	C	2	M	-	-	-	-	-	-	0.452	32.5	-	
BATT01 - 00393	F0	25µg/L	D	1	F	-	-	-	-	-	-	0.294	30.8	-	
BATT01 - 00393	F0	25µg/L	D	2	M	-	-	-	-	-	-	0.443	33.8	-	
BATT01 - 00393	F0	25µg/L	E	1	F	-	-	-	-	-	-	0.385	33.7	-	
BATT01 - 00393	F0	25µg/L	E	2	M	-	-	-	-	-	-	0.394	32.2	-	
BATT01 - 00393	F0	25µg/L	F	1	F	-	-	-	-	-	-	0.506	36.0	-	
BATT01 - 00393	F0	25µg/L	F	2	M	-	-	-	-	-	-	0.600	36.3	-	
BATT01 - 00393	F0	50µg/L	A	1	F	-	-	-	-	-	-	0.283	31.4	-	
BATT01 - 00393	F0	50µg/L	A	2	M	-	-	-	-	-	-	0.329	33.4	-	
BATT01 - 00393	F0	50µg/L	B	1	F	-	-	-	-	-	-	0.541	35.6	-	
BATT01 - 00393	F0	50µg/L	B	2	M	-	-	-	-	-	-	0.391	30.9	-	
BATT01 - 00393	F0	50µg/L	C	1	F	-	-	-	-	-	-	0.503	36.2	-	
BATT01 - 00393	F0	50µg/L	C	2	M	-	-	-	-	-	-	0.380	34.8	-	
BATT01 - 00393	F0	50µg/L	D	1	F	-	-	-	-	-	-	0.260	29.3	-	
BATT01 - 00393	F0	50µg/L	D	2	M	-	-	-	-	-	-	0.347	31.4	-	
BATT01 - 00393	F0	50µg/L	E	1	F	-	-	-	-	-	-	0.441	35.5	-	
BATT01 - 00393	F0	50µg/L	E	2	M	-	-	-	-	-	-	0.445	35.1	-	
BATT01 - 00393	F0	50µg/L	F	1	F	-	-	-	-	-	-	0.399	33.3	-	
BATT01 - 00393	F0	50µg/L	F	2	M	-	-	-	-	-	-	0.522	35.3	-	
BATT01 - 00393	F0	100µg/L	A	1	F	-	-	-	-	-	-	0.280	31.3	-	
BATT01 - 00393	F0	100µg/L	A	2	M	-	-	-	-	-	-	0.597	39.3	-	
BATT01 - 00393	F0	100µg/L	B	1	F	-	-	-	-	-	-	0.335	32.2	-	
BATT01 - 00393	F0	100µg/L	B	2	M	-	-	-	-	-	-	0.653	37.0	-	
BATT01 - 00393	F0	100µg/L	C	1	F	-	-	-	-	-	-	0.317	31.6	-	
BATT01 - 00393	F0	100µg/L	C	2	M	-	-	-	-	-	-	0.545	36.0	-	

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F0	100µg/L	D	1	F	-	-	-	-	-	-	0.295	30.3	-	
BATT01 - 00393	F0	100µg/L	D	2	M	-	-	-	-	-	-	0.356	33.1	-	
BATT01 - 00393	F0	100µg/L	E	1	F	-	-	-	-	-	-	0.265	30.9	-	
BATT01 - 00393	F0	100µg/L	E	2	M	-	-	-	-	-	-	0.323	32.2	-	
BATT01 - 00393	F0	100µg/L	F	1	F	-	-	-	-	-	-	0.352	33.8	-	
BATT01 - 00393	F0	100µg/L	F	2	M	-	-	-	-	-	-	0.425	34.2	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	1	M	9	0.132	23.8	-	-	49	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	2	M	9	0.030	22.8	-	-	31	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	3	F	9	2.133	14.3	0.0104	2.85	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	4	F	9	0.031	14.0	0.0039	3.17	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	5	F	9	0.061	16.9	0.0063	2.64	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	6	F	9	0.067	18.7	0.0062	4.21	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	7	F	9	0.063	17.7	0.0035	1.92	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	8	F	9	0.115	18.9	0.0091	4.48	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	1	M	9	0.079	20.0	-	-	13	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	2	M	9	0.072	19.7	-	-	10	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	3	M	9	0.098	21.9	0.0061	1.77	22	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	4	M	9	0.083	19.2	0.0066	4.26	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	5	M	9	0.062	16.2	0.0024	2.11	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	6	F	9	0.114	23.2	0.0043	1.78	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	7	M	9	0.074	19.6	0.0075	1.75	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	8	F	9	0.078	17.7	0.0066	4.33	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	1	M	9	0.041	14.9	-	-	13	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	2	M	9	0.052	17.2	-	-	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	3	M	9	0.132	22.3	0.0036	2.45	25	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	4	M	9	0.110	24.3	0.0096	2.62	59	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	5	M	9	0.114	20.1	0.0104	1.68	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	6	F	9	0.078	16.3	0.0059	2.10	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	7	F	9	0.066	16.2	0.0051	4.47	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	8	F	9	0.038	16.8	0.0025	4.02	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	1	M	9	0.130	23.2	-	-	43	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	2	M	9	0.139	21.2	-	-	24	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	3	M	9	0.067	16.6	0.0051	3.21	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	4	F	9	0.060	15.4	0.0066	2.75	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	5	M	9	0.098	20.4	0.0161	2.21	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	6	F	9	0.074	17.2	0.0084	1.78	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	7	F	9	0.045	15.3	0.0061	3.94	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	8	F	9	0.087	17.7	0.0096	3.13	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	1	M	9	0.117	21.2	-	-	19	-	-	-	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	2	M	9	0.161	24.3	-	-	42	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	3	M	9	0.142	22.5	0.0125	2.83	41	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	4	M	9	0.221	24.6	0.0131	3.13	51	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	5	M	9	0.101	20.4	0.0079	2.12	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	6	F	9	0.077	18.0	0.0061	1.80	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	7	F	9	0.078	20.0	0.0088	1.87	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	8	F	9	0.120	22.1	0.0130	2.47	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	1	M	9	0.092	17.9	-	-	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	2	M	9	0.097	18.3	-	-	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	3	M	9	0.186	25.8	0.0099	1.54	44	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	4	F	9	0.063	17.1	0.0129	2.68	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	5	M	9	0.065	18.0	0.0030	2.77	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	6	F	9	0.084	19.3	0.0040	2.20	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	7	M	9	0.085	22.5	0.0077	2.37	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	8	F	9	0.112	18.4	0.0162	1.46	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	1	M	9	0.057	17.5	-	-	28	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	2	M	9	0.113	21.5	-	-	32	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	3	M	9	0.118	22.3	0.0080	1.15	28	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	4	M	9	0.105	21.9	0.0079	1.07	25	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	5	F	9	0.117	20.6	0.0082	4.51	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	6	F	9	0.133	23.3	0.0132	3.91	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	7	F	9	0.127	25.0	0.0085	4.64	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	8	F	9	0.187	23.0	0.0139	4.52	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	1	M	9	0.112	21.5	-	-	35	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	2	M	9	0.084	20.8	-	-	31	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	3	M	9	0.165	24.2	0.0122	2.85	35	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	4	M	9	0.122	22.1	0.0083	2.80	41	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	5	M	9	0.160	25.9	0.0136	2.01	28	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	6	F	9	0.078	20.5	0.0081	3.52	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	7	F	9	0.089	21.8	0.0078	3.13	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	8	F	9	0.140	22.9	0.0092	1.38	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	1	M	9	0.100	23.1	-	-	29	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	2	M	9	0.169	25.0	-	-	37	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	3	M	9	0.200	27.1	0.0165	1.30	44	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	4	F	9	0.068	19.7	0.0179	1.49	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	5	F	9	0.189	25.9	0.0150	4.26	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	6	F	9	0.102	21.8	0.0119	2.99	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	7	F	9	0.083	20.7	0.0060	2.19	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	8	F	9	0.090	16.7	0.0108	1.62	0	-	-	-	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	1	M	9	0.110	22.5	-	-	35	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	2	M	9	0.112	23.1	-	-	39	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	3	M	9	0.108	23.4	0.0157	2.49	44	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	4	M	9	0.169	25.4	0.0237	1.62	26	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	5	F	9	0.092	20.3	0.0052	2.28	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	6	F	9	0.121	23.0	0.0156	3.47	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	7	F	9	0.079	20.2	0.0069	2.66	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	8	F	9	0.218	28.7	0.0108	2.99	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	1	M	9	0.116	23.4	-	-	33	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	2	M	9	0.139	23.7	-	-	27	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	3	M	9	0.162	23.1	0.0107	1.40	23	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	4	F	9	0.060	17.5	0.0103	4.12	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	5	M	9	0.080	21.6	0.0056	3.04	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	6	F	9	0.145	24.4	0.0168	3.71	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	7	F	9	0.100	25.5	0.0149	5.52	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	8	F	9	0.173	21.7	0.0101	3.82	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	1	M	9	0.139	25.0	-	-	15	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	2	M	9	0.118	22.7	-	-	21	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	3	F	9	0.121	22.8	0.0126	4.31	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	4	F	9	0.097	19.4	0.0066	3.28	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	5	F	9	0.119	24.0	0.0097	3.26	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	6	F	9	0.137	23.9	0.0070	2.79	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	7	F	9	0.099	21.1	0.0085	1.35	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	8	M	9	0.118	20.8	0.0113	1.49	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	A	1	M	9	0.088	16.7	-	-	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	A	2	M	9	0.157	23.8	-	-	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	A	3	F	9	0.090	19.1	0.0060	2.61	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	A	4	F	9	0.091	17.9	0.0072	1.88	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	A	5	F	9	0.106	18.4	0.0137	2.46	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	A	6	F	9	0.112	20.3	0.0087	3.70	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	A	7	F	9	0.091	21.0	0.0145	4.48	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	A	8	F	9	0.101	20.2	0.0067	4.52	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	B	1	M	9	0.133	25.1	-	-	18	-	-	-	
BATT01 - 00393	F1	6.3µg/L	B	2	M	9	0.107	23.4	-	-	23	-	-	-	
BATT01 - 00393	F1	6.3µg/L	B	3	M	9	0.121	25.1	0.0083	1.54	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	B	4	F	9	0.124	24.4	0.0028	1.99	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	B	5	F	9	0.122	23.9	0.0038	2.59	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	B	6	F	9	0.111	24.2	0.0069	2.55	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	B	7	M	9	0.100	20.8	0.0047	4.96	0	-	-	-	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F1	6.3µg/L	B	8	F	9	0.123	21.7	0.0063	2.53	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	C	1	M	9	0.106	21.7	-	-	10	-	-	-	
BATT01 - 00393	F1	6.3µg/L	C	2	M	9	0.099	21.7	-	-	16	-	-	-	
BATT01 - 00393	F1	6.3µg/L	C	3	M	9	0.085	19.1	0.0032	2.94	20	-	-	-	
BATT01 - 00393	F1	6.3µg/L	C	4	M	9	0.125	22.0	0.0022	1.95	16	-	-	-	
BATT01 - 00393	F1	6.3µg/L	C	5	F	9	0.040	14.9	0.0032	1.15	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	C	6	F	9	0.073	19.2	0.0067	3.94	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	C	7	M	9	0.082	19.8	0.0020	3.81	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	C	8	F	9	0.166	24.0	0.0134	2.11	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	D	1	M	9	0.147	22.4	-	-	14	-	-	-	
BATT01 - 00393	F1	6.3µg/L	D	2	F	9	0.081	19.6	-	-	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	D	3	M	9	0.055	15.8	0.0043	1.24	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	D	4	M	9	0.082	18.1	0.0052	2.92	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	D	5	M	9	0.093	20.7	0.0027	2.81	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	D	6	F	9	0.137	22.2	0.0032	2.67	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	D	7	F	9	0.067	17.8	0.0033	2.79	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	D	8	M	9	0.117	21.2	0.0071	2.63	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	E	1	F	9	0.089	21.8	-	-	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	E	2	M	9	0.068	20.6	-	-	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	E	3	F	9	0.115	19.9	0.0020	1.93	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	E	4	M	9	0.065	18.8	0.0063	1.78	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	E	5	M	9	0.066	20.9	0.0068	1.28	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	E	6	F	9	0.091	21.6	0.0044	1.41	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	E	7	M	9	0.078	18.1	0.0057	1.65	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	E	8	F	9	0.083	19.6	0.0156	1.17	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	F	1	M	9	0.103	20.4	-	-	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	F	2	M	9	0.097	18.7	-	-	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	F	3	M	9	0.159	25.7	0.0111	1.12	21	-	-	-	
BATT01 - 00393	F1	6.3µg/L	F	4	M	9	0.176	26.3	0.0132	2.36	30	-	-	-	
BATT01 - 00393	F1	6.3µg/L	F	5	F	9	0.055	16.9	0.0060	2.00	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	F	6	F	9	0.096	19.6	0.0109	2.36	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	F	7	M	9	0.090	20.3	0.0079	2.42	0	-	-	-	
BATT01 - 00393	F1	6.3µg/L	F	8	F	9	0.077	19.9	0.0060	2.52	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	A	1	M	9	0.072	18.6	-	-	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	A	2	F	9	0.081	18.3	-	-	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	A	3	F	9	0.094	19.6	0.0025	3.00	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	A	4	M	9	0.100	19.4	0.0104	4.46	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	A	5	F	9	0.078	17.6	0.0061	4.59	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	A	6	F	9	0.089	19.2	0.0068	3.18	0	-	-	-	

FEL

DEST

BATT01-00393

Growth and SSC

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F1	12.5µg/L	A	7	F	9	0.087	21.3	0.0129	4.15	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	A	8	F	9	0.111	20.6	0.0138	4.03	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	B	1	M	9	0.089	23.6	-	-	12	-	-	-	
BATT01 - 00393	F1	12.5µg/L	B	2	M	9	0.108	20.5	-	-	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	B	3	M	9	0.105	20.8	0.0066	2.52	10	-	-	-	
BATT01 - 00393	F1	12.5µg/L	B	4	F	9	0.088	19.8	0.0101	2.50	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	B	5	F	9	0.112	21.2	0.0101	5.81	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	B	6	F	9	0.094	20.7	0.0046	2.85	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	B	7	F	9	0.080	19.7	0.0084	3.86	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	B	8	M	9	0.110	19.5	0.0069	2.31	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	C	1	F	9	0.091	20.4	-	-	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	C	2	M	9	0.149	24.3	-	-	44	-	-	-	
BATT01 - 00393	F1	12.5µg/L	C	3	F	9	0.050	16.7	0.0041	3.49	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	C	4	F	9	0.143	24.6	0.0102	4.59	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	C	5	F	9	0.106	21.4	0.0067	2.95	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	C	6	F	9	0.103	21.5	0.0069	4.54	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	C	7	M	9	0.082	22.1	0.0133	4.26	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	C	8	F	9	0.098	21.3	0.0088	2.97	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	D	1	F	9	0.058	17.9	-	-	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	D	2	F	9	0.088	20.5	-	-	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	D	3	F	9	0.085	19.8	0.0077	2.91	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	D	4	F	9	0.090	19.9	0.0071	3.36	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	D	5	F	9	0.058	17.0	0.0760	4.48	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	D	6	M	9	0.082	19.1	0.0059	3.08	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	D	7	F	9	0.079	18.7	0.0081	2.46	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	D	8	F	9	0.064	18.2	0.0059	3.97	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	E	1	M	9	0.131	22.1	-	-	41	-	-	-	
BATT01 - 00393	F1	12.5µg/L	E	2	M	9	0.146	24.1	-	-	43	-	-	-	
BATT01 - 00393	F1	12.5µg/L	E	3	M	9	0.136	23.0	0.0051	2.23	48	-	-	-	
BATT01 - 00393	F1	12.5µg/L	E	4	M	9	0.149	24.1	0.0146	1.81	35	-	-	-	
BATT01 - 00393	F1	12.5µg/L	E	5	F	9	0.132	23.1	0.0171	5.06	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	E	6	M	9	0.245	28.2	0.0194	3.34	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	E	7	M	9	0.226	26.4	0.0172	3.40	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	E	8	F	9	0.208	24.9	0.0273	2.06	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	F	1	M	9	0.113	22.2	-	-	25	-	-	-	
BATT01 - 00393	F1	12.5µg/L	F	2	M	9	0.157	25.2	-	-	64	-	-	-	
BATT01 - 00393	F1	12.5µg/L	F	3	M	9	0.120	27.6	0.0071	2.43	60	-	-	-	
BATT01 - 00393	F1	12.5µg/L	F	4	F	9	0.069	17.5	0.0030	3.16	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	F	5	F	9	0.071	20.4	0.0050	5.77	0	-	-	-	

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F1	12.5µg/L	F	6	F	9	0.081	18.3	0.0058	1.83	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	F	7	F	9	0.079	18.3	0.0070	4.51	0	-	-	-	
BATT01 - 00393	F1	12.5µg/L	F	8	F	9	0.105	20.5	0.0074	5.74	0	-	-	-	
BATT01 - 00393	F1	25µg/L	A	1	M	9	0.150	23.6	-	-	39	-	-	-	
BATT01 - 00393	F1	25µg/L	A	2	M	9	0.193	26.1	-	-	66	-	-	-	
BATT01 - 00393	F1	25µg/L	A	3	M	9	0.112	23.1	0.0104	2.29	39	-	-	-	
BATT01 - 00393	F1	25µg/L	A	4	M	9	0.137	23.6	0.0059	1.65	36	-	-	-	
BATT01 - 00393	F1	25µg/L	A	5	M	9	0.208	27.2	0.0077	1.45	57	-	-	-	
BATT01 - 00393	F1	25µg/L	A	6	M	9	0.141	24.1	0.0094	1.23	47	-	-	-	
BATT01 - 00393	F1	25µg/L	A	7	M	9	0.222	27.5	0.0096	2.10	79	-	-	-	
BATT01 - 00393	F1	25µg/L	A	8	F	9	0.214	25.6	0.0229	5.09	0	-	-	-	
BATT01 - 00393	F1	25µg/L	B	1	M	9	0.103	20.2	-	-	0	-	-	-	
BATT01 - 00393	F1	25µg/L	B	2	F	9	0.049	14.4	-	-	0	-	-	-	
BATT01 - 00393	F1	25µg/L	B	3	F	9	0.056	17.5	0.0066	2.88	0	-	-	-	
BATT01 - 00393	F1	25µg/L	B	4	M	9	0.061	17.8	0.0057	2.03	0	-	-	-	
BATT01 - 00393	F1	25µg/L	B	5	M	9	0.080	19.4	0.0082	2.81	0	-	-	-	
BATT01 - 00393	F1	25µg/L	B	6	M	9	0.087	21.4	0.0072	3.23	0	-	-	-	
BATT01 - 00393	F1	25µg/L	B	7	F	9	0.116	21.1	0.0067	1.90	0	-	-	-	
BATT01 - 00393	F1	25µg/L	B	8	F	9	0.147	23.3	0.0139	5.74	0	-	-	-	
BATT01 - 00393	F1	25µg/L	C	1	M	9	0.086	21.1	-	-	0	-	-	-	
BATT01 - 00393	F1	25µg/L	C	2	M	9	0.116	23.4	-	-	0	-	-	-	
BATT01 - 00393	F1	25µg/L	C	3	M	9	0.136	21.0	0.0081	1.55	35	-	-	-	
BATT01 - 00393	F1	25µg/L	C	4	F	9	0.060	20.7	0.0031	3.22	0	-	-	-	
BATT01 - 00393	F1	25µg/L	C	5	M	9	0.095	19.2	0.0119	1.86	20	-	-	-	
BATT01 - 00393	F1	25µg/L	C	6	M	9	0.080	22.6	0.0076	5.04	0	-	-	-	
BATT01 - 00393	F1	25µg/L	C	7	M	9	0.090	20.5	0.0137	5.35	0	-	-	-	
BATT01 - 00393	F1	25µg/L	C	8	M	9	0.125	23.8	0.0092	2.98	0	-	-	-	
BATT01 - 00393	F1	25µg/L	D	1	M	9	0.125	25.1	-	-	32	-	-	-	
BATT01 - 00393	F1	25µg/L	D	2	M	9	0.157	23.7	-	-	60	-	-	-	
BATT01 - 00393	F1	25µg/L	D	3	M	9	0.198	27.2	0.0203	1.63	42	-	-	-	
BATT01 - 00393	F1	25µg/L	D	4	M	9	0.188	26.7	0.0116	2.42	62	-	-	-	
BATT01 - 00393	F1	25µg/L	D	5	M	9	0.114	23.1	0.0112	1.98	0	-	-	-	
BATT01 - 00393	F1	25µg/L	D	6	M	9	0.109	21.2	0.0123	4.56	0	-	-	-	
BATT01 - 00393	F1	25µg/L	D	7	F	9	0.109	20.4	0.0072	2.87	0	-	-	-	
BATT01 - 00393	F1	25µg/L	D	8	F	9	0.185	23.8	0.0172	6.06	0	-	-	-	
BATT01 - 00393	F1	25µg/L	E	1	M	9	0.116	23.1	-	-	50	-	-	-	
BATT01 - 00393	F1	25µg/L	E	2	M	9	0.110	20.7	-	-	23	-	-	-	
BATT01 - 00393	F1	25µg/L	E	3	M	9	0.146	24.7	0.0131	1.45	53	-	-	-	
BATT01 - 00393	F1	25µg/L	E	4	M	9	0.113	20.2	0.0125	1.47	39	-	-	-	

FEL

DEST

BATT01-00393

Growth and SSC

							Interim Sampling				Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F1	25µg/L	E	5	F	9	0.052	15.2	0.0048	3.02	0	-	-	-	
BATT01 - 00393	F1	25µg/L	E	6	M	9	0.122	20.1	0.0092	2.22	0	-	-	-	
BATT01 - 00393	F1	25µg/L	E	7	M	9	0.104	19.4	0.0094	4.26	0	-	-	-	
BATT01 - 00393	F1	25µg/L	E	8	M	9	0.135	23.9	0.0203	4.32	0	-	-	-	
BATT01 - 00393	F1	25µg/L	F	1	M	9	0.116	21.9	-	-	15	-	-	-	
BATT01 - 00393	F1	25µg/L	F	2	M	9	0.147	22.2	-	-	28	-	-	-	
BATT01 - 00393	F1	25µg/L	F	3	M	9	0.164	23.7	0.0143	2.32	52	-	-	-	
BATT01 - 00393	F1	25µg/L	F	4	F	9	0.087	18.7	0.0084	2.12	0	-	-	-	
BATT01 - 00393	F1	25µg/L	F	5	F	9	0.131	21.0	0.0160	5.11	0	-	-	-	
BATT01 - 00393	F1	25µg/L	F	6	F	9	0.092	18.9	0.0126	5.88	0	-	-	-	
BATT01 - 00393	F1	25µg/L	F	7	F	9	0.076	17.9	0.0080	3.24	0	-	-	-	
BATT01 - 00393	F1	25µg/L	F	8	M	9	0.111	22.4	0.0154	4.38	0	-	-	-	
BATT01 - 00393	F1	50µg/L	A	1	M	9	0.114	21.6	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	A	2	M	9	0.154	25.7	-	-	26	-	-	-	
BATT01 - 00393	F1	50µg/L	A	3	M	9	0.184	26.5	0.0159	1.21	56	-	-	-	
BATT01 - 00393	F1	50µg/L	A	4	M	9	0.161	25.6	0.0128	1.25	41	-	-	-	
BATT01 - 00393	F1	50µg/L	A	5	F	9	0.046	18.5	0.0063	4.34	0	-	-	-	
BATT01 - 00393	F1	50µg/L	A	6	F	9	0.050	17.9	0.0035	3.24	0	-	-	-	
BATT01 - 00393	F1	50µg/L	A	7	M	9	0.109	20.6	0.0099	2.08	0	-	-	-	
BATT01 - 00393	F1	50µg/L	A	8	M	9	0.116	20.4	0.0079	3.73	0	-	-	-	
BATT01 - 00393	F1	50µg/L	B	1	F	9	0.046	16.4	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	B	2	F	9	0.045	14.9	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	B	3	F	9	0.069	18.8	0.0102	3.49	0	-	-	-	
BATT01 - 00393	F1	50µg/L	B	4	F	9	0.083	18.7	0.0150	3.38	0	-	-	-	
BATT01 - 00393	F1	50µg/L	B	5	F	9	0.065	16.7	0.0030	3.70	0	-	-	-	
BATT01 - 00393	F1	50µg/L	B	6	M	9	0.143	23.6	0.0119	2.64	0	-	-	-	
BATT01 - 00393	F1	50µg/L	B	7	F	9	0.096	20.4	0.0089	4.34	0	-	-	-	
BATT01 - 00393	F1	50µg/L	B	8	F	9	0.074	17.9	0.0099	2.13	0	-	-	-	
BATT01 - 00393	F1	50µg/L	C	1	F	9	0.068	17.2	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	C	2	F	9	0.048	15.7	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	C	3	M	9	0.623	28.3	0.0105	3.39	58	-	-	-	
BATT01 - 00393	F1	50µg/L	C	4	M	9	0.243	27.8	0.0123	2.41	55	-	-	-	
BATT01 - 00393	F1	50µg/L	C	5	F	9	0.037	15.3	0.0020	3.48	0	-	-	-	
BATT01 - 00393	F1	50µg/L	C	6	M	9	0.086	20.6	0.0102	4.72	0	-	-	-	
BATT01 - 00393	F1	50µg/L	C	7	M	9	0.093	19.8	0.0068	4.57	0	-	-	-	
BATT01 - 00393	F1	50µg/L	C	8	F	9	0.277	28.7	0.0146	5.36	0	-	-	-	
BATT01 - 00393	F1	50µg/L	D	1	M	9	0.084	19.4	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	D	2	M	9	0.081	19.8	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	D	3	F	9	0.073	17.7	0.0064	2.57	0	-	-	-	

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F1	50µg/L	D	4	F	9	0.042	15.8	0.0032	3.16	0	-	-	-	
BATT01 - 00393	F1	50µg/L	D	5	F	9	0.060	15.7	0.0063	2.97	0	-	-	-	
BATT01 - 00393	F1	50µg/L	D	6	F	9	0.084	18.7	0.0065	3.15	0	-	-	-	
BATT01 - 00393	F1	50µg/L	D	7	F	9	0.102	19.5	0.0136	4.33	0	-	-	-	
BATT01 - 00393	F1	50µg/L	D	8	F	9	0.098	19.6	0.0077	3.02	0	-	-	-	
BATT01 - 00393	F1	50µg/L	E	1	M	9	0.038	22.8	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	E	2	M	9	0.032	13.2	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	E	3	F	9	0.057	16.2	0.0061	2.25	0	-	-	-	
BATT01 - 00393	F1	50µg/L	E	4	F	9	0.078	19.1	0.0064	2.51	0	-	-	-	
BATT01 - 00393	F1	50µg/L	E	5	F	9	0.059	17.4	0.0097	2.13	0	-	-	-	
BATT01 - 00393	F1	50µg/L	E	6	F	9	0.109	20.8	0.0143	2.67	0	-	-	-	
BATT01 - 00393	F1	50µg/L	E	7	F	9	0.110	21.5	0.0162	2.78	0	-	-	-	
BATT01 - 00393	F1	50µg/L	E	8	F	9	0.105	19.7	0.0127	1.60	0	-	-	-	
BATT01 - 00393	F1	50µg/L	F	1	M	9	0.025	12.3	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	F	2	F	9	0.052	16.5	-	-	0	-	-	-	
BATT01 - 00393	F1	50µg/L	F	3	M	9	0.040	14.9	0.0049	2.40	0	-	-	-	
BATT01 - 00393	F1	50µg/L	F	4	M	9	0.090	18.7	0.0051	2.56	0	-	-	-	
BATT01 - 00393	F1	50µg/L	F	5	M	9	0.085	19.7	0.0127	2.15	0	-	-	-	
BATT01 - 00393	F1	50µg/L	F	6	M	9	0.651	17.7	0.0045	2.44	0	-	-	-	
BATT01 - 00393	F1	50µg/L	F	7	F	9	0.059	17.8	0.0045	2.97	0	-	-	-	
BATT01 - 00393	F1	50µg/L	F	8	F	9	0.051	15.2	0.0142	1.96	0	-	-	-	
BATT01 - 00393	F1	100µg/L	A	1	M	9	0.043	17.4	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	A	2	M	9	0.059	18.8	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	A	3	M	9	0.056	17.9	0.0070	1.85	0	-	-	-	
BATT01 - 00393	F1	100µg/L	A	4	M	9	0.065	18.4	0.0067	2.31	0	-	-	-	
BATT01 - 00393	F1	100µg/L	A	5	M	9	0.076	18.5	0.0087	4.06	0	-	-	-	
BATT01 - 00393	F1	100µg/L	A	6	M	9	0.035	15.6	0.0029	2.80	0	-	-	-	
BATT01 - 00393	F1	100µg/L	A	7	F	9	0.065	17.0	0.0088	2.65	0	-	-	-	
BATT01 - 00393	F1	100µg/L	A	8	F	9	0.040	15.5	0.0036	3.21	0	-	-	-	
BATT01 - 00393	F1	100µg/L	B	1	M	9	0.051	16.1	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	B	2	M	9	0.100	19.4	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	B	3	F	9	0.066	17.9	0.0065	3.72	0	-	-	-	
BATT01 - 00393	F1	100µg/L	B	4	M	9	0.051	15.2	0.0055	3.12	0	-	-	-	
BATT01 - 00393	F1	100µg/L	B	5	M	9	0.060	17.5	0.0063	3.33	0	-	-	-	
BATT01 - 00393	F1	100µg/L	B	6	F	9	0.074	17.3	0.0077	2.17	0	-	-	-	
BATT01 - 00393	F1	100µg/L	B	7	F	9	0.042	16.2	0.0048	3.32	0	-	-	-	
BATT01 - 00393	F1	100µg/L	B	8	M	9	0.071	19.6	0.0037	3.05	0	-	-	-	
BATT01 - 00393	F1	100µg/L	C	1	M	9	0.046	16.6	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	C	2	M	9	0.048	16.5	-	-	0	-	-	-	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F1	100µg/L	C	3	M	9	0.052	15.6	0.0061	2.64	0	-	-	-	
BATT01 - 00393	F1	100µg/L	C	4	M	9	0.074	18.0	0.0068	2.55	0	-	-	-	
BATT01 - 00393	F1	100µg/L	C	5	M	9	0.073	18.9	0.0047	2.99	0	-	-	-	
BATT01 - 00393	F1	100µg/L	C	6	F	9	0.038	16.3	0.0032	2.69	0	-	-	-	
BATT01 - 00393	F1	100µg/L	C	7	F	9	0.082	19.2	0.0073	4.76	0	-	-	-	
BATT01 - 00393	F1	100µg/L	C	8	M	9	0.231	28.4	0.0264	5.27	0	-	-	-	
BATT01 - 00393	F1	100µg/L	D	1	M	9	0.051	17.3	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	D	2	M	9	0.045	16.5	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	D	3	M	9	0.060	17.5	0.0069	2.53	0	-	-	-	
BATT01 - 00393	F1	100µg/L	D	4	F	9	0.062	17.2	0.0027	3.80	0	-	-	-	
BATT01 - 00393	F1	100µg/L	D	5	M	9	0.053	16.2	0.0042	2.18	0	-	-	-	
BATT01 - 00393	F1	100µg/L	D	6	M	9	0.055	18.0	0.0056	3.06	0	-	-	-	
BATT01 - 00393	F1	100µg/L	D	7	M	9	0.069	17.5	0.0049	2.40	0	-	-	-	
BATT01 - 00393	F1	100µg/L	D	8	F	9	0.049	16.7	0.0050	2.38	0	-	-	-	
BATT01 - 00393	F1	100µg/L	E	1	F	9	0.040	15.4	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	E	2	M	9	0.047	15.8	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	E	3	M	9	0.073	17.4	0.0044	2.51	0	-	-	-	
BATT01 - 00393	F1	100µg/L	E	4	M	9	0.142	22.2	0.0124	5.42	0	-	-	-	
BATT01 - 00393	F1	100µg/L	E	5	F	9	0.042	14.4	0.0028	4.83	0	-	-	-	
BATT01 - 00393	F1	100µg/L	E	6	F	9	0.048	14.2	0.0041	2.30	0	-	-	-	
BATT01 - 00393	F1	100µg/L	E	7	F	9	0.054	15.2	0.0054	2.18	0	-	-	-	
BATT01 - 00393	F1	100µg/L	E	8	F	9	0.058	17.4	0.0060	2.95	0	-	-	-	
BATT01 - 00393	F1	100µg/L	F	1	M	9	0.044	14.6	-	-	0	-	-	-	
BATT01 - 00393	F1	100µg/L	F	2	M	9	0.208	26.6	-	-	63	-	-	-	
BATT01 - 00393	F1	100µg/L	F	3	M	9	0.182	25.7	0.0100	2.44	62	-	-	-	
BATT01 - 00393	F1	100µg/L	F	4	F	9	0.039	15.1	0.0033	2.73	0	-	-	-	
BATT01 - 00393	F1	100µg/L	F	5	F	9	0.043	14.5	0.0019	2.52	0	-	-	-	
BATT01 - 00393	F1	100µg/L	F	6	F	9	0.049	16.7	0.0044	2.14	0	-	-	-	
BATT01 - 00393	F1	100µg/L	F	7	F	9	0.049	17.0	0.0031	3.33	0	-	-	-	
BATT01 - 00393	F1	100µg/L	F	8	M	9	0.255	30.1	0.0213	5.56	0	-	-	-	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	1	F	15	-	-	-	-	-	0.292	25.4	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	A	2	M	15	-	-	-	-	-	0.278	26.8	88	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	1	F	15	-	-	-	-	-	0.442	26.7	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	B	2	M	15	-	-	-	-	-	0.283	25.0	74	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	1	M	15	-	-	-	-	-	0.298	25.6	70	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	C	2	F	15	-	-	-	-	-	0.406	29.8	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	1	M	15	-	-	-	-	-	0.226	22.9	63	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	D	2	F	15	-	-	-	-	-	0.409	28.5	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	1	M	15	-	-	-	-	-	0.382	28.2	77	

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	E	2	F	15	-	-	-	-	-	0.419	28.8	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	1	F	15	-	-	-	-	-	0.378	27.7	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	F	2	M	15	-	-	-	-	-	0.223	25.5	82	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	1	M	15	-	-	-	-	-	0.259	25.7	40	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	G	2	F	15	-	-	-	-	-	0.293	26.1	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	1	F	15	-	-	-	-	-	0.310	26.0	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	H	2	M	15	-	-	-	-	-	0.288	26.8	74	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	1	M	15	-	-	-	-	-	0.316	28.1	63	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	I	2	F	15	-	-	-	-	-	0.433	30.3	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	1	F	15	-	-	-	-	-	0.310	27.1	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	J	2	M	15	-	-	-	-	-	0.301	28.0	71	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	1	F	15	-	-	-	-	-	0.408	29.7	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	K	2	M	15	-	-	-	-	-	0.319	28.0	73	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	1	F	15	-	-	-	-	-	0.371	28.0	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	L	2	M	15	-	-	-	-	-	0.404	30.6	66	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	M	1	M	15	-	-	-	-	-	0.364	28.6	48	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	M	2	F	15	-	-	-	-	-	0.339	28.4	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	N	1	M	15	-	-	-	-	-	0.302	27.7	89	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	N	2	F	15	-	-	-	-	-	0.418	28.5	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	O	1	M	15	-	-	-	-	-	0.334	29.3	56	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	O	2	F	15	-	-	-	-	-	0.310	25.6	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	P	1	F	15	-	-	-	-	-	0.360	27.1	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	P	2	M	15	-	-	-	-	-	0.330	27.9	58	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	Q	1	F	15	-	-	-	-	-	0.353	27.6	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	Q	2	M	15	-	-	-	-	-	0.232	26.4	59	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	R	1	F	15	-	-	-	-	-	0.367	27.5	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	R	2	M	15	-	-	-	-	-	0.270	25.6	51	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	S	1	F	15	-	-	-	-	-	0.405	29.7	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	S	2	M	15	-	-	-	-	-	0.313	27.5	52	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	T	1	F	15	-	-	-	-	-	0.213	23.1	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	T	2	M	15	-	-	-	-	-	0.285	26.4	59	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	U	1	M	15	-	-	-	-	-	0.302	27.0	70	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	U	2	F	15	-	-	-	-	-	0.405	29.2	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	V	1	M	15	-	-	-	-	-	0.347	28.5	73	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	V	2	F	15	-	-	-	-	-	0.451	29.4	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	W	1	F	15	-	-	-	-	-	0.380	28.6	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	W	2	M	15	-	-	-	-	-	0.277	26.2	72	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	X	1	F	15	-	-	-	-	-	0.338	27.9	0	
BATT01 - 00393	F1	(Ctrl) 0.0µg/L	X	2	M	15	-	-	-	-	-	0.293	27.4	46	

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F1	6.3µg/L	A	1	F	15	-	-	-	-	-	0.432	29.3	0	
BATT01 - 00393	F1	6.3µg/L	A	2	M	15	-	-	-	-	-	0.242	27.1	98	
BATT01 - 00393	F1	6.3µg/L	B	1	F	15	-	-	-	-	-	0.411	29.2	0	
BATT01 - 00393	F1	6.3µg/L	B	2	M	15	-	-	-	-	-	0.394	29.3	66	
BATT01 - 00393	F1	6.3µg/L	C	1	F	15	-	-	-	-	-	0.430	28.8	0	
BATT01 - 00393	F1	6.3µg/L	C	2	M	15	-	-	-	-	-	0.284	27.3	57	
BATT01 - 00393	F1	6.3µg/L	D	1	F	15	-	-	-	-	-	0.493	31.3	0	
BATT01 - 00393	F1	6.3µg/L	D	2	M	15	-	-	-	-	-	0.298	26.6	72	
BATT01 - 00393	F1	6.3µg/L	E	1	F	15	-	-	-	-	-	0.439	28.9	0	
BATT01 - 00393	F1	6.3µg/L	E	2	M	15	-	-	-	-	-	0.402	31.2	87	
BATT01 - 00393	F1	6.3µg/L	F	1	F	15	-	-	-	-	-	0.370	29.3	0	
BATT01 - 00393	F1	6.3µg/L	F	2	M	15	-	-	-	-	-	0.282	27.7	60	
BATT01 - 00393	F1	6.3µg/L	G	1	M	15	-	-	-	-	-	0.333	26.2	0	
BATT01 - 00393	F1	6.3µg/L	G	2	M	15	-	-	-	-	-	0.246	24.4	37	
BATT01 - 00393	F1	6.3µg/L	H	1	F	15	-	-	-	-	-	0.370	26.3	0	
BATT01 - 00393	F1	6.3µg/L	H	2	M	15	-	-	-	-	-	0.258	23.9	50	
BATT01 - 00393	F1	6.3µg/L	I	1	M	15	-	-	-	-	-	0.320	28.5	67	
BATT01 - 00393	F1	6.3µg/L	I	2	F	15	-	-	-	-	-	0.236	22.2	0	
BATT01 - 00393	F1	6.3µg/L	J	1	M	15	-	-	-	-	-	0.251	26.1	73	
BATT01 - 00393	F1	6.3µg/L	J	2	F	15	-	-	-	-	-	0.294	25.2	0	
BATT01 - 00393	F1	6.3µg/L	K	1	F	15	-	-	-	-	-	0.362	27.1	0	
BATT01 - 00393	F1	6.3µg/L	K	2	M	15	-	-	-	-	-	0.259	25.5	76	
BATT01 - 00393	F1	6.3µg/L	L	1	F	15	-	-	-	-	-	0.356	27.0	0	
BATT01 - 00393	F1	6.3µg/L	L	2	M	15	-	-	-	-	-	0.373	30.1	53	
BATT01 - 00393	F1	12.5µg/L	A	1	F	15	-	-	-	-	-	0.335	26.4	0	
BATT01 - 00393	F1	12.5µg/L	A	2	M	15	-	-	-	-	-	0.224	24.9	67	
BATT01 - 00393	F1	12.5µg/L	B	1	F	15	-	-	-	-	-	0.328	25.6	0	
BATT01 - 00393	F1	12.5µg/L	B	2	M	15	-	-	-	-	-	0.337	27.3	61	
BATT01 - 00393	F1	12.5µg/L	C	1	F	15	-	-	-	-	-	0.351	26.1	0	
BATT01 - 00393	F1	12.5µg/L	C	2	M	15	-	-	-	-	-	0.336	26.0	61	
BATT01 - 00393	F1	12.5µg/L	D	1	M	15	-	-	-	-	-	0.267	24.8	59	
BATT01 - 00393	F1	12.5µg/L	D	2	F	15	-	-	-	-	-	0.250	25.9	0	
BATT01 - 00393	F1	12.5µg/L	E	1	M	15	-	-	-	-	-	0.317	27.7	50	
BATT01 - 00393	F1	12.5µg/L	E	2	F	15	-	-	-	-	-	0.411	30.4	0	
BATT01 - 00393	F1	12.5µg/L	F	1	M	15	-	-	-	-	-	0.282	26.3	51	
BATT01 - 00393	F1	12.5µg/L	F	2	F	15	-	-	-	-	-	0.408	28.4	0	
BATT01 - 00393	F1	12.5µg/L	G	1	M	15	-	-	-	-	-	0.267	25.1	68	
BATT01 - 00393	F1	12.5µg/L	G	2	F	15	-	-	-	-	-	0.380	27.2	0	
BATT01 - 00393	F1	12.5µg/L	H	1	M	15	-	-	-	-	-	0.439	31.4	57	

DEST

BATT01-00393

Growth and SSC

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F1	12.5µg/L	H	2	F	15	-	-	-	-	-	0.322	25.5	0	
BATT01 - 00393	F1	12.5µg/L	I	1	F	15	-	-	-	-	-	0.456	30.4	0	
BATT01 - 00393	F1	12.5µg/L	I	2	M	15	-	-	-	-	-	0.248	25.1	81	
BATT01 - 00393	F1	12.5µg/L	J	1	F	15	-	-	-	-	-	0.431	29.4	0	
BATT01 - 00393	F1	12.5µg/L	J	2	M	15	-	-	-	-	-	0.305	28.5	64	
BATT01 - 00393	F1	12.5µg/L	K	1	M	15	-	-	-	-	-	0.350	30.0	61	
BATT01 - 00393	F1	12.5µg/L	K	2	F	15	-	-	-	-	-	0.446	29.4	0	
BATT01 - 00393	F1	12.5µg/L	L	1	M	15	-	-	-	-	-	0.376	29.1	63	
BATT01 - 00393	F1	12.5µg/L	L	2	F	15	-	-	-	-	-	0.251	23.0	0	
BATT01 - 00393	F1	25µg/L	A	1	F	15	-	-	-	-	-	0.367	27.7	0	
BATT01 - 00393	F1	25µg/L	A	2	M	15	-	-	-	-	-	0.267	26.5	74	
BATT01 - 00393	F1	25µg/L	B	1	M	15	-	-	-	-	-	0.269	27.6	54	
BATT01 - 00393	F1	25µg/L	B	2	F	15	-	-	-	-	-	0.413	27.6	0	
BATT01 - 00393	F1	25µg/L	C	1	F	15	-	-	-	-	-	0.541	31.9	0	
BATT01 - 00393	F1	25µg/L	C	2	M	15	-	-	-	-	-	0.299	27.8	67	
BATT01 - 00393	F1	25µg/L	D	1	F	15	-	-	-	-	-	0.401	29.7	0	
BATT01 - 00393	F1	25µg/L	D	2	M	15	-	-	-	-	-	0.246	26.5	54	
BATT01 - 00393	F1	25µg/L	E	1	F	15	-	-	-	-	-	0.313	27.1	0	
BATT01 - 00393	F1	25µg/L	E	2	M	15	-	-	-	-	-	0.309	27.9	29	
BATT01 - 00393	F1	25µg/L	F	1	F	15	-	-	-	-	-	0.334	28.0	0	
BATT01 - 00393	F1	25µg/L	F	2	M	15	-	-	-	-	-	0.251	26.0	56	
BATT01 - 00393	F1	25µg/L	G	1	F	15	-	-	-	-	-	0.387	29.8	0	
BATT01 - 00393	F1	25µg/L	G	2	M	15	-	-	-	-	-	0.296	27.7	71	
BATT01 - 00393	F1	25µg/L	H	1	F	15	-	-	-	-	-	0.352	27.4	0	
BATT01 - 00393	F1	25µg/L	H	2	M	15	-	-	-	-	-	0.387	29.5	76	
BATT01 - 00393	F1	25µg/L	I	1	F	15	-	-	-	-	-	0.406	29.3	0	
BATT01 - 00393	F1	25µg/L	I	2	M	15	-	-	-	-	-	0.291	27.9	72	
BATT01 - 00393	F1	25µg/L	J	1	F	15	-	-	-	-	-	0.276	27.2	0	
BATT01 - 00393	F1	25µg/L	J	2	M	15	-	-	-	-	-	0.270	26.1	60	
BATT01 - 00393	F1	25µg/L	K	1	M	15	-	-	-	-	-	0.377	26.5	82	
BATT01 - 00393	F1	25µg/L	K	2	F	15	-	-	-	-	-	0.347	27.2	0	
BATT01 - 00393	F1	25µg/L	L	1	M	15	-	-	-	-	-	0.309	27.4	43	
BATT01 - 00393	F1	25µg/L	L	2	F	15	-	-	-	-	-	0.308	24.8	0	
BATT01 - 00393	F1	50µg/L	A	1	M	15	-	-	-	-	-	0.346	28.3	53	
BATT01 - 00393	F1	50µg/L	A	2	F	15	-	-	-	-	-	0.460	30.4	0	
BATT01 - 00393	F1	50µg/L	B	1	F	15	-	-	-	-	-	0.338	27.6	0	
BATT01 - 00393	F1	50µg/L	B	2	M	15	-	-	-	-	-	0.285	27.6	55	
BATT01 - 00393	F1	50µg/L	C	1	M	15	-	-	-	-	-	0.271	27.2	49	
BATT01 - 00393	F1	50µg/L	C	2	F	15	-	-	-	-	-	0.328	27.2	0	

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F1	50µg/L	D	1	M	15	-	-	-	-	-	0.188	22.4	50	
BATT01 - 00393	F1	50µg/L	D	2	F	15	-	-	-	-	-	0.469	29.9	0	
BATT01 - 00393	F1	50µg/L	E	1	M	15	-	-	-	-	-	0.348	30.4	73	
BATT01 - 00393	F1	50µg/L	E	2	F	15	-	-	-	-	-	0.462	29.4	0	
BATT01 - 00393	F1	50µg/L	F	1	F	15	-	-	-	-	-	0.338	24.6	0	
BATT01 - 00393	F1	50µg/L	F	2	M	15	-	-	-	-	-	0.324	27.1	63	
BATT01 - 00393	F1	50µg/L	G	1	M	15	-	-	-	-	-	0.261	26.0	81	
BATT01 - 00393	F1	50µg/L	G	2	F	15	-	-	-	-	-	0.550	30.5	0	
BATT01 - 00393	F1	50µg/L	H	1	F	15	-	-	-	-	-	0.259	23.3	0	
BATT01 - 00393	F1	50µg/L	H	2	M	15	-	-	-	-	-	0.220	22.6	67	
BATT01 - 00393	F1	50µg/L	I	1	M	15	-	-	-	-	-	0.191	23.9	76	
BATT01 - 00393	F1	50µg/L	I	2	F	15	-	-	-	-	-	0.250	23.6	0	
BATT01 - 00393	F1	50µg/L	J	1	F	15	-	-	-	-	-	0.306	25.0	0	
BATT01 - 00393	F1	50µg/L	J	2	M	15	-	-	-	-	-	0.177	22.8	54	
BATT01 - 00393	F1	50µg/L	K	1	F	15	-	-	-	-	-	0.274	24.7	0	
BATT01 - 00393	F1	50µg/L	K	2	M	15	-	-	-	-	-	0.217	21.6	49	
BATT01 - 00393	F1	50µg/L	L	1	F	15	-	-	-	-	-	0.376	25.5	0	
BATT01 - 00393	F1	50µg/L	L	2	M	15	-	-	-	-	-	0.195	21.8	39	
BATT01 - 00393	F1	100µg/L	A	1	M	15	-	-	-	-	-	0.181	24.8	46	
BATT01 - 00393	F1	100µg/L	A	2	F	15	-	-	-	-	-	0.281	28.2	0	
BATT01 - 00393	F1	100µg/L	B	1	F	15	-	-	-	-	-	0.382	29.3	0	
BATT01 - 00393	F1	100µg/L	B	2	M	15	-	-	-	-	-	0.265	25.4	72	
BATT01 - 00393	F1	100µg/L	C	1	F	15	-	-	-	-	-	0.313	31.2	0	
BATT01 - 00393	F1	100µg/L	C	2	M	15	-	-	-	-	-	0.218	25.3	50	
BATT01 - 00393	F1	100µg/L	D	1	M	15	-	-	-	-	-	0.257	28.4	76	
BATT01 - 00393	F1	100µg/L	D	2	F	15	-	-	-	-	-	0.268	26.0	0	
BATT01 - 00393	F1	100µg/L	E	1	M	15	-	-	-	-	-	0.380	28.9	56	
BATT01 - 00393	F1	100µg/L	E	2	F	15	-	-	-	-	-	0.329	29.7	0	
BATT01 - 00393	F1	100µg/L	F	1	M	15	-	-	-	-	-	0.236	27.2	54	
BATT01 - 00393	F1	100µg/L	F	2	F	15	-	-	-	-	-	0.364	32.3	0	
BATT01 - 00393	F1	100µg/L	G	1	F	15	-	-	-	-	-	0.427	30.9	0	
BATT01 - 00393	F1	100µg/L	G	2	M	15	-	-	-	-	-	0.264	28.3	73	
BATT01 - 00393	F1	100µg/L	H	1	F	15	-	-	-	-	-	0.287	27.5	0	
BATT01 - 00393	F1	100µg/L	H	2	M	15	-	-	-	-	-	0.334	30.6	67	
BATT01 - 00393	F1	100µg/L	I	1	M	15	-	-	-	-	-	0.263	32.7	83	
BATT01 - 00393	F1	100µg/L	I	2	F	15	-	-	-	-	-	0.305	25.9	0	
BATT01 - 00393	F1	100µg/L	J	1	M	15	-	-	-	-	-	0.160	29.7	65	
BATT01 - 00393	F1	100µg/L	J	2	F	15	-	-	-	-	-	0.273	25.9	0	
BATT01 - 00393	F1	100µg/L	K	1	M	15	-	-	-	-	-	0.396	30.6	60	

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F1	100µg/L	K	2	F	15	-	-	-	-	-	0.317	25.7	0	
BATT01 - 00393	F1	100µg/L	L	1	F	15	-	-	-	-	-	0.354	30.6	0	
BATT01 - 00393	F1	100µg/L	L	2	M	15	-	-	-	-	-	0.331	31.2	81	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	1	F	9	0.092	15.2	0.0029	3.09	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	2	M	9	0.079	15.1	0.0018	3.51	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	3	F	9	0.126	16.4	0.0038	5.27	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	4	F	9	0.084	16.3	0.0027	3.33	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	5	F	9	0.085	15.3	0.0025	5.79	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	6	F	9	0.162	15.4	0.0046	2.61	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	7	M	9	0.124	17.3	0.0037	3.20	6	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	8	F	9	0.070	14.7	0.0025	2.51	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	1	M	9	0.110	15.6	0.0034	1.99	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	2	F	9	0.098	13.8	0.0027	2.12	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	3	F	9	0.107	15.4	0.0031	2.73	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	4	F	9	0.086	14.3	0.0026	2.22	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	5	F	9	0.089	15.3	0.0024	1.87	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	6	F	9	0.077	15.0	0.0028	2.86	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	7	M	9	0.115	14.9	0.0031	2.09	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	8	M	9	0.113	16.7	0.0025	4.30	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	1	M	9	0.109	16.9	0.0030	4.16	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	2	M	9	0.077	13.9	0.0029	2.43	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	3	F	9	0.080	15.4	0.0031	2.41	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	4	F	9	0.092	16.0	0.0035	2.08	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	5	M	9	0.078	15.3	0.0078	2.46	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	6	F	9	0.075	16.1	0.0043	1.82	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	7	F	9	0.086	15.4	0.0032	4.03	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	8	F	9	0.083	13.9	0.0094	2.93	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	1	M	9	0.078	15.8	0.0029	2.99	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	2	M	9	0.067	16.4	0.0028	3.35	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	3	M	9	0.078	13.8	0.0035	2.99	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	4	M	9	0.066	13.8	0.0021	1.95	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	5	F	9	0.038	17.9	0.0016	3.02	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	6	F	9	0.057	13.6	0.0018	1.96	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	7	F	9	0.078	12.7	0.0065	2.72	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	8	F	9	0.041	13.2	0.0024	2.27	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	1	M	9	0.099	17.2	0.0060	1.81	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	2	F	9	0.089	13.8	0.0033	4.19	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	3	F	9	0.083	16.2	0.0033	3.84	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	4	M	9	0.075	16.1	0.0038	4.33	0	-	-	-	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	5	M	9	0.104	17.7	0.0063	2.12	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	6	F	9	0.090	16.2	0.0046	3.04	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	7	F	9	0.070	16.6	0.0031	3.40	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	8	M	9	0.062	14.5	0.0023	2.91	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	1	M	9	0.155	18.8	0.0044	3.61	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	2	M	9	0.094	17.9	0.0035	2.12	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	3	F	9	0.051	15.6	0.0056	2.00	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	4	M	9	0.085	16.9	0.0022	4.90	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	5	M	9	0.051	14.5	0.0013	3.68	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	6	F	9	0.042	12.9	0.0013	3.19	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	7	F	9	0.058	15.2	0.0021	1.94	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	8	F	9	0.051	14.6	0.0015	2.48	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	1	M	9	0.079	16.4	0.0019	1.98	8	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	2	F	9	0.061	14.9	0.0027	2.92	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	3	M	9	0.053	14.5	0.0018	2.64	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	4	M	9	0.067	15.8	0.0038	2.54	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	5	M	9	0.060	14.3	0.0019	3.92	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	6	F	9	0.052	13.2	0.0029	3.44	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	7	F	9	0.061	15.2	0.0019	3.71	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	8	M	9	0.081	18.8	0.0021	4.20	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	1	F	9	0.061	14.8	0.0056	1.34	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	2	M	9	0.044	12.2	0.0017	2.09	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	3	M	9	0.084	16.2	0.0059	1.87	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	4	F	9	0.083	16.0	0.0016	2.43	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	5	F	9	0.059	13.9	0.0038	1.88	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	6	M	9	0.070	15.3	0.0030	3.62	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	7	M	9	0.048	16.1	0.0019	2.26	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	8	F	9	0.056	14.0	0.0023	1.45	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	1	M	9	0.095	16.5	0.0042	2.53	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	2	M	9	0.093	16.6	0.0027	5.12	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	3	M	9	0.077	16.7	0.0024	4.25	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	4	M	9	0.107	18.6	0.0057	5.07	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	5	F	9	0.086	15.5	0.0024	4.16	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	6	F	9	0.068	16.5	0.0024	3.10	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	7	F	9	0.050	12.8	0.0021	2.04	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	8	F	9	0.054	14.4	0.0022	3.06	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	1	F	9	0.081	16.0	0.0025	1.94	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	2	F	9	0.116	15.8	0.0053	2.94	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	3	M	9	0.121	17.8	0.0034	2.14	0	-	-	-	

FEL

DEST

BATT01-00393

Growth and SSC

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	4	F	9	0.090	16.7	0.0037	4.62	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	5	F	9	0.096	16.7	0.0030	4.98	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	6	F	9	0.074	15.2	0.0035	2.33	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	7	F	9	0.103	15.5	0.0046	4.78	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	8	F	9	0.052	14.0	0.0027	3.38	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	1	M	9	0.145	19.9	0.0038	6.12	11	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	2	M	9	0.091	16.5	0.0034	3.80	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	3	F	9	0.113	19.0	0.0052	2.70	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	4	F	9	0.073	17.2	0.0025	2.98	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	5	F	9	0.067	15.6	0.0033	3.10	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	6	F	9	0.067	14.5	0.0034	2.45	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	7	F	9	0.086	15.2	0.0023	2.43	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	8	M	9	0.066	15.9	0.0037	2.66	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	1	M	9	0.145	19.2	0.0056	2.20	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	2	M	9	0.125	20.6	0.0053	3.33	28	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	3	F	9	0.115	18.9	0.0049	2.95	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	4	F	9	0.099	18.1	0.0037	2.77	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	5	F	9	0.093	17.4	0.0034	3.41	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	6	M	9	0.095	19.0	0.0032	2.75	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	7	F	9	0.065	15.2	0.0024	3.39	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	8	F	9	0.090	17.9	0.0029	2.82	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	A	1	F	9	0.093	16.8	0.0033	2.81	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	A	2	M	9	0.102	18.0	0.0039	5.49	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	A	3	F	9	0.102	16.9	0.0038	2.30	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	A	4	F	9	0.077	16.3	0.0036	1.62	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	A	5	F	9	0.064	17.3	0.0053	2.79	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	A	6	F	9	0.057	14.2	0.0030	1.68	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	A	7	F	9	0.083	17.3	0.0042	2.28	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	A	8	F	9	0.101	17.7	0.0045	2.29	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	B	1	M	9	0.087	15.4	0.0032	3.11	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	B	2	M	9	0.107	16.7	0.0070	1.65	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	B	3	M	9	0.086	15.5	0.0030	2.69	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	B	4	M	9	0.052	14.8	0.0030	3.00	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	B	5	F	9	0.075	13.6	0.0042	2.44	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	B	6	F	9	0.074	14.1	0.0041	2.69	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	B	7	M	9	0.107	17.5	0.0053	2.84	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	B	8	F	9	0.078	17.3	0.0044	1.33	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	C	1	M	9	0.094	15.8	0.0057	2.91	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	C	2	M	9	0.102	17.2	0.0063	2.19	12	-	-	-	

DEST

BATT01-00393

Growth and SSC

								Interim Sampling				Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F2	6.3µg/L	C	3	M	9	0.073	15.5	0.0037	2.54	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	C	4	M	9	0.099	15.4	0.0049	2.24	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	C	5	F	9	0.074	15.3	0.0051	4.20	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	C	6	F	9	0.075	14.7	0.0036	2.32	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	C	7	F	9	0.074	15.2	0.0047	4.25	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	C	8	F	9	0.064	14.3	0.0038	3.34	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	D	1	M	9	0.114	17.1	0.0061	2.99	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	D	2	F	9	0.080	16.7	0.0040	5.37	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	D	3	M	9	0.081	16.4	0.0043	6.02	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	D	4	M	9	0.057	15.0	0.0037	3.67	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	D	5	F	9	0.061	14.2	0.0035	2.23	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	D	6	F	9	0.083	16.9	0.0051	2.72	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	D	7	F	9	0.061	12.6	0.0034	2.76	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	D	8	F	9	0.047	11.7	0.0031	2.76	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	E	1	M	9	0.098	17.2	0.0061	4.55	5	-	-	-	
BATT01 - 00393	F2	6.3µg/L	E	2	M	9	0.136	14.7	0.0073	5.26	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	E	3	F	9	0.091	16.2	0.0025	2.60	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	E	4	F	9	0.101	16.5	0.0123	5.25	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	E	5	F	9	0.095	16.0	0.0100	2.42	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	E	6	F	9	0.096	16.1	0.0100	4.72	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	E	7	M	9	0.091	16.2	0.0043	2.51	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	E	8	M	9	0.083	15.5	0.0039	2.70	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	F	1	M	9	0.109	17.7	0.0024	3.26	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	F	2	F	9	0.112	17.1	0.0074	3.76	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	F	3	F	9	0.104	17.9	0.0040	5.26	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	F	4	F	9	0.070	13.5	0.0021	4.35	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	F	5	M	9	0.108	17.1	0.0042	3.06	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	F	6	F	9	0.088	15.9	0.0047	1.66	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	F	7	F	9	0.101	16.5	0.0046	4.37	0	-	-	-	
BATT01 - 00393	F2	6.3µg/L	F	8	F	9	0.092	15.2	0.0038	2.74	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	A	1	F	9	0.132	17.6	0.0022	3.23	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	A	2	F	9	0.132	16.1	0.0058	2.43	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	A	3	M	9	0.158	17.8	0.0125	2.92	23	-	-	-	
BATT01 - 00393	F2	12.5µg/L	A	4	F	9	0.132	17.4	0.0043	4.67	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	A	5	F	9	0.092	15.4	0.0045	3.05	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	A	6	F	9	0.127	17.1	0.0050	5.86	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	A	7	F	9	0.090	14.3	0.0071	3.21	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	A	8	F	9	0.092	14.0	0.0037	2.67	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	B	1	M	9	0.135	18.5	0.0064	4.16	0	-	-	-	

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F2	12.5µg/L	B	2	F	9	0.069	15.1	0.0040	2.25	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	B	3	F	9	0.153	18.2	0.0050	3.90	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	B	4	F	9	0.088	16.9	0.0049	4.46	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	B	5	F	9	0.089	15.0	0.0055	4.97	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	B	6	F	9	0.112	16.7	0.0072	4.15	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	B	7	F	9	0.109	16.4	0.0077	4.31	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	B	8	F	9	0.157	19.5	0.0071	5.58	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	C	1	M	9	0.101	17.7	0.0045	3.06	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	C	2	F	9	0.099	18.2	0.0051	1.72	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	C	3	M	9	0.079	15.7	0.0053	2.05	6	-	-	-	
BATT01 - 00393	F2	12.5µg/L	C	4	F	9	0.091	15.7	0.0039	1.94	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	C	5	F	9	0.092	15.5	0.0046	5.09	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	C	6	F	9	0.146	19.8	0.0064	5.44	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	C	7	F	9	0.105	16.1	0.0048	3.18	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	C	8	F	9	0.101	16.9	0.0037	4.54	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	D	1	M	9	0.137	19.0	0.0037	2.58	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	D	2	F	9	0.100	16.3	0.0059	2.64	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	D	3	F	9	0.089	15.4	0.0046	1.72	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	D	4	M	9	0.117	17.5	0.0069	2.85	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	D	5	M	9	0.094	16.1	0.0042	2.84	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	D	6	F	9	0.093	14.4	0.0046	2.45	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	D	7	M	9	0.111	16.1	0.0068	5.35	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	D	8	F	9	0.092	16.5	0.0045	2.61	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	E	1	M	9	0.117	18.2	0.0018	3.37	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	E	2	M	9	0.121	18.6	0.0046	2.45	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	E	3	F	9	0.069	14.6	0.0050	2.04	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	E	4	M	9	0.102	16.5	0.0070	4.16	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	E	5	M	9	0.093	15.9	0.0093	3.15	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	E	6	F	9	0.099	15.9	0.0047	5.28	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	E	7	F	9	0.089	15.9	0.0078	3.44	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	E	8	F	9	0.077	15.5	0.0096	2.79	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	F	1	M	9	0.108	17.3	0.0095	2.69	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	F	2	M	9	0.149	19.5	0.0053	2.51	14	-	-	-	
BATT01 - 00393	F2	12.5µg/L	F	3	F	9	0.106	15.7	0.0070	2.38	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	F	4	F	9	0.102	16.8	0.0043	5.02	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	F	5	F	9	0.109	17.1	0.0107	4.41	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	F	6	F	9	0.114	16.5	0.0065	5.03	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	F	7	F	9	0.086	16.3	0.0072	3.57	0	-	-	-	
BATT01 - 00393	F2	12.5µg/L	F	8	F	9	0.084	15.0	0.0098	4.98	0	-	-	-	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F2	25µg/L	A	1	M	9	0.079	14.8	0.0050	1.92	0	-	-	-	
BATT01 - 00393	F2	25µg/L	A	2	M	9	0.088	14.4	0.0051	2.13	0	-	-	-	
BATT01 - 00393	F2	25µg/L	A	3	F	9	0.081	16.4	0.0070	2.65	0	-	-	-	
BATT01 - 00393	F2	25µg/L	A	4	F	9	0.094	16.4	0.0040	2.66	0	-	-	-	
BATT01 - 00393	F2	25µg/L	A	5	F	9	0.096	15.1	0.0048	2.66	0	-	-	-	
BATT01 - 00393	F2	25µg/L	A	6	F	9	0.071	13.9	0.0051	2.34	0	-	-	-	
BATT01 - 00393	F2	25µg/L	A	7	F	9	0.072	13.9	0.0035	2.50	0	-	-	-	
BATT01 - 00393	F2	25µg/L	A	8	F	9	0.077	15.0	0.0046	1.88	0	-	-	-	
BATT01 - 00393	F2	25µg/L	B	1	F	9	0.088	15.0	0.0040	2.89	0	-	-	-	
BATT01 - 00393	F2	25µg/L	B	2	F	9	0.121	17.6	0.0029	2.13	0	-	-	-	
BATT01 - 00393	F2	25µg/L	B	3	F	9	0.077	16.1	0.0033	4.41	0	-	-	-	
BATT01 - 00393	F2	25µg/L	B	4	F	9	0.078	14.5	0.0029	3.09	0	-	-	-	
BATT01 - 00393	F2	25µg/L	B	5	F	9	0.098	15.3	0.0030	2.31	0	-	-	-	
BATT01 - 00393	F2	25µg/L	B	6	F	9	0.110	17.1	0.0029	2.85	0	-	-	-	
BATT01 - 00393	F2	25µg/L	B	7	F	9	0.092	15.6	0.0042	1.82	0	-	-	-	
BATT01 - 00393	F2	25µg/L	B	8	F	9	0.089	15.0	0.0083	2.47	0	-	-	-	
BATT01 - 00393	F2	25µg/L	C	1	M	9	0.101	15.8	0.0090	2.13	0	-	-	-	
BATT01 - 00393	F2	25µg/L	C	2	F	9	0.088	15.0	0.0057	1.39	0	-	-	-	
BATT01 - 00393	F2	25µg/L	C	3	F	9	0.098	14.8	0.0040	2.43	0	-	-	-	
BATT01 - 00393	F2	25µg/L	C	4	M	9	0.104	15.8	0.0031	3.34	0	-	-	-	
BATT01 - 00393	F2	25µg/L	C	5	F	9	0.117	16.3	0.0069	1.08	0	-	-	-	
BATT01 - 00393	F2	25µg/L	C	6	F	9	0.106	15.8	0.0052	1.35	0	-	-	-	
BATT01 - 00393	F2	25µg/L	C	7	F	9	0.067	15.8	0.0075	4.32	0	-	-	-	
BATT01 - 00393	F2	25µg/L	C	8	F	9	0.067	12.6	0.0055	2.37	0	-	-	-	
BATT01 - 00393	F2	25µg/L	D	1	F	9	0.107	18.1	0.0075	2.13	0	-	-	-	
BATT01 - 00393	F2	25µg/L	D	2	M	9	0.096	15.9	0.0070	2.06	0	-	-	-	
BATT01 - 00393	F2	25µg/L	D	3	F	9	0.067	14.0	0.0052	2.16	0	-	-	-	
BATT01 - 00393	F2	25µg/L	D	4	F	9	0.065	12.4	0.0037	1.58	0	-	-	-	
BATT01 - 00393	F2	25µg/L	D	5	M	9	0.067	14.4	0.0066	2.98	0	-	-	-	
BATT01 - 00393	F2	25µg/L	D	6	F	9	0.066	13.9	0.0063	1.51	0	-	-	-	
BATT01 - 00393	F2	25µg/L	D	7	F	9	0.069	14.5	0.0057	2.19	0	-	-	-	
BATT01 - 00393	F2	25µg/L	D	8	F	9	0.070	13.7	0.0042	1.40	0	-	-	-	
BATT01 - 00393	F2	25µg/L	E	1	F	9	0.089	16.4	0.0083	2.43	0	-	-	-	
BATT01 - 00393	F2	25µg/L	E	2	M	9	0.100	15.9	0.0056	3.42	0	-	-	-	
BATT01 - 00393	F2	25µg/L	E	3	F	9	0.080	15.4	0.0050	1.09	0	-	-	-	
BATT01 - 00393	F2	25µg/L	E	4	M	9	0.090	16.4	0.0078	1.78	0	-	-	-	
BATT01 - 00393	F2	25µg/L	E	5	F	9	0.075	15.0	0.0051	1.45	0	-	-	-	
BATT01 - 00393	F2	25µg/L	E	6	M	9	0.059	15.5	0.0079	3.07	0	-	-	-	
BATT01 - 00393	F2	25µg/L	E	7	F	9	0.097	16.0	0.0088	1.55	0	-	-	-	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F2	25µg/L	E	8	F	9	0.085	14.4	0.0085	3.02	0	-	-	-	
BATT01 - 00393	F2	25µg/L	F	1	M	9	0.122	18.6	0.0095	1.85	46	-	-	-	
BATT01 - 00393	F2	25µg/L	F	2	M	9	0.126	18.3	0.0069	2.00	0	-	-	-	
BATT01 - 00393	F2	25µg/L	F	3	M	9	0.107	16.7	0.0072	1.88	0	-	-	-	
BATT01 - 00393	F2	25µg/L	F	4	F	9	0.076	16.6	0.0072	4.50	0	-	-	-	
BATT01 - 00393	F2	25µg/L	F	5	F	9	0.078	15.3	0.0080	4.14	0	-	-	-	
BATT01 - 00393	F2	25µg/L	F	6	F	9	0.084	17.3	0.0038	1.42	0	-	-	-	
BATT01 - 00393	F2	25µg/L	F	7	M	9	0.078	16.6	0.0064	1.84	0	-	-	-	
BATT01 - 00393	F2	25µg/L	F	8	M	9	0.092	16.4	0.0083	4.77	0	-	-	-	
BATT01 - 00393	F2	50µg/L	A	1	M	9	0.112	17.3	0.0065	2.84	0	-	-	-	
BATT01 - 00393	F2	50µg/L	A	2	M	9	0.112	17.9	0.0033	3.31	8	-	-	-	
BATT01 - 00393	F2	50µg/L	A	3	M	9	0.107	18.0	0.0038	2.63	0	-	-	-	
BATT01 - 00393	F2	50µg/L	A	4	F	9	0.088	16.1	0.0050	2.15	0	-	-	-	
BATT01 - 00393	F2	50µg/L	A	5	F	9	0.096	15.8	0.0048	4.82	0	-	-	-	
BATT01 - 00393	F2	50µg/L	A	6	M	9	0.098	17.1	0.0055	3.15	0	-	-	-	
BATT01 - 00393	F2	50µg/L	A	7	M	9	0.091	15.4	0.0020	2.68	0	-	-	-	
BATT01 - 00393	F2	50µg/L	A	8	M	9	0.115	18.1	0.0040	3.31	0	-	-	-	
BATT01 - 00393	F2	50µg/L	B	1	M	9	0.128	18.4	0.0080	2.37	22	-	-	-	
BATT01 - 00393	F2	50µg/L	B	2	M	9	0.111	17.3	0.0048	1.62	30	-	-	-	
BATT01 - 00393	F2	50µg/L	B	3	F	9	0.076	18.5	0.0044	4.47	0	-	-	-	
BATT01 - 00393	F2	50µg/L	B	4	F	9	0.098	18.5	0.0057	4.09	0	-	-	-	
BATT01 - 00393	F2	50µg/L	B	5	M	9	0.088	15.8	0.0065	3.17	0	-	-	-	
BATT01 - 00393	F2	50µg/L	B	6	F	9	0.115	18.3	0.0046	3.52	0	-	-	-	
BATT01 - 00393	F2	50µg/L	B	7	F	9	0.097	16.6	0.0035	4.93	0	-	-	-	
BATT01 - 00393	F2	50µg/L	B	8	F	9	0.095	17.7	0.0051	4.06	0	-	-	-	
BATT01 - 00393	F2	50µg/L	C	1	M	9	0.141	16.1	0.0065	3.00	26	-	-	-	
BATT01 - 00393	F2	50µg/L	C	2	F	9	0.107	16.0	0.0070	4.89	0	-	-	-	
BATT01 - 00393	F2	50µg/L	C	3	F	9	0.085	15.5	0.0051	4.58	0	-	-	-	
BATT01 - 00393	F2	50µg/L	C	4	M	9	0.075	15.3	0.0025	3.48	0	-	-	-	
BATT01 - 00393	F2	50µg/L	C	5	F	9	0.096	15.3	0.0045	2.47	0	-	-	-	
BATT01 - 00393	F2	50µg/L	C	6	F	9	0.075	15.0	0.0064	4.96	0	-	-	-	
BATT01 - 00393	F2	50µg/L	C	7	F	9	0.120	18.9	0.0066	4.47	0	-	-	-	
BATT01 - 00393	F2	50µg/L	C	8	F	9	0.128	17.5	0.0074	4.48	0	-	-	-	
BATT01 - 00393	F2	50µg/L	D	1	M	9	0.140	19.7	0.0057	3.14	25	-	-	-	
BATT01 - 00393	F2	50µg/L	D	2	M	9	0.086	16.2	0.0051	3.09	0	-	-	-	
BATT01 - 00393	F2	50µg/L	D	3	F	9	0.090	17.6	0.0061	3.55	0	-	-	-	
BATT01 - 00393	F2	50µg/L	D	4	M	9	0.104	16.7	0.0068	3.31	0	-	-	-	
BATT01 - 00393	F2	50µg/L	D	5	F	9	0.093	15.9	0.0026	2.96	0	-	-	-	
BATT01 - 00393	F2	50µg/L	D	6	M	9	0.076	16.6	0.0038	3.40	0	-	-	-	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F2	50µg/L	D	7	F	9	0.076	16.8	0.0057	1.98	0	-	-	-	
BATT01 - 00393	F2	50µg/L	D	8	F	9	0.095	16.0	0.0060	5.05	0	-	-	-	
BATT01 - 00393	F2	50µg/L	E	1	M	9	0.127	16.5	0.0066	2.22	0	-	-	-	
BATT01 - 00393	F2	50µg/L	E	2	M	9	0.082	14.7	0.0032	5.12	0	-	-	-	
BATT01 - 00393	F2	50µg/L	E	3	M	9	0.085	15.5	0.0060	3.03	0	-	-	-	
BATT01 - 00393	F2	50µg/L	E	4	F	9	0.071	15.9	0.0040	3.48	0	-	-	-	
BATT01 - 00393	F2	50µg/L	E	5	F	9	0.081	15.1	0.0020	3.94	0	-	-	-	
BATT01 - 00393	F2	50µg/L	E	6	F	9	0.076	15.6	0.0065	3.52	0	-	-	-	
BATT01 - 00393	F2	50µg/L	E	7	F	9	0.070	14.8	0.0039	2.47	0	-	-	-	
BATT01 - 00393	F2	50µg/L	E	8	F	9	0.124	17.3	0.0048	2.68	0	-	-	-	
BATT01 - 00393	F2	50µg/L	F	1	M	9	0.096	18.2	0.0056	1.74	0	-	-	-	
BATT01 - 00393	F2	50µg/L	F	2	M	9	0.106	16.8	0.0044	2.53	0	-	-	-	
BATT01 - 00393	F2	50µg/L	F	3	F	9	0.099	17.8	0.0095	3.91	0	-	-	-	
BATT01 - 00393	F2	50µg/L	F	4	F	9	0.112	17.0	0.0060	1.27	0	-	-	-	
BATT01 - 00393	F2	50µg/L	F	5	F	9	0.091	16.4	0.0040	4.51	0	-	-	-	
BATT01 - 00393	F2	50µg/L	F	6	F	9	0.079	15.0	0.0057	2.36	0	-	-	-	
BATT01 - 00393	F2	50µg/L	F	7	F	9	0.082	15.2	0.0048	1.45	0	-	-	-	
BATT01 - 00393	F2	50µg/L	F	8	F	9	0.081	14.0	0.0049	3.19	0	-	-	-	
BATT01 - 00393	F2	100µg/L	A	1	M	9	0.101	14.8	0.0049	2.48	0	-	-	-	
BATT01 - 00393	F2	100µg/L	A	2	M	9	0.131	16.9	0.0076	2.42	0	-	-	-	
BATT01 - 00393	F2	100µg/L	A	3	F	9	0.086	14.3	0.0055	3.53	0	-	-	-	
BATT01 - 00393	F2	100µg/L	A	4	F	9	0.089	14.6	0.0025	2.96	0	-	-	-	
BATT01 - 00393	F2	100µg/L	A	5	M	9	0.104	14.5	0.0035	3.28	0	-	-	-	
BATT01 - 00393	F2	100µg/L	A	6	F	9	0.097	15.3	0.0068	2.68	0	-	-	-	
BATT01 - 00393	F2	100µg/L	A	7	F	9	0.092	16.1	0.0038	2.55	0	-	-	-	
BATT01 - 00393	F2	100µg/L	A	8	F	9	0.058	14.3	0.0028	2.72	0	-	-	-	
BATT01 - 00393	F2	100µg/L	B	1	F	9	0.133	16.9	0.0086	1.26	0	-	-	-	
BATT01 - 00393	F2	100µg/L	B	2	M	9	0.143	18.1	0.0085	2.35	0	-	-	-	
BATT01 - 00393	F2	100µg/L	B	3	F	9	0.093	16.2	0.0039	2.64	0	-	-	-	
BATT01 - 00393	F2	100µg/L	B	4	F	9	0.094	14.9	0.0082	1.27	0	-	-	-	
BATT01 - 00393	F2	100µg/L	B	5	F	9	0.072	14.4	0.0041	2.72	0	-	-	-	
BATT01 - 00393	F2	100µg/L	B	6	F	9	0.111	15.7	0.0036	5.01	0	-	-	-	
BATT01 - 00393	F2	100µg/L	B	7	F	9	0.115	16.5	0.0042	4.49	0	-	-	-	
BATT01 - 00393	F2	100µg/L	B	8	F	9	0.069	14.4	0.0049	3.23	0	-	-	-	
BATT01 - 00393	F2	100µg/L	C	1	M	9	0.160	19.0	0.0039	2.73	25	-	-	-	
BATT01 - 00393	F2	100µg/L	C	2	M	9	0.106	16.8	0.0029	3.17	0	-	-	-	
BATT01 - 00393	F2	100µg/L	C	3	M	9	0.093	16.8	0.0032	3.93	0	-	-	-	
BATT01 - 00393	F2	100µg/L	C	4	M	9	0.097	15.3	0.0025	2.11	0	-	-	-	
BATT01 - 00393	F2	100µg/L	C	5	F	9	0.085	15.2	0.0051	2.71	0	-	-	-	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F2	100µg/L	C	6	F	9	0.080	14.8	0.0058	1.62	0	-	-	-	
BATT01 - 00393	F2	100µg/L	C	7	M	9	0.078	15.4	0.0066	4.01	0	-	-	-	
BATT01 - 00393	F2	100µg/L	C	8	M	9	0.087	15.6	0.0045	2.77	0	-	-	-	
BATT01 - 00393	F2	100µg/L	D	1	M	9	0.098	16.7	0.0036	2.71	12	-	-	-	
BATT01 - 00393	F2	100µg/L	D	2	M	9	0.079	15.0	0.0048	1.72	0	-	-	-	
BATT01 - 00393	F2	100µg/L	D	3	M	9	0.088	17.2	0.0044	2.81	0	-	-	-	
BATT01 - 00393	F2	100µg/L	D	4	M	9	0.103	15.7	0.0063	3.76	0	-	-	-	
BATT01 - 00393	F2	100µg/L	D	5	F	9	0.093	16.1	0.0057	2.16	0	-	-	-	
BATT01 - 00393	F2	100µg/L	D	6	M	9	0.081	16.1	0.0030	2.24	0	-	-	-	
BATT01 - 00393	F2	100µg/L	D	7	M	9	0.080	15.0	0.0080	4.17	0	-	-	-	
BATT01 - 00393	F2	100µg/L	D	8	M	9	0.098	15.3	0.0074	4.06	0	-	-	-	
BATT01 - 00393	F2	100µg/L	E	1	M	9	0.111	17.6	0.0046	1.40	18	-	-	-	
BATT01 - 00393	F2	100µg/L	E	2	M	9	0.099	17.2	0.0041	3.03	0	-	-	-	
BATT01 - 00393	F2	100µg/L	E	3	M	9	0.068	14.0	0.0045	2.02	0	-	-	-	
BATT01 - 00393	F2	100µg/L	E	4	F	9	0.094	16.7	0.0050	3.38	0	-	-	-	
BATT01 - 00393	F2	100µg/L	E	5	F	9	0.090	17.9	0.0052	4.09	0	-	-	-	
BATT01 - 00393	F2	100µg/L	E	6	F	9	0.080	16.2	0.0032	4.05	0	-	-	-	
BATT01 - 00393	F2	100µg/L	E	7	F	9	0.054	14.1	0.0030	2.53	0	-	-	-	
BATT01 - 00393	F2	100µg/L	E	8	F	9	0.080	17.3	0.0040	3.56	0	-	-	-	
BATT01 - 00393	F2	100µg/L	F	1	F	9	0.080	14.1	0.0056	2.36	0	-	-	-	
BATT01 - 00393	F2	100µg/L	F	2	M	9	0.154	19.4	0.0061	1.44	11	-	-	-	
BATT01 - 00393	F2	100µg/L	F	3	F	9	0.078	14.7	0.0023	2.73	0	-	-	-	
BATT01 - 00393	F2	100µg/L	F	4	F	9	0.108	18.0	0.0081	3.39	0	-	-	-	
BATT01 - 00393	F2	100µg/L	F	5	F	9	0.077	14.9	0.0031	2.61	0	-	-	-	
BATT01 - 00393	F2	100µg/L	F	6	F	9	0.063	15.4	0.0026	2.05	0	-	-	-	
BATT01 - 00393	F2	100µg/L	F	7	M	9	0.087	15.9	0.0075	2.24	0	-	-	-	
BATT01 - 00393	F2	100µg/L	F	8	F	9	0.104	17.0	0.0033	2.39	0	-	-	-	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	1	M	15	-	-	-	-	-	0.191	26.1	61	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	A	2	F	15	-	-	-	-	-	0.261	28.1	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	1	M	15	-	-	-	-	-	0.190	25.6	59	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	B	2	F	15	-	-	-	-	-	0.270	27.5	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	1	M	15	-	-	-	-	-	0.194	24.5	62	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	C	2	F	15	-	-	-	-	-	0.199	25.1	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	1	M	15	-	-	-	-	-	0.191	26.0	40	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	D	2	F	15	-	-	-	-	-	0.224	20.7	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	1	F	15	-	-	-	-	-	0.253	22.9	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	E	2	M	15	-	-	-	-	-	0.244	24.4	60	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	1	M	15	-	-	-	-	-	0.265	23.6	60	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	F	2	F	15	-	-	-	-	-	0.275	21.8	0	

FEL

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	1	M	15	-	-	-	-	-	0.245	25.3	61	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	G	2	F	15	-	-	-	-	-	0.238	24.3	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	1	M	15	-	-	-	-	-	0.204	24.1	56	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	H	2	F	15	-	-	-	-	-	0.286	25.5	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	1	M	15	-	-	-	-	-	0.250	27.4	58	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	I	2	F	15	-	-	-	-	-	0.327	28.9	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	1	M	15	-	-	-	-	-	0.240	24.5	34	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	J	2	F	15	-	-	-	-	-	0.469	26.2	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	1	M	15	-	-	-	-	-	0.297	27.4	63	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	K	2	F	15	-	-	-	-	-	0.545	25.2	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	1	M	15	-	-	-	-	-	0.289	25.1	52	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	L	2	F	15	-	-	-	-	-	0.439	28.7	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	M	1	M	15	-	-	-	-	-	0.267	25.6	60	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	M	2	F	15	-	-	-	-	-	0.374	26.7	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	N	1	M	15	-	-	-	-	-	0.273	25.0	82	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	N	2	F	15	-	-	-	-	-	0.366	27.6	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	O	1	M	15	-	-	-	-	-	0.319	26.5	51	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	O	2	F	15	-	-	-	-	-	0.344	25.1	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	P	1	M	15	-	-	-	-	-	0.337	27.9	67	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	P	2	F	15	-	-	-	-	-	0.357	27.5	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	Q	1	M	15	-	-	-	-	-	0.256	24.4	46	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	Q	2	F	15	-	-	-	-	-	0.389	27.5	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	R	1	M	15	-	-	-	-	-	0.313	27.6	65	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	R	2	F	15	-	-	-	-	-	0.388	26.7	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	S	1	M	15	-	-	-	-	-	0.356	27.0	70	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	S	2	F	15	-	-	-	-	-	0.538	30.0	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	T	1	M	15	-	-	-	-	-	0.372	28.2	68	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	T	2	F	15	-	-	-	-	-	0.384	25.0	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	U	1	M	15	-	-	-	-	-	0.372	26.7	59	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	U	2	F	15	-	-	-	-	-	0.501	28.7	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	V	1	M	15	-	-	-	-	-	0.354	25.2	70	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	V	2	F	15	-	-	-	-	-	0.429	25.3	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	W	1	M	15	-	-	-	-	-	0.393	27.0	43	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	W	2	F	15	-	-	-	-	-	0.515	29.1	0	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	X	1	M	15	-	-	-	-	-	0.358	24.9	43	
BATT01 - 00393	F2	(Ctrl) 0.0µg/L	X	2	F	15	-	-	-	-	-	0.338	22.5	0	
BATT01 - 00393	F2	6.3µg/L	A	1	M	15	-	-	-	-	-	0.373	25.5	71	
BATT01 - 00393	F2	6.3µg/L	A	2	F	15	-	-	-	-	-	0.503	26.0	0	
BATT01 - 00393	F2	6.3µg/L	B	1	M	15	-	-	-	-	-	0.396	26.4	70	

FEL

DEST

BATT01-00393

Growth and SSC

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling					Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F2	6.3µg/L	B	2	F	15	-	-	-	-	-	0.399	23.3	0	
BATT01 - 00393	F2	6.3µg/L	C	1	M	15	-	-	-	-	-	0.408	25.2	62	
BATT01 - 00393	F2	6.3µg/L	C	2	F	15	-	-	-	-	-	0.614	29.1	0	
BATT01 - 00393	F2	6.3µg/L	D	1	M	15	-	-	-	-	-	0.404	25.6	58	
BATT01 - 00393	F2	6.3µg/L	D	2	F	15	-	-	-	-	-	0.557	27.4	0	
BATT01 - 00393	F2	6.3µg/L	E	1	M	15	-	-	-	-	-	0.338	23.8	88	
BATT01 - 00393	F2	6.3µg/L	E	2	F	15	-	-	-	-	-	0.412	26.2	0	
BATT01 - 00393	F2	6.3µg/L	F	1	M	15	-	-	-	-	-	0.356	24.8	61	
BATT01 - 00393	F2	6.3µg/L	F	2	F	15	-	-	-	-	-	0.396	24.9	0	
BATT01 - 00393	F2	6.3µg/L	G	1	M	15	-	-	-	-	-	0.344	25.2	64	
BATT01 - 00393	F2	6.3µg/L	G	2	F	15	-	-	-	-	-	0.433	24.6	0	
BATT01 - 00393	F2	6.3µg/L	H	1	M	15	-	-	-	-	-	0.353	23.2	67	
BATT01 - 00393	F2	6.3µg/L	H	2	F	15	-	-	-	-	-	0.542	27.5	0	
BATT01 - 00393	F2	6.3µg/L	I	1	M	15	-	-	-	-	-	0.415	27.2	61	
BATT01 - 00393	F2	6.3µg/L	I	2	F	15	-	-	-	-	-	0.479	27.2	0	
BATT01 - 00393	F2	6.3µg/L	J	1	M	15	-	-	-	-	-	0.430	23.4	53	
BATT01 - 00393	F2	6.3µg/L	J	2	F	15	-	-	-	-	-	0.369	23.1	0	
BATT01 - 00393	F2	6.3µg/L	K	1	M	15	-	-	-	-	-	0.391	25.8	57	
BATT01 - 00393	F2	6.3µg/L	K	2	F	15	-	-	-	-	-	0.455	26.9	0	
BATT01 - 00393	F2	6.3µg/L	L	1	M	15	-	-	-	-	-	0.395	26.1	61	
BATT01 - 00393	F2	6.3µg/L	L	2	F	15	-	-	-	-	-	0.370	23.2	0	
BATT01 - 00393	F2	12.5µg/L	A	1	M	15	-	-	-	-	-	0.379	26.9	66	
BATT01 - 00393	F2	12.5µg/L	A	2	F	15	-	-	-	-	-	0.521	28.0	0	
BATT01 - 00393	F2	12.5µg/L	B	1	M	15	-	-	-	-	-	0.391	25.3	61	
BATT01 - 00393	F2	12.5µg/L	B	2	F	15	-	-	-	-	-	0.568	29.6	0	
BATT01 - 00393	F2	12.5µg/L	C	1	M	15	-	-	-	-	-	0.423	25.7	70	
BATT01 - 00393	F2	12.5µg/L	C	2	F	15	-	-	-	-	-	0.496	26.1	0	
BATT01 - 00393	F2	12.5µg/L	D	1	M	15	-	-	-	-	-	0.358	24.8	68	
BATT01 - 00393	F2	12.5µg/L	D	2	F	15	-	-	-	-	-	0.542	28.4	0	
BATT01 - 00393	F2	12.5µg/L	E	1	M	15	-	-	-	-	-	0.389	26.6	93	
BATT01 - 00393	F2	12.5µg/L	E	2	F	15	-	-	-	-	-	0.538	28.3	0	
BATT01 - 00393	F2	12.5µg/L	F	1	M	15	-	-	-	-	-	0.380	28.3	71	
BATT01 - 00393	F2	12.5µg/L	F	2	F	15	-	-	-	-	-	0.539	23.8	0	
BATT01 - 00393	F2	12.5µg/L	G	1	M	15	-	-	-	-	-	0.437	26.5	73	
BATT01 - 00393	F2	12.5µg/L	G	2	F	15	-	-	-	-	-	0.572	27.7	0	
BATT01 - 00393	F2	12.5µg/L	H	1	M	15	-	-	-	-	-	0.462	24.0	56	
BATT01 - 00393	F2	12.5µg/L	H	2	F	15	-	-	-	-	-	0.609	30.2	0	
BATT01 - 00393	F2	12.5µg/L	I	1	M	15	-	-	-	-	-	0.427	26.0	53	
BATT01 - 00393	F2	12.5µg/L	I	2	F	15	-	-	-	-	-	0.615	30.1	0	

							Interim Sampling					Terminal Sampling			
Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	Comments
BATT01 - 00393	F2	12.5µg/L	J	1	M	15	-	-	-	-	-	0.416	25.1	70	
BATT01 - 00393	F2	12.5µg/L	J	2	F	15	-	-	-	-	-	0.534	28.1	0	
BATT01 - 00393	F2	12.5µg/L	K	1	M	15	-	-	-	-	-	0.489	28.8	69	
BATT01 - 00393	F2	12.5µg/L	K	2	F	15	-	-	-	-	-	0.552	29.5	0	
BATT01 - 00393	F2	12.5µg/L	L	1	M	15	-	-	-	-	-	0.423	26.1	67	
BATT01 - 00393	F2	12.5µg/L	L	2	F	15	-	-	-	-	-	0.599	28.4	0	
BATT01 - 00393	F2	25µg/L	A	1	M	15	-	-	-	-	-	0.417	25.7	71	
BATT01 - 00393	F2	25µg/L	A	2	F	15	-	-	-	-	-	0.574	30.0	0	
BATT01 - 00393	F2	25µg/L	B	1	M	15	-	-	-	-	-	0.350	22.9	51	
BATT01 - 00393	F2	25µg/L	B	2	F	15	-	-	-	-	-	0.458	30.4	0	
BATT01 - 00393	F2	25µg/L	C	1	M	15	-	-	-	-	-	0.419	26.3	75	
BATT01 - 00393	F2	25µg/L	C	2	F	15	-	-	-	-	-	0.575	27.4	0	
BATT01 - 00393	F2	25µg/L	D	1	M	15	-	-	-	-	-	0.411	27.4	84	
BATT01 - 00393	F2	25µg/L	D	2	F	15	-	-	-	-	-	0.501	29.1	0	
BATT01 - 00393	F2	25µg/L	E	1	M	15	-	-	-	-	-	0.393	27.3	70	
BATT01 - 00393	F2	25µg/L	E	2	F	15	-	-	-	-	-	0.410	26.2	0	
BATT01 - 00393	F2	25µg/L	F	1	M	15	-	-	-	-	-	0.347	23.6	52	
BATT01 - 00393	F2	25µg/L	F	2	F	15	-	-	-	-	-	0.413	25.8	0	
BATT01 - 00393	F2	25µg/L	G	1	M	15	-	-	-	-	-	0.381	25.7	77	
BATT01 - 00393	F2	25µg/L	G	2	F	15	-	-	-	-	-	0.406	24.8	0	
BATT01 - 00393	F2	25µg/L	H	1	M	15	-	-	-	-	-	0.480	28.2	55	
BATT01 - 00393	F2	25µg/L	H	2	F	15	-	-	-	-	-	0.509	29.3	0	
BATT01 - 00393	F2	25µg/L	I	1	M	15	-	-	-	-	-	0.390	25.1	56	
BATT01 - 00393	F2	25µg/L	I	2	F	15	-	-	-	-	-	0.474	24.6	0	
BATT01 - 00393	F2	25µg/L	J	1	M	15	-	-	-	-	-	0.386	25.1	72	
BATT01 - 00393	F2	25µg/L	J	2	F	15	-	-	-	-	-	0.569	27.1	0	
BATT01 - 00393	F2	25µg/L	K	1	M	15	-	-	-	-	-	0.407	25.2	70	
BATT01 - 00393	F2	25µg/L	K	2	F	15	-	-	-	-	-	0.503	26.7	0	
BATT01 - 00393	F2	25µg/L	L	1	M	15	-	-	-	-	-	0.430	25.2	58	
BATT01 - 00393	F2	25µg/L	L	2	F	15	-	-	-	-	-	0.551	28.9	0	
BATT01 - 00393	F2	50µg/L	A	1	M	15	-	-	-	-	-	0.425	25.1	32	
BATT01 - 00393	F2	50µg/L	A	2	F	15	-	-	-	-	-	0.506	23.9	0	
BATT01 - 00393	F2	50µg/L	B	1	M	15	-	-	-	-	-	0.443	27.5	38	
BATT01 - 00393	F2	50µg/L	B	2	F	15	-	-	-	-	-	0.534	25.5	0	
BATT01 - 00393	F2	50µg/L	C	1	M	15	-	-	-	-	-	0.461	26.1	37	
BATT01 - 00393	F2	50µg/L	C	2	F	15	-	-	-	-	-	0.523	26.6	0	
BATT01 - 00393	F2	50µg/L	D	1	M	15	-	-	-	-	-	0.374	23.1	31	
BATT01 - 00393	F2	50µg/L	D	2	F	15	-	-	-	-	-	0.538	27.1	0	
BATT01 - 00393	F2	50µg/L	E	1	M	15	-	-	-	-	-	0.428	24.0	25	

FEL

DEST

BATT01-00393

Growth and SSC

Study ID	Generation	Name of Treatment Group	Replicate ID	Individual Fish ID	Genotypic Sex (M or F)	Age (WPF)	Interim Sampling				Terminal Sampling			Comments
							Body Weight (g)	Body Length (mm)	Liver Weight (g)	Liver *vtg* Log10(copies *vtg* 1 mRNA/ng total RNA)	Anal Fin Papillae Number	Body Weight (g)	Body Length (mm)	Anal Fin Papillae Number	
BATT01 - 00393	F2	50µg/L	E	2	F	15	-	-	-	-	-	0.554	26.7	0	
BATT01 - 00393	F2	50µg/L	F	1	M	15	-	-	-	-	-	0.470	25.3	65	
BATT01 - 00393	F2	50µg/L	F	2	F	15	-	-	-	-	-	0.383	28.8	0	
BATT01 - 00393	F2	50µg/L	G	1	M	15	-	-	-	-	-	0.474	26.5	58	
BATT01 - 00393	F2	50µg/L	G	2	F	15	-	-	-	-	-	0.589	27.0	0	
BATT01 - 00393	F2	50µg/L	H	1	M	15	-	-	-	-	-	0.501	25.4	36	
BATT01 - 00393	F2	50µg/L	H	2	F	15	-	-	-	-	-	0.582	27.5	0	
BATT01 - 00393	F2	50µg/L	I	1	M	15	-	-	-	-	-	0.460	25.4	72	
BATT01 - 00393	F2	50µg/L	I	2	F	15	-	-	-	-	-	0.354	29.3	0	
BATT01 - 00393	F2	50µg/L	J	1	M	15	-	-	-	-	-	0.222	25.6	55	
BATT01 - 00393	F2	50µg/L	J	2	F	15	-	-	-	-	-	0.381	30.2	0	
BATT01 - 00393	F2	50µg/L	K	1	M	15	-	-	-	-	-	0.238	26.8	57	
BATT01 - 00393	F2	50µg/L	K	2	F	15	-	-	-	-	-	0.388	28.6	0	
BATT01 - 00393	F2	50µg/L	L	1	M	15	-	-	-	-	-	0.226	23.9	47	
BATT01 - 00393	F2	50µg/L	L	2	F	15	-	-	-	-	-	0.356	26.6	0	
BATT01 - 00393	F2	100µg/L	A	1	M	15	-	-	-	-	-	0.224	24.3	29	
BATT01 - 00393	F2	100µg/L	A	2	F	15	-	-	-	-	-	0.322	29.3	0	
BATT01 - 00393	F2	100µg/L	B	1	M	15	-	-	-	-	-	0.265	26.5	38	
BATT01 - 00393	F2	100µg/L	B	2	F	15	-	-	-	-	-	0.315	27.3	0	
BATT01 - 00393	F2	100µg/L	C	1	M	15	-	-	-	-	-	0.332	28.8	66	
BATT01 - 00393	F2	100µg/L	C	2	F	15	-	-	-	-	-	0.277	25.9	0	
BATT01 - 00393	F2	100µg/L	D	1	M	15	-	-	-	-	-	0.291	26.7	49	
BATT01 - 00393	F2	100µg/L	D	2	F	15	-	-	-	-	-	0.387	28.3	0	
BATT01 - 00393	F2	100µg/L	E	1	M	15	-	-	-	-	-	0.319	27.6	46	
BATT01 - 00393	F2	100µg/L	E	2	F	15	-	-	-	-	-	0.399	28.8	0	
BATT01 - 00393	F2	100µg/L	F	1	M	15	-	-	-	-	-	0.265	26.0	42	
BATT01 - 00393	F2	100µg/L	F	2	F	15	-	-	-	-	-	0.392	26.2	0	
BATT01 - 00393	F2	100µg/L	G	1	M	15	-	-	-	-	-	0.297	26.3	47	
BATT01 - 00393	F2	100µg/L	G	2	F	15	-	-	-	-	-	0.358	27.7	0	
BATT01 - 00393	F2	100µg/L	H	1	M	15	-	-	-	-	-	0.303	27.0	47	
BATT01 - 00393	F2	100µg/L	H	2	F	15	-	-	-	-	-	0.337	25.7	0	
BATT01 - 00393	F2	100µg/L	I	1	M	15	-	-	-	-	-	0.267	25.6	41	
BATT01 - 00393	F2	100µg/L	I	2	F	15	-	-	-	-	-	0.367	27.4	0	
BATT01 - 00393	F2	100µg/L	J	1	M	15	-	-	-	-	-	0.293	30.0	43	
BATT01 - 00393	F2	100µg/L	J	2	F	15	-	-	-	-	-	0.398	25.6	0	
BATT01 - 00393	F2	100µg/L	K	1	M	15	-	-	-	-	-	0.227	24.6	50	
BATT01 - 00393	F2	100µg/L	K	2	F	15	-	-	-	-	-	0.384	29.4	0	
BATT01 - 00393	F2	100µg/L	L	1	M	15	-	-	-	-	-	0.326	26.4	28	
BATT01 - 00393	F2	100µg/L	L	2	F	15	-	-	-	-	-	0.301	23.8	0	

DEST worksheet produced by Battelle

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Mineralization	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Epithelium, Eosinophilic Inclusions	Tubules, Epithelium, Hyperplasia	Tubules, Epithelium, Hypertrophy	Tubules, Cellular Debris/Casts	Proteinaceous Fluid	Comments	Sex	Tissue	Not Remarkable
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	A	1	749				1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	A	2	750		2		1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	B	1	757				1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	B	2	758		2	1		1						M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	C	1	765		1	1	1				1			F	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	C	2	766				2							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	D	1	773				2							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	D	2	774				1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	E	1	781				1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	E	2	782				2							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	F	1	789				1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	F	2	790				1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	G	1	797		1		1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	G	2	798		1		1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	H	1	805			1	1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	H	2	806		2		1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	I	1	813	0	0	0	0	0	0	0	0	0	Not Remarkable	M	KIDNEY	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	I	2	814			1	1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	J	1	821		1		1	1						M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	J	2	822		1	1	1	1						M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	K	1	829			1	2							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	K	2	830		2		1							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	L	1	837				2							M	KIDNEY	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	L	2	838				1							M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	A	1	845				1							M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	A	2	846		3	1	1							M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	B	1	853			1	1							M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	B	2	854		2		1				1			M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	C	1	861				1							M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	C	2	862		2		1							M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	D	1	869		1		1							F	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	D	2	870				2							M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	E	1	877		1									F	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	E	2	878				1							M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	F	1	885		1		1							M	KIDNEY	
BATT01-00393	F1 Subadults	6.3µg/L	F	2	886		2		1							M	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	A	1	893			1								M	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	A	2	894		1		1							M	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	B	1	901	0	0	0	0	0	0	0	0	0	Not Remarkable	M	KIDNEY	X
BATT01-00393	F1 Subadults	12.5µg/L	B	2	902			1	1		1					M	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	C	1	909			1		1						M	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	C	2	910				2							M	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	D	1	917				1							F	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	D	2	918		1		1				1			F	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	E	1	925		1		1							M	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	E	2	926		3		1							M	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	F	1	933				2							M	KIDNEY	
BATT01-00393	F1 Subadults	12.5µg/L	F	2	934				3							M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	A	1	941		1		1							M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	A	2	942		1		2							M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	B	1	949			1	1	1		1				M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	B	2	950				1							F	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	C	1	957		1	1	1							M	KIDNEY	

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Mineralization	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Epithelium, Eosinophilic Inclusions	Tubules, Epithelium, Hyperplasia	Tubules, Epithelium, Hypertrophy	Tubules, Cellular Debris/Casts	Proteinaceous Fluid	Comments	Sex	Tissue	Not Remarkable
BATT01-00393	F1 Subadults	25µg/L	C	2	958		1	2	1	2						M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	D	1	965				1							M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	D	2	966			1	1							M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	E	1	973		1		2							M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	E	2	974				1							M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	F	1	981			1	1							M	KIDNEY	
BATT01-00393	F1 Subadults	25µg/L	F	2	982		2					1				M	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	A	1	989				1							M	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	A	2	990			1	1							M	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	B	1	997		2		1							M	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	B	2	998		1		1							F	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	C	1	1005				1							F	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	C	2	1006	0	0	0	0	0	0	0	0	0	Not Remarkable	F	KIDNEY	X
BATT01-00393	F1 Subadults	50µg/L	D	1	1013		2		1							F	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	D	2	1014		1	1		1		2	1			M	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	E	1	1021				1	1						M	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	E	2	1022				1							M	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	F	1	1029		1	1								M	KIDNEY	
BATT01-00393	F1 Subadults	50µg/L	F	2	1030		2		1				1			M	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	A	1	1037				1							F	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	A	2	1038		2									F	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	B	1	1045				1							F	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	B	2	1046				2							F	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	C	1	1053		2									M	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	C	2	1054				1							M	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	D	1	1061				1	1						M	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	D	2	1062		2		1							F	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	E	1	1069				1							F	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	E	2	1070				1							M	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	F	1	1077				1							M	KIDNEY	
BATT01-00393	F1 Subadults	100µg/L	F	2	1078				2							M	KIDNEY	

FEL

DEST worksheet produced by Battelle												
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Anisokaryosis	Hepatocytes, Hypertrophy	Individual Cell Necrosis	Sex	Tissue
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	A	1	749	1					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	A	2	750	1					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	B	1	757	1					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	B	2	758	1					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	C	1	765	2					F	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	C	2	766	1					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	D	1	773	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	D	2	774	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	E	1	781	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	E	2	782	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	F	1	789	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	F	2	790	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	G	1	797	1					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	G	2	798	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	H	1	805	3					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	H	2	806	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	I	1	813	2	1				M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	I	2	814	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	J	1	821	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	J	2	822	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	K	1	829	2	2				M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	K	2	830	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	L	1	837	2					M	LIVER
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	L	2	838	3					M	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	A	1	845	2					M	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	A	2	846	3					M	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	B	1	853	2					M	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	B	2	854	2					M	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	C	1	861	1					M	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	C	2	862	1					M	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	D	1	869	1	1				F	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	D	2	870	2					M	LIVER

FEL

DEST

BATT01-00393

Liver Histology_F1 Subadults

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Anisokaryosis	Hepatocytes, Hypertrophy	Individual Cell Necrosis	Sex	Tissue
BATT01-00393	F1 Subadults	6.3µg/L	E	1	877	1					F	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	E	2	878	2					M	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	F	1	885	1					M	LIVER
BATT01-00393	F1 Subadults	6.3µg/L	F	2	886	2					M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	A	1	893	1					M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	A	2	894	1					M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	B	1	901	2					M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	B	2	902	2					M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	C	1	909	3					M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	C	2	910	3					M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	D	1	917	1					F	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	D	2	918	1					F	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	E	1	925	2					M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	E	2	926	2	3				M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	F	1	933	2					M	LIVER
BATT01-00393	F1 Subadults	12.5µg/L	F	2	934	2					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	A	1	941	1					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	A	2	942	1					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	B	1	949	2					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	B	2	950	3					F	LIVER
BATT01-00393	F1 Subadults	25µg/L	C	1	957	2					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	C	2	958	3					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	D	1	965	2					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	D	2	966	3					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	E	1	973	2					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	E	2	974	1					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	F	1	981	2					M	LIVER
BATT01-00393	F1 Subadults	25µg/L	F	2	982	2					M	LIVER
BATT01-00393	F1 Subadults	50µg/L	A	1	989	2					M	LIVER
BATT01-00393	F1 Subadults	50µg/L	A	2	990	2					M	LIVER
BATT01-00393	F1 Subadults	50µg/L	B	1	997	2					M	LIVER
BATT01-00393	F1 Subadults	50µg/L	B	2	998	3					F	LIVER
BATT01-00393	F1 Subadults	50µg/L	C	1	1005	1					F	LIVER

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Anisokaryosis	Hepatocytes, Hypertrophy	Individual Cell Necrosis	Sex	Tissue
BATT01-00393	F1 Subadults	50µg/L	C	2	1006	2					F	LIVER
BATT01-00393	F1 Subadults	50µg/L	D	1	1013	2					F	LIVER
BATT01-00393	F1 Subadults	50µg/L	D	2	1014	2					M	LIVER
BATT01-00393	F1 Subadults	50µg/L	E	1	1021	3					M	LIVER
BATT01-00393	F1 Subadults	50µg/L	E	2	1022	3					M	LIVER
BATT01-00393	F1 Subadults	50µg/L	F	1	1029	3					M	LIVER
BATT01-00393	F1 Subadults	50µg/L	F	2	1030	3					M	LIVER
BATT01-00393	F1 Subadults	100µg/L	A	1	1037	1	1	1	1		F	LIVER
BATT01-00393	F1 Subadults	100µg/L	A	2	1038	2				1	F	LIVER
BATT01-00393	F1 Subadults	100µg/L	B	1	1045	2					F	LIVER
BATT01-00393	F1 Subadults	100µg/L	B	2	1046	2					F	LIVER
BATT01-00393	F1 Subadults	100µg/L	C	1	1053	2					M	LIVER
BATT01-00393	F1 Subadults	100µg/L	C	2	1054	2					M	LIVER
BATT01-00393	F1 Subadults	100µg/L	D	1	1061	2					M	LIVER
BATT01-00393	F1 Subadults	100µg/L	D	2	1062	2					F	LIVER
BATT01-00393	F1 Subadults	100µg/L	E	1	1069	1					F	LIVER
BATT01-00393	F1 Subadults	100µg/L	E	2	1070	2					M	LIVER
BATT01-00393	F1 Subadults	100µg/L	F	1	1077	1					M	LIVER
BATT01-00393	F1 Subadults	100µg/L	F	2	1078	2					M	LIVER

FEL

DEST worksheet produced by Battelle											
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Ovary Stage	Gonad Phenotype Score	Oocyte Atresia	Comments	Sex	Tissue
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	C	1	765	0	5			F	OVARY
BATT01-00393	F1 Subadults	6.3µg/L	D	1	869	0	5			F	OVARY
BATT01-00393	F1 Subadults	6.3µg/L	E	1	877	1	5			F	OVARY
BATT01-00393	F1 Subadults	12.5µg/L	D	1	917	0	5			F	OVARY
BATT01-00393	F1 Subadults	12.5µg/L	D	2	918	0	5	1		F	OVARY
BATT01-00393	F1 Subadults	25µg/L	B	2	950	0	5			F	OVARY
BATT01-00393	F1 Subadults	50µg/L	B	2	998	0	5			F	OVARY
BATT01-00393	F1 Subadults	50µg/L	C	1	1005	0	5			F	OVARY
BATT01-00393	F1 Subadults	50µg/L	C	2	1006	0	5			F	OVARY
BATT01-00393	F1 Subadults	50µg/L	D	1	1013	1	5			F	OVARY
BATT01-00393	F1 Subadults	100µg/L	A	1	1037	0	5			F	OVARY
BATT01-00393	F1 Subadults	100µg/L	A	2	1038	0	5			F	OVARY
BATT01-00393	F1 Subadults	100µg/L	B	1	1045	0	5			F	OVARY
BATT01-00393	F1 Subadults	100µg/L	B	2	1046	1	5			F	OVARY
BATT01-00393	F1 Subadults	100µg/L	D	2	1062	0	5			F	OVARY
BATT01-00393	F1 Subadults	100µg/L	E	1	1069	0	5			F	OVARY

FEL

DEST worksheet produced by Battelle																	
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Testis Stage	Gonad Phenotype Score	Testicular Degeneration	Testicular Oocytes	Hypoplasia/ Atrophy	Histiocytic Cells, Intraluminal	Interstitial Fibrosis	Comments	Sex	Tissue	Unable to Stage	Asynchronous Development/ Maldevelopment
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	A	1	749	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	A	2	750	N/A	1			4			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	B	1	757	1	1							M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	B	2	758	1	1	1						M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	C	2	766	N/A	1	1					Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	D	1	773	2	1							M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	D	2	774	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	E	1	781	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	E	2	782	2	1	1						M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	F	1	789	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	F	2	790	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	G	1	797	N/A	1	1					Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	G	2	798	1	1	1						M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	H	1	805	1	1							M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	H	2	806	1	1							M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	I	1	813	N/A	2		1					M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	I	2	814	2	1							M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	J	1	821	1	1							M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	J	2	822	N/A	1	1					Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	K	1	829	N/A	1			3			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	K	2	830	2	1							M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	L	1	837	2	1	1						M	TESTIS		
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	L	2	838	1	1							M	TESTIS		
BATT01-00393	F1 Subadults	6.3µg/L	A	1	845	N/A	1			1			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	6.3µg/L	A	2	846	N/A	1	1					Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	6.3µg/L	B	1	853	2	1							M	TESTIS		
BATT01-00393	F1 Subadults	6.3µg/L	B	2	854	2	1							M	TESTIS		
BATT01-00393	F1 Subadults	6.3µg/L	C	1	861	N/A	1	1					Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	6.3µg/L	C	2	862	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	6.3µg/L	D	2	870	2	1	1						M	TESTIS		
BATT01-00393	F1 Subadults	6.3µg/L	E	2	878	N/A	1			4			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	6.3µg/L	F	1	885	1	1							M	TESTIS		
BATT01-00393	F1 Subadults	6.3µg/L	F	2	886	N/A	1	1					Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	12.5µg/L	A	1	893	N/A	1	1		3			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	12.5µg/L	A	2	894	N/A	1			3			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	12.5µg/L	B	1	901	N/A	1	1					Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	12.5µg/L	B	2	902	1	1	1						M	TESTIS		
BATT01-00393	F1 Subadults	12.5µg/L	C	1	909	N/A	1	1		2			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	12.5µg/L	C	2	910	3	1	1						M	TESTIS		
BATT01-00393	F1 Subadults	12.5µg/L	E	1	925	1	1	1						M	TESTIS		
BATT01-00393	F1 Subadults	12.5µg/L	E	2	926	2	1							M	TESTIS		
BATT01-00393	F1 Subadults	12.5µg/L	F	1	933	1	1							M	TESTIS		
BATT01-00393	F1 Subadults	12.5µg/L	F	2	934	4	1							M	TESTIS		
BATT01-00393	F1 Subadults	25µg/L	A	1	941	N/A	1	2		1			Unable to Stage	M	TESTIS	P	

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Testis Stage	Gonad Phenotype Score	Testicular Degeneration	Testicular Oocytes	Hypoplasia/ Atrophy	Histiocytic Cells, Intraluminal	Interstitial Fibrosis	Comments	Sex	Tissue	Unable to Stage	Asynchronous Development/ Maldevelopment
BATT01-00393	F1 Subadults	25µg/L	A	2	942	2	1							M	TESTIS		
BATT01-00393	F1 Subadults	25µg/L	B	1	949	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	25µg/L	C	1	957	N/A	1			1			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	25µg/L	C	2	958	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	25µg/L	D	1	965	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	25µg/L	D	2	966	2	1						Unable to Stage	M	TESTIS		
BATT01-00393	F1 Subadults	25µg/L	E	1	973	3	1							M	TESTIS		
BATT01-00393	F1 Subadults	25µg/L	E	2	974	2	1							M	TESTIS		
BATT01-00393	F1 Subadults	25µg/L	F	1	981	N/A	1						Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	25µg/L	F	2	982	N/A	1					2	Unable to Stage	M	TESTIS	P	1
BATT01-00393	F1 Subadults	50µg/L	A	1	989	N/A	1			3			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	50µg/L	A	2	990	1	1	1						M	TESTIS		
BATT01-00393	F1 Subadults	50µg/L	B	1	997	N/A	1			3			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	50µg/L	D	2	1014	N/A	1			3			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	50µg/L	E	1	1021	N/A	1			4			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	50µg/L	E	2	1022	N/A	1			4			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	50µg/L	F	1	1029	N/A	1			4			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	50µg/L	F	2	1030	N/A	1	1		3			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	100µg/L	C	1	1053	N/A	1			4			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	100µg/L	C	2	1054	N/A	1			3			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	100µg/L	D	1	1061	N/A	1			4			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	100µg/L	E	2	1070	N/A	1	1		4			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	100µg/L	F	1	1077	N/A	1			3			Unable to Stage	M	TESTIS	P	
BATT01-00393	F1 Subadults	100µg/L	F	2	1078	3	1	1			2			M	TESTIS		

FEL

DEST worksheet produced by Battelle										
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hypoplasia/ Atrophy	Comments	Sex	Tissue	Not Remarkable
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	A	1	749	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	A	2	750	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	B	1	757	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	B	2	758	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	C	1	765	0	Not Remarkable	F	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	C	2	766	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	D	1	773	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	D	2	774	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	E	1	781	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	E	2	782	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	F	1	789	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	F	2	790	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	G	1	797	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	G	2	798	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	H	1	805	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	H	2	806	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	I	1	813	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	I	2	814	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	J	1	821	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	J	2	822	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	K	1	829	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	K	2	830	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	L	1	837	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	(Ctrl) 0.0µg/L	L	2	838	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	A	1	1037	0	Not Remarkable	F	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	A	2	1038	0	Not Remarkable	F	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	B	1	1045	0	Not Remarkable	F	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	B	2	1046	0	Not Remarkable	F	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	C	1	1053	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	C	2	1054	0	Not Remarkable	M	THYROID	X

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hypoplasia/ Atrophy	Comments	Sex	Tissue	Not Remarkable
BATT01-00393	F1 Subadults	100µg/L	D	1	1061	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	D	2	1062	1		F	THYROID	
BATT01-00393	F1 Subadults	100µg/L	E	1	1069	0	Not Remarkable	F	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	E	2	1070	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	F	1	1077	0	Not Remarkable	M	THYROID	X
BATT01-00393	F1 Subadults	100µg/L	F	2	1078	0	Not Remarkable	M	THYROID	X

FEL

BATT01-00393

DEST worksheet produced by Battelle																
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Epithelium, Eosinophilic Inclusions	Tubules, Cellular Debris/Casts	Sex	Tissue	Tubules, Mineralization	Inflammation, Granulomatous	Glomerulomegaly	Glomeruli, Hyaline Inclusions
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	A	1	1393	1		1	1		F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	A	2	1394			3			M	KIDNEY	1	1		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	B	1	1395			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	B	2	1396			3			M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	C	1	1397			3			M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	C	2	1398	3	2	1	1		F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	D	1	1399	2		3		2	M	KIDNEY	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	D	2	1400	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	E	1	1401	3		3		2	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	E	2	1402	3	1	1		1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	F	1	1403	3		1		2	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	F	2	1404	1		3			M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	G	1	1405	3		3		2	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	G	2	1406	1		1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	H	1	1407	1		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	H	2	1408	2		3		2	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	I	1	1409	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	I	2	1410			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	J	1	1411	1		1	1	1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	J	2	1412	3		3			M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	K	1	1413	3		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	K	2	1414	3		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	L	1	1415			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	L	2	1416			3			U	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	M	1	1417			2			U	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	M	2	1418			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	N	1	1419	3		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	N	2	1420			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	O	1	1421	2		3			M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	O	2	1422			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	P	1	1423			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	P	2	1424	3		3		1	M	KIDNEY	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	Q	1	1425			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	Q	2	1426			3			M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	R	1	1427	1	1	1		1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	R	2	1428	2	1	3		1	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	S	1	1429	1	1	1	1	1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	S	2	1430	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	T	1	1431	3		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	T	2	1432	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	U	1	1433	1		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	U	2	1434	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	V	1	1435	2	2	3		1	M	KIDNEY				

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Epithelium, Eosinophilic Inclusions	Tubules, Cellular Debris/Casts	Sex	Tissue	Tubules, Mineralization	Inflammation, Granulomatous	Glomerulomegaly	Glomeruli, Hyaline Inclusions
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	V	2	1436			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	W	1	1437	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	W	2	1438	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	X	1	1439			1			F	KIDNEY				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	X	2	1440	1		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	A	1	1441			1			F	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	A	2	1442	1		3		1	M	KIDNEY	1			
BATT01-00393	F1 Adult	6.3µg/L	B	1	1443	1		2		1	U	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	B	2	1444	1		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	C	1	1445	1		1			F	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	C	2	1446			3			U	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	D	1	1447	1	1	1	1	1	F	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	D	2	1448	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	E	1	1449	3		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	E	2	1450	2		3		2	M	KIDNEY	1			
BATT01-00393	F1 Adult	6.3µg/L	F	1	1451			1			F	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	F	2	1452	1		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	G	1	1453	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	G	2	1454			3			M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	H	1	1455	2	1	1		1	F	KIDNEY	1			
BATT01-00393	F1 Adult	6.3µg/L	H	2	1456	1		3			M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	I	1	1457	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	I	2	1458	2		1			F	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	J	1	1459	1		3			M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	J	2	1460	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	K	1	1461	1	1	1			F	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	K	2	1462	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	L	1	1463	2	1	1		1	F	KIDNEY				
BATT01-00393	F1 Adult	6.3µg/L	L	2	1464	1		3		1	M	KIDNEY	1			
BATT01-00393	F1 Adult	12.5µg/L	A	1	1465	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	A	2	1466	1		3			M	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	B	1	1467	1	1	1	1		F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	B	2	1468	2		3		1	M	KIDNEY	1			
BATT01-00393	F1 Adult	12.5µg/L	C	1	1469	1	1	1			F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	C	2	1470	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	D	1	1471	3	1	3		2	M	KIDNEY	1			
BATT01-00393	F1 Adult	12.5µg/L	D	2	1472		1	1	1		F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	E	1	1473		1	3			M	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	E	2	1474	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	F	1	1475			3			M	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	F	2	1476			1			F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	G	1	1477	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	G	2	1478			1			F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	H	1	1479	2		3			M	KIDNEY				

BATT01-00393

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Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Epithelium, Eosinophilic Inclusions	Tubules, Cellular Debris/Casts	Sex	Tissue	Tubules, Mineralization	Inflammation, Granulomatous	Glomerulomegaly	Glomeruli, Hyaline Inclusions
BATT01-00393	F1 Adult	12.5µg/L	H	2	1480	2	1	1	1	1	F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	I	1	1481	3		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	I	2	1482	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	J	1	1483			1			F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	J	2	1484	3		3		2	M	KIDNEY	1			
BATT01-00393	F1 Adult	12.5µg/L	K	1	1485	1		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	K	2	1486	2		1			F	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	L	1	1487	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	12.5µg/L	L	2	1488	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	A	1	1489	1		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	A	2	1490	3		3		2	M	KIDNEY	1			
BATT01-00393	F1 Adult	25µg/L	B	1	1491	1		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	B	2	1492	3	1	1			F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	C	1	1493	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	C	2	1494	2		3		1	M	KIDNEY	1			
BATT01-00393	F1 Adult	25µg/L	D	1	1495	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	D	2	1496		1	3		1	M	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	E	1	1497	2		1	1	1	F	KIDNEY	1			
BATT01-00393	F1 Adult	25µg/L	E	2	1498	3		3		2	M	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	F	1	1499	1		1			F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	F	2	1500	2		3		2	M	KIDNEY	1			
BATT01-00393	F1 Adult	25µg/L	G	1	1501	1		1	1	1	F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	G	2	1502	1		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	H	1	1503	2		1			F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	H	2	1504	2	1	3			M	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	I	1	1505	2		1			F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	I	2	1506	2	1	3		2	M	KIDNEY	2	1		
BATT01-00393	F1 Adult	25µg/L	J	1	1507	1		1			F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	J	2	1508	1	1	3			M	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	K	1	1509	1	1	3			M	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	K	2	1510	1	1	1			F	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	L	1	1511	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	25µg/L	L	2	1512	1		1			F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	A	1	1513	1	1	3		1	M	KIDNEY	1			
BATT01-00393	F1 Adult	50µg/L	A	2	1514		1	1	1		F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	B	1	1515	1	1	1	2	1	F	KIDNEY			1	2
BATT01-00393	F1 Adult	50µg/L	B	2	1516	1		3			M	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	C	1	1517		3	3		1	M	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	C	2	1518			1			F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	D	1	1519	3		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	D	2	1520			2			F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	E	1	1521	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	E	2	1522	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	F	1	1523	3	1	1			F	KIDNEY				

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Epithelium, Eosinophilic Inclusions	Tubules, Cellular Debris/Casts	Sex	Tissue	Tubules, Mineralization	Inflammation, Granulomatous	Glomerulomegaly	Glomeruli, Hyaline Inclusions
BATT01-00393	F1 Adult	50µg/L	F	2	1524	1		3			M	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	G	1	1525	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	G	2	1526		1	1	1		F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	H	1	1527	1		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	H	2	1528	2		3		2	M	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	I	1	1529	1		3		1	M	KIDNEY	1			
BATT01-00393	F1 Adult	50µg/L	I	2	1530	2		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	J	1	1531			1	1		F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	J	2	1532	1		3			M	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	K	1	1533	2	1	1	1		F	KIDNEY		1		
BATT01-00393	F1 Adult	50µg/L	K	2	1534			3			M	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	L	1	1535	1	1	1			F	KIDNEY				
BATT01-00393	F1 Adult	50µg/L	L	2	1536	2		3		1	M	KIDNEY	2			
BATT01-00393	F1 Adult	100µg/L	A	1	1537			3			M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	A	2	1538	2		2			F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	B	1	1539	2		2			F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	B	2	1540	1		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	C	1	1541	3		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	C	2	1542			3			M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	D	1	1543			3			M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	D	2	1544			1			F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	E	1	1545	1		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	E	2	1546			1			F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	F	1	1547			3			M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	F	2	1548			1			F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	G	1	1549	2		2		1	F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	G	2	1550	2		3		1	M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	H	1	1551			1			F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	H	2	1552	1		3			M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	I	1	1553	1		3			M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	I	2	1554	1		1		1	F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	J	1	1555			3			M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	J	2	1556	1		1			F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	K	1	1557			3			M	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	K	2	1558	2		1		2	F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	L	1	1559			1			F	KIDNEY				
BATT01-00393	F1 Adult	100µg/L	L	2	1560			3			M	KIDNEY				

FEL

DEST worksheet produced by Battelle																		
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Individual Cell Necrosis	Sex	Tissue	Cellular Infiltrate, Mononuclear Cell	Focus of Cellular Alteration	Hepatocytes, Fatty Change, Regional	Inflammation, Granulomatous	Not Remarkable	Basophilia	Cytoplasmic Inclusions, Eosinophilic	Hepatocellular Adenoma
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	A	1	1393	3			F	LIVER		1				3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	A	2	1394	3	1		M	LIVER	1							
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	B	1	1395	2		1	F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	B	2	1396	2	2		M	LIVER		1						
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	C	1	1397	3			M	LIVER		3						
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	C	2	1398	2	2	1	F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	D	1	1399	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	D	2	1400	2	1	1	F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	E	1	1401	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	E	2	1402	2		1	F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	F	1	1403	3	1		F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	F	2	1404	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	G	1	1405	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	G	2	1406	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	H	1	1407	2			F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	H	2	1408	2			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	I	1	1409	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	I	2	1410	2	1		F	LIVER						3	1	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	J	1	1411	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	J	2	1412	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	K	1	1413	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	K	2	1414	2	1		M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	L	1	1415	2			F	LIVER		2				3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	L	2	1416	3			U	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	M	1	1417	3			U	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	M	2	1418	2			F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	N	1	1419	2			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	N	2	1420	2			F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	O	1	1421	2			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	O	2	1422	2			F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	P	1	1423	2			F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	P	2	1424	2	1		M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	Q	1	1425	2	1	1	F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	Q	2	1426	2			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	R	1	1427	2			F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	R	2	1428	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	S	1	1429	2			F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	S	2	1430	2			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	T	1	1431	3			F	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	T	2	1432	3			M	LIVER		2						
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	U	1	1433	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	U	2	1434	2			F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	V	1	1435	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	V	2	1436	2	2		F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	W	1	1437	3			F	LIVER						3		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	W	2	1438	3			M	LIVER								
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	X	1	1439	3	1		F	LIVER						2		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	X	2	1440	3			M	LIVER								

DEST

BATT01-00393

Liver Histology_F1 Adult

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Individual Cell Necrosis	Sex		Cellular Infiltrate, Mononuclear Cell	Focus of Cellular Alteration	Hepatocytes, Fatty Change, Regional	Inflammation, Granulomatous	Not Remarkable	Basophilia	Cytoplasmic Inclusions, Eosinophilic	Hepatocellular Adenoma
BATT01-00393	F1 Adult	6.3µg/L	A	1	1441	2	1	1	F	LIVER						3		
BATT01-00393	F1 Adult	6.3µg/L	A	2	1442	2			M	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	B	1	1443	3	1		U	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	B	2	1444	3			M	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	C	1	1445	3	2	1	F	LIVER						2		
BATT01-00393	F1 Adult	6.3µg/L	C	2	1446	3			U	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	D	1	1447	1		1	F	LIVER						3		
BATT01-00393	F1 Adult	6.3µg/L	D	2	1448	2			M	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	E	1	1449	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	6.3µg/L	E	2	1450	2			M	LIVER			1					
BATT01-00393	F1 Adult	6.3µg/L	F	1	1451	1		1	F	LIVER						3		
BATT01-00393	F1 Adult	6.3µg/L	F	2	1452	2	1		M	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	G	1	1453	3	2		M	LIVER			1					
BATT01-00393	F1 Adult	6.3µg/L	G	2	1454	2			M	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	H	1	1455	2	2	1	F	LIVER						3		
BATT01-00393	F1 Adult	6.3µg/L	H	2	1456	2			M	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	I	1	1457	2			M	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	I	2	1458	1			F	LIVER						3		
BATT01-00393	F1 Adult	6.3µg/L	J	1	1459	3	1		M	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	J	2	1460	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	6.3µg/L	K	1	1461	3	2		F	LIVER		1						
BATT01-00393	F1 Adult	6.3µg/L	K	2	1462	3			M	LIVER								
BATT01-00393	F1 Adult	6.3µg/L	L	1	1463	1	2		F	LIVER						3		
BATT01-00393	F1 Adult	6.3µg/L	L	2	1464	3			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	A	1	1465	2	1		F	LIVER		1	1			3		
BATT01-00393	F1 Adult	12.5µg/L	A	2	1466	3			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	B	1	1467	2	1	1	F	LIVER						3		
BATT01-00393	F1 Adult	12.5µg/L	B	2	1468	2			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	C	1	1469	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	12.5µg/L	C	2	1470	2			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	D	1	1471	2			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	D	2	1472	3			F	LIVER						2		
BATT01-00393	F1 Adult	12.5µg/L	E	1	1473	3			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	E	2	1474	2	2	1	F	LIVER						3		
BATT01-00393	F1 Adult	12.5µg/L	F	1	1475	2			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	F	2	1476	2			F	LIVER						3		
BATT01-00393	F1 Adult	12.5µg/L	G	1	1477	2			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	G	2	1478	2	1		F	LIVER						3		P
BATT01-00393	F1 Adult	12.5µg/L	H	1	1479	2	1		M	LIVER		1						
BATT01-00393	F1 Adult	12.5µg/L	H	2	1480	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	12.5µg/L	I	1	1481	3	1		F	LIVER						2		
BATT01-00393	F1 Adult	12.5µg/L	I	2	1482	3			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	J	1	1483	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	12.5µg/L	J	2	1484	2	1		M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	K	1	1485	2			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	K	2	1486	2			F	LIVER						2		
BATT01-00393	F1 Adult	12.5µg/L	L	1	1487	3			M	LIVER								
BATT01-00393	F1 Adult	12.5µg/L	L	2	1488	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	25µg/L	A	1	1489	2			F	LIVER						3		

DEST

BATT01-00393

Liver Histology_F1 Adult

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Individual Cell Necrosis	Sex		Cellular Infiltrate, Mononuclear Cell	Focus of Cellular Alteration	Hepatocytes, Fatty Change, Regional	Inflammation, Granulomatous	Not Remarkable	Basophilia	Cytoplasmic Inclusions, Eosinophilic	Hepatocellular Adenoma
BATT01-00393	F1 Adult	25µg/L	A	2	1490	2			M	LIVER								
BATT01-00393	F1 Adult	25µg/L	B	1	1491	2			M	LIVER								
BATT01-00393	F1 Adult	25µg/L	B	2	1492	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	25µg/L	C	1	1493	1			F	LIVER						3		
BATT01-00393	F1 Adult	25µg/L	C	2	1494	1			M	LIVER								
BATT01-00393	F1 Adult	25µg/L	D	1	1495	2			F	LIVER						3		
BATT01-00393	F1 Adult	25µg/L	D	2	1496	2			M	LIVER								
BATT01-00393	F1 Adult	25µg/L	E	1	1497	3	1		F	LIVER						2		
BATT01-00393	F1 Adult	25µg/L	E	2	1498	2			M	LIVER								
BATT01-00393	F1 Adult	25µg/L	F	1	1499	2	1		F	LIVER		1				3		
BATT01-00393	F1 Adult	25µg/L	F	2	1500	1			M	LIVER								
BATT01-00393	F1 Adult	25µg/L	G	1	1501	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	25µg/L	G	2	1502	2			M	LIVER								
BATT01-00393	F1 Adult	25µg/L	H	1	1503	2	1	1	F	LIVER						3		
BATT01-00393	F1 Adult	25µg/L	H	2	1504	2	1		M	LIVER								
BATT01-00393	F1 Adult	25µg/L	I	1	1505	2			F	LIVER						3		
BATT01-00393	F1 Adult	25µg/L	I	2	1506	1			M	LIVER								
BATT01-00393	F1 Adult	25µg/L	J	1	1507	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	25µg/L	J	2	1508	2			M	LIVER								
BATT01-00393	F1 Adult	25µg/L	K	1	1509	2			M	LIVER				1				
BATT01-00393	F1 Adult	25µg/L	K	2	1510	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	25µg/L	L	1	1511	2		2	M	LIVER								
BATT01-00393	F1 Adult	25µg/L	L	2	1512	1			F	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	A	1	1513	2			M	LIVER								
BATT01-00393	F1 Adult	50µg/L	A	2	1514	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	B	1	1515	2	1		F	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	B	2	1516	2			M	LIVER								
BATT01-00393	F1 Adult	50µg/L	C	1	1517	1			M	LIVER								
BATT01-00393	F1 Adult	50µg/L	C	2	1518	1	1	1	F	LIVER						3	1	
BATT01-00393	F1 Adult	50µg/L	D	1	1519	2	2		M	LIVER								
BATT01-00393	F1 Adult	50µg/L	D	2	1520	2			F	LIVER		2				3	1	
BATT01-00393	F1 Adult	50µg/L	E	1	1521	2			M	LIVER								
BATT01-00393	F1 Adult	50µg/L	E	2	1522	2			F	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	F	1	1523	1	1	1	F	LIVER						3	1	
BATT01-00393	F1 Adult	50µg/L	F	2	1524	2	1		M	LIVER								
BATT01-00393	F1 Adult	50µg/L	G	1	1525	2			M	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	G	2	1526	2			F	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	H	1	1527	2			F	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	H	2	1528	2		1	M	LIVER								
BATT01-00393	F1 Adult	50µg/L	I	1	1529	2			M	LIVER								
BATT01-00393	F1 Adult	50µg/L	I	2	1530	2			F	LIVER						2		
BATT01-00393	F1 Adult	50µg/L	J	1	1531	1	2		F	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	J	2	1532	2			M	LIVER								
BATT01-00393	F1 Adult	50µg/L	K	1	1533	1	1		F	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	K	2	1534	1			M	LIVER								
BATT01-00393	F1 Adult	50µg/L	L	1	1535	1	1		F	LIVER						3		
BATT01-00393	F1 Adult	50µg/L	L	2	1536	1			M	LIVER								
BATT01-00393	F1 Adult	100µg/L	A	1	1537	1			M	LIVER								
BATT01-00393	F1 Adult	100µg/L	A	2	1538	1	1		F	LIVER						3	1	

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Individual Cell Necrosis	Sex	Tissue	Cellular Infiltrate, Mononuclear Cell	Focus of Cellular Alteration	Hepatocytes, Fatty Change, Regional	Inflammation, Granulomatous	Not Remarkable	Basophilia	Cytoplasmic Inclusions, Eosinophilic	Hepatocellular Adenoma
BATT01-00393	F1 Adult	100µg/L	B	1	1539	1		1	F	LIVER						3		
BATT01-00393	F1 Adult	100µg/L	B	2	1540	1			M	LIVER								
BATT01-00393	F1 Adult	100µg/L	C	1	1541	1	2		F	LIVER						3	1	
BATT01-00393	F1 Adult	100µg/L	C	2	1542	1			M	LIVER								
BATT01-00393	F1 Adult	100µg/L	D	1	1543	1			M	LIVER								
BATT01-00393	F1 Adult	100µg/L	D	2	1544	1	1	1	F	LIVER						3		
BATT01-00393	F1 Adult	100µg/L	E	1	1545	2			M	LIVER								
BATT01-00393	F1 Adult	100µg/L	E	2	1546	1			F	LIVER						3		
BATT01-00393	F1 Adult	100µg/L	F	1	1547	1	1		M	LIVER	1							
BATT01-00393	F1 Adult	100µg/L	F	2	1548		1		F	LIVER						3		
BATT01-00393	F1 Adult	100µg/L	G	1	1549	1			F	LIVER						3		
BATT01-00393	F1 Adult	100µg/L	G	2	1550	1			M	LIVER								
BATT01-00393	F1 Adult	100µg/L	H	1	1551	1	1		F	LIVER						3		
BATT01-00393	F1 Adult	100µg/L	H	2	1552	1	1		M	LIVER								
BATT01-00393	F1 Adult	100µg/L	I	1	1553	1			M	LIVER								
BATT01-00393	F1 Adult	100µg/L	I	2	1554	2			F	LIVER						2		
BATT01-00393	F1 Adult	100µg/L	J	1	1555	1			M	LIVER								
BATT01-00393	F1 Adult	100µg/L	J	2	1556	1			F	LIVER						3		
BATT01-00393	F1 Adult	100µg/L	K	1	1557				M	LIVER					X			
BATT01-00393	F1 Adult	100µg/L	K	2	1558	2			F	LIVER						3		
BATT01-00393	F1 Adult	100µg/L	L	1	1559	1	1	1	F	LIVER						3	2	
BATT01-00393	F1 Adult	100µg/L	L	2	1560	1			M	LIVER								

FEL

DEST worksheet produced by Battelle															
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Ovary Stage	Gonad Phenotype Score	Oocyte Atresia	Sex	Tissue	Post-ovulatory Follicles	Inflammation, Granulomatous	Post-ovulatory Follicles, Accelerated Necrosis	Hypoplasia/ Atrophy	Unable to Stage
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	A	1	1393	4	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	B	1	1395	4	5		F	OVARY	2				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	C	2	1398	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	D	2	1400	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	E	2	1402	3	5		F	OVARY	2				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	F	1	1403	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	G	2	1406	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	H	1	1407	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	I	2	1410	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	J	1	1411	3	5		F	OVARY	2				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	K	1	1413	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	L	1	1415	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	M	2	1418	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	N	2	1420	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	O	2	1422	3	5	1	F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	P	1	1423	3	5		F	OVARY					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	Q	1	1425	4	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	R	1	1427	4	5		F	OVARY					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	S	1	1429	4	5		F	OVARY	3				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	T	1	1431	1	5	1	F	OVARY					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	U	2	1434	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	V	2	1436	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	W	1	1437	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	X	1	1439	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	6.3µg/L	A	1	1441	3	5		F	OVARY	2				
BATT01-00393	F1 Adult	6.3µg/L	B	1	1443				U	GONAD				4	P
BATT01-00393	F1 Adult	6.3µg/L	C	1	1445	3	5		F	OVARY	2				
BATT01-00393	F1 Adult	6.3µg/L	D	1	1447	3	5		F	OVARY					
BATT01-00393	F1 Adult	6.3µg/L	E	1	1449	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	6.3µg/L	F	1	1451	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	6.3µg/L	H	1	1455	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	6.3µg/L	I	2	1458	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	6.3µg/L	J	2	1460	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	6.3µg/L	K	1	1461	2	5	1	F	OVARY		1			
BATT01-00393	F1 Adult	6.3µg/L	L	1	1463	2	5	1	F	OVARY					

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Ovary Stage	Gonad Phenotype Score	Oocyte Atresia	Sex	Tissue	Post-ovulatory Follicles	Inflammation, Granulomatous	Post-ovulatory Follicles, Accelerated Necrosis	Hypoplasia/ Atrophy	Unable to Stage
BATT01-00393	F1 Adult	12.5µg/L	A	1	1465	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	12.5µg/L	B	1	1467	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	12.5µg/L	C	1	1469	4	5		F	OVARY	1				
BATT01-00393	F1 Adult	12.5µg/L	D	2	1472	4	5	2	F	OVARY		2			
BATT01-00393	F1 Adult	12.5µg/L	E	2	1474	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	12.5µg/L	F	2	1476	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	12.5µg/L	G	2	1478	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	12.5µg/L	H	2	1480	4	5		F	OVARY	2				
BATT01-00393	F1 Adult	12.5µg/L	I	1	1481	4	5		F	OVARY	1				
BATT01-00393	F1 Adult	12.5µg/L	J	1	1483	3	5		F	OVARY	2				
BATT01-00393	F1 Adult	12.5µg/L	K	2	1486	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	12.5µg/L	L	2	1488	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	25µg/L	A	1	1489	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	25µg/L	B	2	1492	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	25µg/L	C	1	1493	3	5		F	OVARY	2				
BATT01-00393	F1 Adult	25µg/L	D	1	1495	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	25µg/L	E	1	1497	3	5		F	OVARY					
BATT01-00393	F1 Adult	25µg/L	F	1	1499	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	25µg/L	G	1	1501	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	25µg/L	H	1	1503	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	25µg/L	I	1	1505	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	25µg/L	J	1	1507	4	5		F	OVARY	1				
BATT01-00393	F1 Adult	25µg/L	K	2	1510	4	5		F	OVARY					
BATT01-00393	F1 Adult	25µg/L	L	2	1512	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	50µg/L	A	2	1514	4	5		F	OVARY					
BATT01-00393	F1 Adult	50µg/L	B	1	1515	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	50µg/L	C	2	1518	3	5		F	OVARY	1		1		
BATT01-00393	F1 Adult	50µg/L	D	2	1520	3	5		F	OVARY					
BATT01-00393	F1 Adult	50µg/L	E	2	1522	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	50µg/L	F	1	1523	2	5		F	OVARY	1				
BATT01-00393	F1 Adult	50µg/L	G	2	1526	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	50µg/L	H	1	1527	4	5	1	F	OVARY	1				
BATT01-00393	F1 Adult	50µg/L	I	2	1530	3	5		F	OVARY					
BATT01-00393	F1 Adult	50µg/L	J	1	1531	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	50µg/L	K	1	1533	3	5		F	OVARY					
BATT01-00393	F1 Adult	50µg/L	L	1	1535	4	5		F	OVARY	1				

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Ovary Stage	Gonad Phenotype Score	Oocyte Atresia	Sex	Tissue	Post-ovulatory Follicles	Inflammation, Granulomatous	Post-ovulatory Follicles, Accelerated Necrosis	Hypoplasia/ Atrophy	Unable to Stage
BATT01-00393	F1 Adult	100µg/L	A	2	1538	3	5		F	OVARY					
BATT01-00393	F1 Adult	100µg/L	B	1	1539	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	100µg/L	C	1	1541	4	5		F	OVARY	1				
BATT01-00393	F1 Adult	100µg/L	D	2	1544	3	5		F	OVARY	1		1		
BATT01-00393	F1 Adult	100µg/L	E	2	1546	4	5		F	OVARY					
BATT01-00393	F1 Adult	100µg/L	F	2	1548	3	5		F	OVARY	3				
BATT01-00393	F1 Adult	100µg/L	G	1	1549	4	5		F	OVARY	1				
BATT01-00393	F1 Adult	100µg/L	H	1	1551	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	100µg/L	I	2	1554	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	100µg/L	J	2	1556	4	5	3	F	OVARY		2			
BATT01-00393	F1 Adult	100µg/L	K	2	1558	3	5		F	OVARY	1				
BATT01-00393	F1 Adult	100µg/L	L	1	1559	3	5		F	OVARY	1				

FEL

DEST worksheet produced by Battelle																	
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Testis Stage	Gonad Phenotype Score	Testicular Degeneration	Histiocytic Cells, Intraluminal	Interstitial Fibrosis	Sex	Tissue	Interstitial Cells, Increased	Unable to Stage	Increased Spermatagonia	Hypoplasia/ Atrophy	No Section
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	A	2	1394	2	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	B	2	1396	3	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	C	1	1397	1	1			2	M	TESTIS	2				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	D	1	1399		1			1	M	TESTIS		P			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	E	1	1401	1	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	F	2	1404		1	1			M	TESTIS		P	1		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	G	1	1405	3	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	H	2	1408	3	1	1			M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	I	1	1409	4	1	1			M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	J	2	1412	1	1	1			M	TESTIS	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	K	2	1414	4	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	L	2	1416						U	GONAD					N
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	M	1	1417						U	GONAD					N
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	N	1	1419	1	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	O	1	1421	1	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	P	2	1424	2	1				M	TESTIS	1				
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	Q	2	1426	2	1	1			M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	R	2	1428	3	1	2			M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	S	2	1430	2	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	T	2	1432	4	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	U	1	1433		1				M	TESTIS		P			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	V	1	1435	2	1				M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	W	2	1438	1	1		3		M	TESTIS					
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	X	2	1440	2	1				M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	A	2	1442	2	1	1			M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	B	2	1444	3	1	1			M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	C	2	1446						U	GONAD					N
BATT01-00393	F1 Adult	6.3µg/L	D	2	1448	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	E	2	1450	2	1	1			M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	F	2	1452	2	1				M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	G	1	1453	3	1	1			M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	G	2	1454	4	1	1			M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	H	2	1456	2	1	1			M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	I	1	1457	4	1	1			M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	J	1	1459	2	1				M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	K	2	1462	3	1				M	TESTIS					
BATT01-00393	F1 Adult	6.3µg/L	L	2	1464	4	1				M	TESTIS					
BATT01-00393	F1 Adult	12.5µg/L	A	2	1466	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	12.5µg/L	B	2	1468	2	1				M	TESTIS					
BATT01-00393	F1 Adult	12.5µg/L	C	2	1470	2	1	1			M	TESTIS	1				
BATT01-00393	F1 Adult	12.5µg/L	D	1	1471	3	1	1			M	TESTIS					

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Testis Stage	Gonad Phenotype Score	Testicular Degeneration	Histiocytic Cells, Intraluminal	Interstitial Fibrosis	Sex	Tissue	Interstitial Cells, Increased	Unable to Stage	Increased Spermatagonia	Hypoplasia/ Atrophy	No Section
BATT01-00393	F1 Adult	12.5µg/L	E	1	1473		1				M	TESTIS	2	P			
BATT01-00393	F1 Adult	12.5µg/L	F	1	1475	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	12.5µg/L	G	1	1477	2	1				M	TESTIS					
BATT01-00393	F1 Adult	12.5µg/L	H	1	1479	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	12.5µg/L	I	2	1482	4	1	1			M	TESTIS				1	
BATT01-00393	F1 Adult	12.5µg/L	J	2	1484	2	1				M	TESTIS	1				
BATT01-00393	F1 Adult	12.5µg/L	K	1	1485	2	1	1			M	TESTIS					
BATT01-00393	F1 Adult	12.5µg/L	L	1	1487	3	1				M	TESTIS				1	
BATT01-00393	F1 Adult	25µg/L	A	2	1490	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	25µg/L	B	1	1491	2	1				M	TESTIS					
BATT01-00393	F1 Adult	25µg/L	C	2	1494	4	1	1			M	TESTIS					
BATT01-00393	F1 Adult	25µg/L	D	2	1496		1	1			M	TESTIS		P			
BATT01-00393	F1 Adult	25µg/L	E	2	1498	2	1				M	TESTIS					
BATT01-00393	F1 Adult	25µg/L	F	2	1500	1	1				M	TESTIS					
BATT01-00393	F1 Adult	25µg/L	G	2	1502	1	1	1			M	TESTIS	1				
BATT01-00393	F1 Adult	25µg/L	H	2	1504	3	1				M	TESTIS					
BATT01-00393	F1 Adult	25µg/L	I	2	1506	1	1				M	TESTIS					
BATT01-00393	F1 Adult	25µg/L	J	2	1508	3	1	1			M	TESTIS					
BATT01-00393	F1 Adult	25µg/L	K	1	1509	3	1	1			M	TESTIS					
BATT01-00393	F1 Adult	25µg/L	L	1	1511	3	1	1			M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	A	1	1513	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	B	2	1516	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	C	1	1517	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	D	1	1519	4	1	2			M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	E	1	1521		1	1			M	TESTIS	1	P			
BATT01-00393	F1 Adult	50µg/L	F	2	1524	2	1	1			M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	G	1	1525	4	1				M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	H	2	1528	2	1				M	TESTIS	1				
BATT01-00393	F1 Adult	50µg/L	I	1	1529	4	1	2			M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	J	2	1532	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	K	2	1534	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	50µg/L	L	2	1536	3	1				M	TESTIS	1				
BATT01-00393	F1 Adult	100µg/L	A	1	1537		1				M	TESTIS		P			
BATT01-00393	F1 Adult	100µg/L	B	2	1540	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	100µg/L	C	2	1542	1	1	1			M	TESTIS					
BATT01-00393	F1 Adult	100µg/L	D	1	1543	2	1	1			M	TESTIS					
BATT01-00393	F1 Adult	100µg/L	E	1	1545	3	1				M	TESTIS					
BATT01-00393	F1 Adult	100µg/L	F	1	1547	1	1				M	TESTIS					
BATT01-00393	F1 Adult	100µg/L	G	2	1550	3	1	1			M	TESTIS					
BATT01-00393	F1 Adult	100µg/L	H	2	1552		1				M	TESTIS		P			
BATT01-00393	F1 Adult	100µg/L	I	1	1553	3	1	1			M	TESTIS					
BATT01-00393	F1 Adult	100µg/L	J	1	1555	2	1	1			M	TESTIS	1				

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Testis Stage	Gonad Phenotype Score	Testicular Degeneration	Histiocytic Cells, Intraluminal	Interstitial Fibrosis	Sex	Tissue	Interstitial Cells, Increased	Unable to Stage	Increased Spermatagonia	Hypoplasia/ Atrophy	No Section
BATT01-00393	F1 Adult	100µg/L	K	1	1557	4	1	1			M	TESTIS					
BATT01-00393	F1 Adult	100µg/L	L	2	1560	1	1	1			M	TESTIS					

DEST worksheet produced by Battelle											
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Sex	Tissue	Follicular Cell Hypertrophy/ Hyperplasia	Follicular Cells, Hyaline Degeneration	Not Remarkable	Hypoplasia/ Atrophy
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	A	1	1393	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	A	2	1394	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	B	1	1395	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	B	2	1396	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	C	1	1397	M	THYROID	2			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	C	2	1398	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	D	1	1399	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	D	2	1400	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	E	1	1401	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	E	2	1402	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	F	1	1403	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	F	2	1404	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	G	1	1405	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	G	2	1406	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	H	1	1407	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	H	2	1408	M	THYROID	1	2		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	I	1	1409	M	THYROID	2			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	I	2	1410	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	J	1	1411	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	J	2	1412	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	K	1	1413	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	K	2	1414	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	L	1	1415	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	L	2	1416	U	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	M	1	1417	U	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	M	2	1418	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	N	1	1419	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	N	2	1420	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	O	1	1421	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	O	2	1422	F	THYROID			X	

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Sex	Tissue	Follicular Cell Hypertrophy/ Hyperplasia	Follicular Cells, Hyaline Degeneration	Not Remarkable	Hypoplasia/ Atrophy
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	P	1	1423	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	P	2	1424	M	THYROID	1	2		
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	Q	1	1425	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	Q	2	1426	M	THYROID	2			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	R	1	1427	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	R	2	1428	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	S	1	1429	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	S	2	1430	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	T	1	1431	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	T	2	1432	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	U	1	1433	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	U	2	1434	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	V	1	1435	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	V	2	1436	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	W	1	1437	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	W	2	1438	M	THYROID	1			
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	X	1	1439	F	THYROID			X	
BATT01-00393	F1 Adult	(Ctrl) 0.0µg/L	X	2	1440	M	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	A	1	1537	M	THYROID	1			
BATT01-00393	F1 Adult	100µg/L	A	2	1538	F	THYROID				1
BATT01-00393	F1 Adult	100µg/L	B	1	1539	F	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	B	2	1540	M	THYROID	2			
BATT01-00393	F1 Adult	100µg/L	C	1	1541	F	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	C	2	1542	M	THYROID	1			
BATT01-00393	F1 Adult	100µg/L	D	1	1543	M	THYROID	1			
BATT01-00393	F1 Adult	100µg/L	D	2	1544	F	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	E	1	1545	M	THYROID	1			
BATT01-00393	F1 Adult	100µg/L	E	2	1546	F	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	F	1	1547	M	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	F	2	1548	F	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	G	1	1549	F	THYROID			X	

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Sex	Tissue	Follicular Cell Hypertrophy/ Hyperplasia	Follicular Cells, Hyaline Degeneration	Not Remarkable	Hypoplasia/ Atrophy
BATT01-00393	F1 Adult	100µg/L	G	2	1550	M	THYROID	1			
BATT01-00393	F1 Adult	100µg/L	H	1	1551	F	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	H	2	1552	M	THYROID	2			
BATT01-00393	F1 Adult	100µg/L	I	1	1553	M	THYROID	1			
BATT01-00393	F1 Adult	100µg/L	I	2	1554	F	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	J	1	1555	M	THYROID	1			
BATT01-00393	F1 Adult	100µg/L	J	2	1556	F	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	K	1	1557	M	THYROID	1			
BATT01-00393	F1 Adult	100µg/L	K	2	1558	F	THYROID	1			
BATT01-00393	F1 Adult	100µg/L	L	1	1559	F	THYROID			X	
BATT01-00393	F1 Adult	100µg/L	L	2	1560	M	THYROID	1			

FEL

DEST worksheet produced by Battelle																
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Cellular Debris/Casts	Sex	Tissue	Tubules, Mineralization	Inflammation, Granulomatous	Hematopoietic Tissue, Decreased	Hematopoietic Tissue, Increased	Tubules, Epithelium, Eosinophilic Inclus
BATT01-00393	F2 Adult	0.0 (Control)	A	1	2552	2		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	B	1	2554	3		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	D	1	2558	4		2		M	KIDNEY	1		2		
BATT01-00393	F2 Adult	0.0 (Control)	E	2	2561	3		3	2	M	KIDNEY	2	1			
BATT01-00393	F2 Adult	0.0 (Control)	F	1	2562	1		3		M	KIDNEY	2				
BATT01-00393	F2 Adult	0.0 (Control)	G	1	2564	1		3		M	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	H	1	2566	3		3	1	M	KIDNEY	1		2		
BATT01-00393	F2 Adult	0.0 (Control)	I	1	2568	2		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	K	1	2572	2		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	L	1	2574	4		2	1	M	KIDNEY	1		1		
BATT01-00393	F2 Adult	0.0 (Control)	M	1	2576	3		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	N	1	2578	2		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	O	1	2580	2		3	1	M	KIDNEY	2				
BATT01-00393	F2 Adult	0.0 (Control)	P	1	2582	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	Q	1	2584	3		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	R	1	2586	1		3		M	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	S	1	2588	2		3		M	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	T	1	2590	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	U	1	2592	1		3		M	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	V	1	2594	3		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	W	1	2596			3		M	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	X	1	2598	1		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	6.3	A	1	2600			3		M	KIDNEY					
BATT01-00393	F2 Adult	6.3	B	1	2602	3		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	6.3	C	1	2604	2		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	6.3	D	1	2606	3		3	2	M	KIDNEY	2				
BATT01-00393	F2 Adult	6.3	E	1	2608	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	6.3	F	1	2610	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	6.3	G	1	2612	1		3		M	KIDNEY					
BATT01-00393	F2 Adult	6.3	H	1	2614	3		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	6.3	I	1	2616	2		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	6.3	J	1	2618	1		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	6.3	K	1	2620	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	6.3	L	1	2622	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	12.5	A	1	2624	2		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	12.5	B	1	2626			3		M	KIDNEY					
BATT01-00393	F2 Adult	12.5	C	1	2628	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	12.5	D	1	2630	2		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	12.5	E	1	2632	1		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	12.5	F	1	2634	3		3	2	M	KIDNEY	2	1			
BATT01-00393	F2 Adult	12.5	G	1	2636	1		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	12.5	H	1	2638	1		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	12.5	I	1	2640	3		3	1	M	KIDNEY	1				

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Cellular Debris/Casts	Sex	Tissue	Tubules, Mineralization	Inflammation, Granulomatous	Hematopoietic Tissue, Decreased	Hematopoietic Tissue, Increased	Tubules, Epithelium, Eosinophilic Inclus
BATT01-00393	F2 Adult	12.5	J	1	2642	4		2	2	M	KIDNEY			2		
BATT01-00393	F2 Adult	12.5	K	1	2644	1		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	12.5	L	1	2646			3	2	M	KIDNEY	2	1			
BATT01-00393	F2 Adult	25	A	1	2648	2		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	25	B	1	2650	4		3	2	M	KIDNEY	2		1		
BATT01-00393	F2 Adult	25	C	1	2652	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	25	D	1	2654	1		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	25	E	1	2656	2		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	25	F	1	2658	4		3		M	KIDNEY					
BATT01-00393	F2 Adult	25	G	1	2660	3		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	25	I	1	2664	4		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	25	J	1	2666	1		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	25	K	1	2668	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	25	L	1	2670	2		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	50	A	1	2672	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	50	B	1	2674			3		M	KIDNEY					
BATT01-00393	F2 Adult	50	C	1	2676	3		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	50	D	1	2678	3		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	50	E	1	2680	2		3	2	M	KIDNEY	1				
BATT01-00393	F2 Adult	50	F	1	2682	2		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	50	G	1	2684	1		3		M	KIDNEY					
BATT01-00393	F2 Adult	50	H	1	2686	3		3	2	M	KIDNEY	2				
BATT01-00393	F2 Adult	50	I	1	2688	4		3	1	M	KIDNEY	2		1		
BATT01-00393	F2 Adult	50	J	1	2690	1		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	50	K	1	2692	2		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	50	L	1	2694	2		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	100	A	1	2696	4		3	1	M	KIDNEY	2				
BATT01-00393	F2 Adult	100	B	1	2698	1		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	100	C	1	2700	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	100	D	1	2702	3		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	100	E	1	2704	2		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	100	F	1	2706	3		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	100	G	1	2708	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	100	H	1	2710	2		3	1	M	KIDNEY	1				
BATT01-00393	F2 Adult	100	I	1	2712	3		3	2	M	KIDNEY					
BATT01-00393	F2 Adult	100	J	1	2714	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	100	K	1	2716	2		3	1	M	KIDNEY					
BATT01-00393	F2 Adult	100	L	1	2718	1		3		M	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	A	2	2553	2		1		F	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	B	2	2555	2		1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	C	1	2556			1	1	F	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	C	2	2557	3	1	1		F	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	E	1	2560			1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	F	2	2563	4		1	1	F	KIDNEY	1	1			

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Cellular Debris/Casts	Sex	Tissue	Tubules, Mineralization	Inflammation, Granulomatous	Hematopoietic Tissue, Decreased	Hematopoietic Tissue, Increased	Tubules, Epithelium, Eosinophilic Inclus
BATT01-00393	F2 Adult	0.0 (Control)	G	2	2565	3		1	2	F	KIDNEY	2				
BATT01-00393	F2 Adult	0.0 (Control)	H	2	2567	2		1	1	F	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	I	2	2569	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	J	2	2571	2		1	1	F	KIDNEY	1				
BATT01-00393	F2 Adult	0.0 (Control)	K	2	2573	1		1		F	KIDNEY				3	
BATT01-00393	F2 Adult	0.0 (Control)	L	2	2575			1		F	KIDNEY				3	
BATT01-00393	F2 Adult	0.0 (Control)	M	2	2577	2		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	N	2	2579			1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	O	2	2581	2		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	P	2	2583	3		1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	Q	2	2585	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	R	2	2587	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	S	2	2589	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	T	2	2591	2		1	1	F	KIDNEY				2	
BATT01-00393	F2 Adult	0.0 (Control)	U	2	2593			1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	V	2	2595	2		1	1	F	KIDNEY				1	
BATT01-00393	F2 Adult	0.0 (Control)	W	2	2597	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	X	2	2599	3		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	6.3	A	2	2601	2		1		F	KIDNEY					
BATT01-00393	F2 Adult	6.3	B	2	2603	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	6.3	C	2	2605	2		1		F	KIDNEY					
BATT01-00393	F2 Adult	6.3	D	2	2607	2		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	6.3	E	2	2609	2		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	6.3	G	2	2613	2		1		F	KIDNEY					2
BATT01-00393	F2 Adult	6.3	H	2	2615			1		F	KIDNEY					
BATT01-00393	F2 Adult	6.3	I	2	2617	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	6.3	J	2	2619	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	6.3	K	2	2621	2		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	6.3	L	2	2623			1		F	KIDNEY					
BATT01-00393	F2 Adult	12.5	A	2	2625	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	12.5	B	2	2627			1		F	KIDNEY					
BATT01-00393	F2 Adult	12.5	D	2	2631	2		1	1	F	KIDNEY	1				
BATT01-00393	F2 Adult	12.5	E	2	2633	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	12.5	F	2	2635	3		1	1	F	KIDNEY				1	
BATT01-00393	F2 Adult	12.5	G	2	2637	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	12.5	I	2	2641	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	12.5	J	2	2643	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	12.5	K	2	2645		1	1	1	F	KIDNEY					
BATT01-00393	F2 Adult	12.5	L	2	2647	3		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	25	A	2	2649	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	25	B	2	2651	1		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	25	C	2	2653			1	1	F	KIDNEY					
BATT01-00393	F2 Adult	25	D	2	2655	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	25	E	2	2657	1		2		F	KIDNEY					

FEL

BATT01-00393

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Tubules, Dilation	Tubules, Epithelium, Vacuolation	Tubules, Epithelium, Eosinophilia	Tubules, Cellular Debris/Casts	Sex	Tissue	Tubules, Mineralization	Inflammation, Granulomatous	Hematopoietic Tissue, Decreased	Hematopoietic Tissue, Increased	Tubules, Epithelium, Eosinophilic Inclus
BATT01-00393	F2 Adult	25	F	2	2659	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	25	G	2	2661			1		F	KIDNEY					
BATT01-00393	F2 Adult	25	H	2	2663			1		F	KIDNEY					
BATT01-00393	F2 Adult	25	I	2	2665	2		1		F	KIDNEY					
BATT01-00393	F2 Adult	25	J	2	2667			1		F	KIDNEY					
BATT01-00393	F2 Adult	25	K	2	2669	2		1		F	KIDNEY					
BATT01-00393	F2 Adult	25	L	2	2671			1		F	KIDNEY					
BATT01-00393	F2 Adult	50	A	2	2673	2		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	50	B	2	2675			1		F	KIDNEY					
BATT01-00393	F2 Adult	50	C	2	2677	2		1		F	KIDNEY					
BATT01-00393	F2 Adult	50	D	2	2679			1		F	KIDNEY					
BATT01-00393	F2 Adult	50	E	2	2681	3		1	1	F	KIDNEY	1				
BATT01-00393	F2 Adult	50	F	2	2683			1		F	KIDNEY					
BATT01-00393	F2 Adult	50	G	2	2685			1		F	KIDNEY					
BATT01-00393	F2 Adult	50	H	2	2687	4		1	2	F	KIDNEY	1	2			
BATT01-00393	F2 Adult	50	I	2	2689	1		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	50	J	2	2691			1		F	KIDNEY					
BATT01-00393	F2 Adult	50	K	2	2693	3		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	50	L	2	2695			1		F	KIDNEY	1	1			
BATT01-00393	F2 Adult	100	A	2	2697	2		1		F	KIDNEY					
BATT01-00393	F2 Adult	100	B	2	2699			1		F	KIDNEY					
BATT01-00393	F2 Adult	100	C	2	2701	4		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	100	D	2	2703			1		F	KIDNEY					
BATT01-00393	F2 Adult	100	E	2	2705	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	100	F	2	2707			1		F	KIDNEY				3	
BATT01-00393	F2 Adult	100	G	2	2709			1		F	KIDNEY					
BATT01-00393	F2 Adult	100	H	2	2711	3		1	1	F	KIDNEY					
BATT01-00393	F2 Adult	100	I	2	2713	4		1		F	KIDNEY					
BATT01-00393	F2 Adult	100	J	2	2715	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	100	K	2	2717			1		F	KIDNEY					
BATT01-00393	F2 Adult	100	L	2	2719	1		1		F	KIDNEY					
BATT01-00393	F2 Adult	0.0 (Control)	D	2	2559	3		1	2	U	KIDNEY	1	2			
BATT01-00393	F2 Adult	0.0 (Control)	J	1	2570	1		1	2	U	KIDNEY					
BATT01-00393	F2 Adult	6.3	F	2	2611	3		1	2	U	KIDNEY	2				
BATT01-00393	F2 Adult	12.5	C	2	2629	3		1	2	U	KIDNEY	1				
BATT01-00393	F2 Adult	12.5	H	2	2639	2		1	2	U	KIDNEY					
BATT01-00393	F2 Adult	25	H	1	2662	1		3	1	U	KIDNEY	1				

FEL

DEST

BATT01-00393

Liver Histology_F2 Adult

DEST worksheet produced by Battelle

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Individual Cell Necrosis	Sex	Tissue	Cellular Infiltrate, Mononuclear Cell	Focus of Cellular Alteration	Inflammation, Granulomatous	Basophilia	Cytoplasmic Inclusions, Eosinophilic	Oval Cell Proliferation	Hepatocellular Vacuolation, Lipid-Type	Metastatic Dysgerminoma
BATT01-00393	F2 Adult	0.0 (Control)	A	1	2552	3	3		M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	B	1	2554	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	D	1	2558	3			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	E	2	2561	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	F	1	2562	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	G	1	2564	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	H	1	2566	3			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	I	1	2568	2	1		M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	K	1	2572	2	1		M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	L	1	2574	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	M	1	2576	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	N	1	2578	2	1		M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	O	1	2580	2	1		M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	P	1	2582	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	Q	1	2584	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	R	1	2586	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	S	1	2588	3			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	T	1	2590	1	1		M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	U	1	2592	3			M	LIVER	1							
BATT01-00393	F2 Adult	0.0 (Control)	V	1	2594	2			M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	W	1	2596	3	1		M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	X	1	2598	2			M	LIVER								
BATT01-00393	F2 Adult	6.3	A	1	2600	2	1		M	LIVER		2						
BATT01-00393	F2 Adult	6.3	B	1	2602		1		M	LIVER				1				
BATT01-00393	F2 Adult	6.3	C	1	2604	2	1		M	LIVER		1						
BATT01-00393	F2 Adult	6.3	D	1	2606	3			M	LIVER								
BATT01-00393	F2 Adult	6.3	E	1	2608	2			M	LIVER								
BATT01-00393	F2 Adult	6.3	F	1	2610	3	1		M	LIVER								
BATT01-00393	F2 Adult	6.3	G	1	2612	2			M	LIVER								
BATT01-00393	F2 Adult	6.3	H	1	2614	3			M	LIVER								
BATT01-00393	F2 Adult	6.3	I	1	2616	2			M	LIVER								
BATT01-00393	F2 Adult	6.3	J	1	2618	1	1		M	LIVER								
BATT01-00393	F2 Adult	6.3	K	1	2620	3			M	LIVER								
BATT01-00393	F2 Adult	6.3	L	1	2622	2	1		M	LIVER								
BATT01-00393	F2 Adult	12.5	A	1	2624	3	2		M	LIVER								
BATT01-00393	F2 Adult	12.5	B	1	2626	2			M	LIVER								
BATT01-00393	F2 Adult	12.5	C	1	2628	3			M	LIVER								
BATT01-00393	F2 Adult	12.5	D	1	2630	3			M	LIVER								
BATT01-00393	F2 Adult	12.5	E	1	2632	2	1		M	LIVER		1						
BATT01-00393	F2 Adult	12.5	F	1	2634	2	1		M	LIVER						1		
BATT01-00393	F2 Adult	12.5	G	1	2636	2	1		M	LIVER								
BATT01-00393	F2 Adult	12.5	H	1	2638	3			M	LIVER								
BATT01-00393	F2 Adult	12.5	I	1	2640	2			M	LIVER								
BATT01-00393	F2 Adult	12.5	J	1	2642	2	1		M	LIVER	1							
BATT01-00393	F2 Adult	12.5	K	1	2644	2	1		M	LIVER								
BATT01-00393	F2 Adult	12.5	L	1	2646	1			M	LIVER								
BATT01-00393	F2 Adult	25	A	1	2648	1	1		M	LIVER					1			
BATT01-00393	F2 Adult	25	B	1	2650	2			M	LIVER								
BATT01-00393	F2 Adult	25	C	1	2652	2			M	LIVER								
BATT01-00393	F2 Adult	25	D	1	2654	2			M	LIVER	1							

DEST

Liver Histology_F2 Adult

BATT01-00393

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Individual Cell Necrosis	Sex	Tissue	Cellular Infiltrate, Mononuclear Cell	Focus of Cellular Alteration	Inflammation, Granulomatous	Basophilia	Cytoplasmic Inclusions, Eosinophilic	Oval Cell Proliferation	Hepatocellular Vacuolation, Lipid-Type	Metastatic Dysgerminoma
BATT01-00393	F2 Adult	25	E	1	2656	2			M	LIVER								
BATT01-00393	F2 Adult	25	F	1	2658	2	3		M	LIVER								
BATT01-00393	F2 Adult	25	G	1	2660	2			M	LIVER								
BATT01-00393	F2 Adult	25	I	1	2664	2	1		M	LIVER								
BATT01-00393	F2 Adult	25	J	1	2666	1			M	LIVER								
BATT01-00393	F2 Adult	25	K	1	2668	1	2		M	LIVER								
BATT01-00393	F2 Adult	25	L	1	2670	2	1		M	LIVER								
BATT01-00393	F2 Adult	50	A	1	2672	2			M	LIVER								
BATT01-00393	F2 Adult	50	B	1	2674	2			M	LIVER								
BATT01-00393	F2 Adult	50	C	1	2676	2	1		M	LIVER				1				
BATT01-00393	F2 Adult	50	D	1	2678	2			M	LIVER								
BATT01-00393	F2 Adult	50	E	1	2680	2	1		M	LIVER								
BATT01-00393	F2 Adult	50	F	1	2682	2			M	LIVER								
BATT01-00393	F2 Adult	50	G	1	2684	2	1		M	LIVER								
BATT01-00393	F2 Adult	50	H	1	2686	3			M	LIVER								
BATT01-00393	F2 Adult	50	I	1	2688	1	1		M	LIVER								
BATT01-00393	F2 Adult	50	J	1	2690	2	1		M	LIVER								
BATT01-00393	F2 Adult	50	K	1	2692	1	1		M	LIVER								
BATT01-00393	F2 Adult	50	L	1	2694	1			M	LIVER								
BATT01-00393	F2 Adult	100	A	1	2696	1	1		M	LIVER								
BATT01-00393	F2 Adult	100	B	1	2698	2			M	LIVER								
BATT01-00393	F2 Adult	100	C	1	2700	2	1		M	LIVER								
BATT01-00393	F2 Adult	100	D	1	2702	1	2		M	LIVER								
BATT01-00393	F2 Adult	100	E	1	2704	2	1		M	LIVER								
BATT01-00393	F2 Adult	100	F	1	2706	2			M	LIVER								
BATT01-00393	F2 Adult	100	G	1	2708	2	2		M	LIVER								
BATT01-00393	F2 Adult	100	H	1	2710	2	1		M	LIVER								
BATT01-00393	F2 Adult	100	I	1	2712	1	1		M	LIVER								
BATT01-00393	F2 Adult	100	J	1	2714	3			M	LIVER								
BATT01-00393	F2 Adult	100	K	1	2716	2	1		M	LIVER								
BATT01-00393	F2 Adult	100	L	1	2718	2	1		M	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	A	2	2553	2			F	LIVER		3		2				
BATT01-00393	F2 Adult	0.0 (Control)	B	2	2555	1			F	LIVER				3				
BATT01-00393	F2 Adult	0.0 (Control)	C	1	2556	3			F	LIVER								
BATT01-00393	F2 Adult	0.0 (Control)	C	2	2557	2			F	LIVER				2				
BATT01-00393	F2 Adult	0.0 (Control)	E	1	2560		1		F	LIVER				3	1			
BATT01-00393	F2 Adult	0.0 (Control)	F	2	2563	1	2		F	LIVER			3	3				
BATT01-00393	F2 Adult	0.0 (Control)	G	2	2565	1	2		F	LIVER				3	1	1		
BATT01-00393	F2 Adult	0.0 (Control)	H	2	2567	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	0.0 (Control)	I	2	2569	1			F	LIVER				3				
BATT01-00393	F2 Adult	0.0 (Control)	J	2	2571		1		F	LIVER	1			3				
BATT01-00393	F2 Adult	0.0 (Control)	K	2	2573				F	LIVER				2				
BATT01-00393	F2 Adult	0.0 (Control)	L	2	2575	2			F	LIVER				2				
BATT01-00393	F2 Adult	0.0 (Control)	M	2	2577	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	0.0 (Control)	N	2	2579		1	1	F	LIVER				3	1			
BATT01-00393	F2 Adult	0.0 (Control)	O	2	2581	1	1		F	LIVER		2		3				
BATT01-00393	F2 Adult	0.0 (Control)	P	2	2583	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	0.0 (Control)	Q	2	2585	2	1		F	LIVER				2				
BATT01-00393	F2 Adult	0.0 (Control)	R	2	2587	2	1		F	LIVER				2				
BATT01-00393	F2 Adult	0.0 (Control)	S	2	2589	2	1		F	LIVER	1			3				
BATT01-00393	F2 Adult	0.0 (Control)	T	2	2591				F	LIVER				3				

DEST

BATT01-00393

Liver Histology_F2 Adult

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Individual Cell Necrosis	Sex	Tissue	Cellular Infiltrate, Mononuclear Cell	Focus of Cellular Alteration	Inflammation, Granulomatous	Basophilia	Cytoplasmic Inclusions, Eosinophilic	Oval Cell Proliferation	Hepatocellular Vacuolation, Lipid-Type	Metastatic Dysgerminoma
BATT01-00393	F2 Adult	0.0 (Control)	U	2	2593	2			F	LIVER				3				
BATT01-00393	F2 Adult	0.0 (Control)	V	2	2595	2	1		F	LIVER				2				
BATT01-00393	F2 Adult	0.0 (Control)	W	2	2597	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	0.0 (Control)	X	2	2599	2			F	LIVER			2	1				
BATT01-00393	F2 Adult	6.3	A	2	2601	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	6.3	B	2	2603	2			F	LIVER				3				
BATT01-00393	F2 Adult	6.3	C	2	2605	2	3		F	LIVER				3	1			
BATT01-00393	F2 Adult	6.3	D	2	2607	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	6.3	E	2	2609	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	6.3	G	2	2613	3	1		F	LIVER				1	1			
BATT01-00393	F2 Adult	6.3	H	2	2615	2	3		F	LIVER			1	3				
BATT01-00393	F2 Adult	6.3	I	2	2617	2			F	LIVER				3				
BATT01-00393	F2 Adult	6.3	J	2	2619	2			F	LIVER								
BATT01-00393	F2 Adult	6.3	K	2	2621	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	6.3	L	2	2623	2			F	LIVER				1				
BATT01-00393	F2 Adult	12.5	A	2	2625	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	12.5	B	2	2627	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	12.5	D	2	2631	1			F	LIVER				3	1			
BATT01-00393	F2 Adult	12.5	E	2	2633	2	2		F	LIVER		1		3				
BATT01-00393	F2 Adult	12.5	F	2	2635	3	1		F	LIVER				2				
BATT01-00393	F2 Adult	12.5	G	2	2637	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	12.5	I	2	2641	1	1		F	LIVER				3				
BATT01-00393	F2 Adult	12.5	J	2	2643	3	2		F	LIVER	1			2				
BATT01-00393	F2 Adult	12.5	K	2	2645	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	12.5	L	2	2647	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	25	A	2	2649	2	2		F	LIVER				3				
BATT01-00393	F2 Adult	25	B	2	2651	1	2		F	LIVER				3				
BATT01-00393	F2 Adult	25	C	2	2653	2	2		F	LIVER				3				
BATT01-00393	F2 Adult	25	D	2	2655	1	2		F	LIVER				3				
BATT01-00393	F2 Adult	25	E	2	2657	1	1		F	LIVER				3				
BATT01-00393	F2 Adult	25	F	2	2659	1	1		F	LIVER				2				
BATT01-00393	F2 Adult	25	G	2	2661	1	1		F	LIVER				3				
BATT01-00393	F2 Adult	25	H	2	2663	2	2		F	LIVER				2				
BATT01-00393	F2 Adult	25	I	2	2665	3	1		F	LIVER				2				
BATT01-00393	F2 Adult	25	J	2	2667	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	25	K	2	2669	1	1		F	LIVER				3				
BATT01-00393	F2 Adult	25	L	2	2671	2	2		F	LIVER		3		3				
BATT01-00393	F2 Adult	50	A	2	2673	2	1		F	LIVER				1				
BATT01-00393	F2 Adult	50	B	2	2675	2	1		F	LIVER				2				
BATT01-00393	F2 Adult	50	C	2	2677	2	1		F	LIVER				3	1			
BATT01-00393	F2 Adult	50	D	2	2679				F	LIVER				3			1	
BATT01-00393	F2 Adult	50	E	2	2681	2	1		F	LIVER				2				
BATT01-00393	F2 Adult	50	F	2	2683	1	1		F	LIVER				3				
BATT01-00393	F2 Adult	50	G	2	2685	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	50	H	2	2687	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	50	I	2	2689	1	2		F	LIVER				3				
BATT01-00393	F2 Adult	50	J	2	2691	2	1		F	LIVER				3				
BATT01-00393	F2 Adult	50	K	2	2693	1	2		F	LIVER				3				
BATT01-00393	F2 Adult	50	L	2	2695	1	1		F	LIVER				3			1	
BATT01-00393	F2 Adult	100	A	2	2697	1	1		F	LIVER				3				
BATT01-00393	F2 Adult	100	B	2	2699	1	2	1	F	LIVER				3				

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Hepatocellular Vacuolation, Glycogen-Type	Cystic Degeneration	Individual Cell Necrosis	Sex	Tissue	Cellular Infiltrate, Mononuclear Cell	Focus of Cellular Alteration	Inflammation, Granulomatous	Basophilia	Cytoplasmic Inclusions, Eosinophilic	Oval Cell Proliferation	Hepatocellular Vacuolation, Lipid-Type	Metastatic Dysgerminoma
BATT01-00393	F2 Adult	100	C	2	2701	1	1		F	LIVER				3	1			
BATT01-00393	F2 Adult	100	D	2	2703	1			F	LIVER				3				
BATT01-00393	F2 Adult	100	E	2	2705	1			F	LIVER				3				
BATT01-00393	F2 Adult	100	F	2	2707	2			F	LIVER				3				
BATT01-00393	F2 Adult	100	G	2	2709		1		F	LIVER				3	1			
BATT01-00393	F2 Adult	100	H	2	2711	1	3		F	LIVER				3				
BATT01-00393	F2 Adult	100	I	2	2713	1	2		F	LIVER				3				
BATT01-00393	F2 Adult	100	J	2	2715	1			F	LIVER				3				
BATT01-00393	F2 Adult	100	K	2	2717	1	1	1	F	LIVER				3				
BATT01-00393	F2 Adult	100	L	2	2719	1	2		F	LIVER				3	1			
BATT01-00393	F2 Adult	0.0 (Control)	D	2	2559	3			U	LIVER			2					
BATT01-00393	F2 Adult	0.0 (Control)	J	1	2570	3	1		U	LIVER				1				P
BATT01-00393	F2 Adult	6.3	F	2	2611	3	2		U	LIVER								
BATT01-00393	F2 Adult	12.5	C	2	2629	3			U	LIVER						1		
BATT01-00393	F2 Adult	12.5	H	2	2639	3			U	LIVER								
BATT01-00393	F2 Adult	25	H	1	2662	2	1		U	LIVER	1							

FEL

DEST

BATT01-00393

Ovary Histology_F2 Adult

DEST worksheet produced by Battelle

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Ovary Stage	Gonad Phenotype Score	Oocyte Atresia	Ovarian Spermatogenesis	Sex	Tissue	Post-ovulatory Follicles	Inflammation, Granulomatous	Unable to Stage	Ovary, Edema	Oocyte Retention	Decreased Yolk Formation	No Section	Comment
BATT01-00393	F2 Adult	0.0 (Control)	A	2	2553	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	B	2	2555	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	C	1	2556	1	5			F	OVARY								Pathologist identified C1 as having a Stage 1 ovary indicative that fish was not cycling competently at the time of sacrifice (reproductively competent females should be Stage 2 or 2.5 to Stage 4). C1 lacked hepatic basophilia suggesting that vitellogenin production was low or non-existent and lack of eosinophilia in the renal tubules consistent with the female phenotype. During terminal necropsy, C1 was identified as a male phenotype with strong SCC (anal fin papillae). The C replicate produced reasonable reproductive fecundity data and no genotype-phenotype mismatches were identified in the F2 subadults.
BATT01-00393	F2 Adult	0.0 (Control)	C	2	2557	4	5			F	OVARY	1							Pathologist identified C2 as having a Stage 4 ovary with post-ovulatory follicles, indicative of active spawning.
BATT01-00393	F2 Adult	0.0 (Control)	E	1	2560	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	F	2	2563	3	5			F	OVARY	1	2						
BATT01-00393	F2 Adult	0.0 (Control)	G	2	2565	4	5			F	OVARY								
BATT01-00393	F2 Adult	0.0 (Control)	H	2	2567	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	I	2	2569	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	J	2	2571		5			F	OVARY			P	4	4			
BATT01-00393	F2 Adult	0.0 (Control)	K	2	2573		5			F	OVARY		3	P	3	4			
BATT01-00393	F2 Adult	0.0 (Control)	L	2	2575		5	2		F	OVARY		4	P	1	2			
BATT01-00393	F2 Adult	0.0 (Control)	M	2	2577	4	5			F	OVARY	1	1						
BATT01-00393	F2 Adult	0.0 (Control)	N	2	2579	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	O	2	2581	4	5	1		F	OVARY	1	2		1	1			
BATT01-00393	F2 Adult	0.0 (Control)	P	2	2583	4	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	Q	2	2585	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	R	2	2587	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	S	2	2589	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	T	2	2591		5	3		F	OVARY		4	P		3			
BATT01-00393	F2 Adult	0.0 (Control)	U	2	2593	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	V	2	2595	3	5	1		F	OVARY	1	1						
BATT01-00393	F2 Adult	0.0 (Control)	W	2	2597	4	5			F	OVARY	1							
BATT01-00393	F2 Adult	0.0 (Control)	X	2	2599	1	5	1		F	OVARY		1						
BATT01-00393	F2 Adult	6.3	A	2	2601	4	5			F	OVARY	1							
BATT01-00393	F2 Adult	6.3	B	2	2603	3	5			F	OVARY								
BATT01-00393	F2 Adult	6.3	C	2	2605	3	5			F	OVARY	1	1						
BATT01-00393	F2 Adult	6.3	D	2	2607	3	5			F	OVARY	2							
BATT01-00393	F2 Adult	6.3	E	2	2609	4	5			F	OVARY								
BATT01-00393	F2 Adult	6.3	G	2	2613	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	6.3	H	2	2615	4	5			F	OVARY	1							

DEST BATT01-00393 Ovary histology_F2 Adult

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Ovary Stage	Gonad Phenotype Score	Oocyte Atresia	Ovarian Spermatogenesis	Sex	Tissue	Post-ovulatory Follicles	Inflammation, Granulomatous	Unable to Stage	Ovary, Edema	Oocyte Retention	Decreased Yolk Formation	No Section	Comment
BATT01-00393	F2 Adult	6.3	I	2	2617	2	5			F	OVARY	1							
BATT01-00393	F2 Adult	6.3	J	2	2619	1	5			F	OVARY						3		
BATT01-00393	F2 Adult	6.3	K	2	2621	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	6.3	L	2	2623	2	5			F	OVARY						1		
BATT01-00393	F2 Adult	12.5	A	2	2625	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	12.5	B	2	2627	4	5			F	OVARY								
BATT01-00393	F2 Adult	12.5	D	2	2631	3	5			F	OVARY	2							
BATT01-00393	F2 Adult	12.5	E	2	2633	4	5	1		F	OVARY	1							
BATT01-00393	F2 Adult	12.5	F	2	2635	4	5			F	OVARY	1							
BATT01-00393	F2 Adult	12.5	G	2	2637	3	5	2		F	OVARY	1				2			
BATT01-00393	F2 Adult	12.5	I	2	2641	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	12.5	J	2	2643	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	12.5	K	2	2645	3	5			F	OVARY								
BATT01-00393	F2 Adult	12.5	L	2	2647	4	5			F	OVARY		2						
BATT01-00393	F2 Adult	25	A	2	2649	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	25	B	2	2651	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	25	C	2	2653	4	5			F	OVARY	2							
BATT01-00393	F2 Adult	25	D	2	2655	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	25	E	2	2657	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	25	F	2	2659	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	25	G	2	2661	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	25	H	2	2663	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	25	I	2	2665	4	5	1		F	OVARY		2		2	2			
BATT01-00393	F2 Adult	25	J	2	2667	4	5			F	OVARY	1							
BATT01-00393	F2 Adult	25	K	2	2669	3	5			F	OVARY		1						
BATT01-00393	F2 Adult	25	L	2	2671	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	50	A	2	2673	2	5			F	OVARY						1		
BATT01-00393	F2 Adult	50	B	2	2675	4	5			F	OVARY				1				
BATT01-00393	F2 Adult	50	C	2	2677	3	5			F	OVARY	2							
BATT01-00393	F2 Adult	50	D	2	2679	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	50	E	2	2681	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	50	F	2	2683	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	50	G	2	2685	3	5			F	OVARY	1	1						
BATT01-00393	F2 Adult	50	H	2	2687	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	50	I	2	2689	4	5			F	OVARY								
BATT01-00393	F2 Adult	50	J	2	2691	4	5			F	OVARY	2			3				
BATT01-00393	F2 Adult	50	K	2	2693	4	5	1		F	OVARY				2	3			
BATT01-00393	F2 Adult	50	L	2	2695	3	5		1	F	OVARY	1							
BATT01-00393	F2 Adult	100	A	2	2697	4	5			F	OVARY								
BATT01-00393	F2 Adult	100	B	2	2699	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	100	C	2	2701	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	100	D	2	2703	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	100	E	2	2705	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	100	F	2	2707		5	4		F	OVARY		4	P	1	3			
BATT01-00393	F2 Adult	100	G	2	2709	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	100	H	2	2711	3	5			F	OVARY	1							
BATT01-00393	F2 Adult	100	I	2	2713	4	5			F	OVARY	1							
BATT01-00393	F2 Adult	100	J	2	2715	2	5			F	OVARY	1							
BATT01-00393	F2 Adult	100	K	2	2717	4	5			F	OVARY	1							
BATT01-00393	F2 Adult	100	L	2	2719	4	5			F	OVARY								
BATT01-00393	F2 Adult	0.0 (Control)	D	2	2559					U	GONAD							N	
BATT01-00393	F2 Adult	6.3	F	2	2611					U	GONAD							N	
BATT01-00393	F2 Adult	12.5	C	2	2629					U	GONAD							N	

DEST

BATT01-00393

Ovary histology_F2 Adult

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Ovary Stage	Gonad Phenotype Score	Oocyte Atresia	Ovarian Spermatogenesis	Sex	Tissue	Post-ovulatory Follicles	Inflammation, Granulomatous	Unable to Stage	Ovary, Edema	Oocyte Retention	Decreased Yolk Formation	No Section	Comment
BATT01-00393	F2 Adult	12.5	H	2	2639					U	GONAD							N	

DEST worksheet produced by Battelle																			
Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Testis Stage	Gonad Phenotype Score	Testicular Degeneration	Histiocytic Cells, Intraluminal	Sex	Tissue	Interstitial Cells, Increased	Unable to Stage	Increased Spermatagonia	No Section	Asynchronous Development/ Maldevelopment	Decreased Spermatozoa	Testis, Exfoliated Cells	Dysgerminoma, Malignant
BATT01-00393	F2 Adult	0.0 (Control)	A	1	2552	1	1	3		M	TESTIS					1			
BATT01-00393	F2 Adult	0.0 (Control)	B	1	2554	2	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	D	1	2558	3	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	E	2	2561	2	1			M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	F	1	2562	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	G	1	2564	2	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	H	1	2566	1	1			M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	I	1	2568	1	1			M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	K	1	2572	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	L	1	2574	1	1	1		M	TESTIS						1		
BATT01-00393	F2 Adult	0.0 (Control)	M	1	2576	3	1			M	TESTIS							1	
BATT01-00393	F2 Adult	0.0 (Control)	N	1	2578	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	O	1	2580	4	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	P	1	2582		1	1		M	TESTIS		P						
BATT01-00393	F2 Adult	0.0 (Control)	Q	1	2584	1	1	1		M	TESTIS						1		
BATT01-00393	F2 Adult	0.0 (Control)	R	1	2586	1	1			M	TESTIS						1		
BATT01-00393	F2 Adult	0.0 (Control)	S	1	2588	1	1	2		M	TESTIS	2							
BATT01-00393	F2 Adult	0.0 (Control)	T	1	2590	1	1			M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	U	1	2592	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	V	1	2594	1	1	1		M	TESTIS	1							
BATT01-00393	F2 Adult	0.0 (Control)	W	1	2596	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	X	1	2598	1	1	2		M	TESTIS								
BATT01-00393	F2 Adult	6.3	A	1	2600	2	1	1		M	TESTIS								
BATT01-00393	F2 Adult	6.3	B	1	2602	2	1	1		M	TESTIS						1		
BATT01-00393	F2 Adult	6.3	C	1	2604	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	6.3	D	1	2606	2	1			M	TESTIS	1							
BATT01-00393	F2 Adult	6.3	E	1	2608	4	1	1		M	TESTIS								
BATT01-00393	F2 Adult	6.3	F	1	2610	3	1	1		M	TESTIS								
BATT01-00393	F2 Adult	6.3	G	1	2612	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	6.3	H	1	2614	2	1			M	TESTIS	1							
BATT01-00393	F2 Adult	6.3	I	1	2616	1	1	2		M	TESTIS								
BATT01-00393	F2 Adult	6.3	J	1	2618	3	1	1		M	TESTIS								
BATT01-00393	F2 Adult	6.3	K	1	2620	1	1	2		M	TESTIS								
BATT01-00393	F2 Adult	6.3	L	1	2622	3	1			M	TESTIS								
BATT01-00393	F2 Adult	12.5	A	1	2624	2	1	1		M	TESTIS								
BATT01-00393	F2 Adult	12.5	B	1	2626	2	1	1		M	TESTIS								
BATT01-00393	F2 Adult	12.5	C	1	2628	1	1			M	TESTIS	1							
BATT01-00393	F2 Adult	12.5	D	1	2630	1	1			M	TESTIS								
BATT01-00393	F2 Adult	12.5	E	1	2632	1	1			M	TESTIS	1							
BATT01-00393	F2 Adult	12.5	F	1	2634	1	1	2		M	TESTIS								
BATT01-00393	F2 Adult	12.5	G	1	2636	1	1			M	TESTIS								
BATT01-00393	F2 Adult	12.5	H	1	2638		1			M	TESTIS		P						
BATT01-00393	F2 Adult	12.5	I	1	2640	3	1			M	TESTIS								
BATT01-00393	F2 Adult	12.5	J	1	2642	1	1	1		M	TESTIS	1		1					
BATT01-00393	F2 Adult	12.5	K	1	2644	3	1			M	TESTIS								
BATT01-00393	F2 Adult	12.5	L	1	2646	3	1	1		M	TESTIS						1		
BATT01-00393	F2 Adult	25	A	1	2648	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	25	B	1	2650		1			M	TESTIS		P						
BATT01-00393	F2 Adult	25	C	1	2652	1	1	1		M	TESTIS	1					1		

FEL

Study ID	Generation	Name of Treatment Group	Replicate ID	Fish ID	Sample Number	Testis Stage	Gonad Phenotype Score	Testicular Degeneration	Histiocytic Cells, Intraluminal	Sex	Tissue	Interstitial Cells, Increased	Unable to Stage	Increased Spermatagonia	No Section	Asynchronous Development/ Maldevelopment	Decreased Spermatozoa	Testis, Exfoliated Cells	Dysgerminoma, Malignant
BATT01-00393	F2 Adult	25	D	1	2654	1	1			M	TESTIS	1							
BATT01-00393	F2 Adult	25	E	1	2656	2	1	1		M	TESTIS								
BATT01-00393	F2 Adult	25	F	1	2658	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	25	G	1	2660	1	1	1		M	TESTIS	1							
BATT01-00393	F2 Adult	25	I	1	2664	4	1	1		M	TESTIS								
BATT01-00393	F2 Adult	25	J	1	2666	2	1	1		M	TESTIS	1					2		
BATT01-00393	F2 Adult	25	K	1	2668	3	1			M	TESTIS	1							
BATT01-00393	F2 Adult	25	L	1	2670	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	50	A	1	2672	3	1	1		M	TESTIS	2							
BATT01-00393	F2 Adult	50	B	1	2674	4	1	1		M	TESTIS			2					
BATT01-00393	F2 Adult	50	C	1	2676	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	50	D	1	2678	2	1			M	TESTIS								
BATT01-00393	F2 Adult	50	E	1	2680	1	1	2		M	TESTIS						1		
BATT01-00393	F2 Adult	50	F	1	2682	2	1	1		M	TESTIS								
BATT01-00393	F2 Adult	50	G	1	2684	4	1	1		M	TESTIS								
BATT01-00393	F2 Adult	50	H	1	2686	1	1			M	TESTIS	2							
BATT01-00393	F2 Adult	50	I	1	2688	2	1	1		M	TESTIS	1							
BATT01-00393	F2 Adult	50	J	1	2690	4	1	1		M	TESTIS								
BATT01-00393	F2 Adult	50	K	1	2692	2	1	1		M	TESTIS								
BATT01-00393	F2 Adult	50	L	1	2694	2	1	1		M	TESTIS						1		
BATT01-00393	F2 Adult	100	A	1	2696	1	1	1		M	TESTIS	1							
BATT01-00393	F2 Adult	100	B	1	2698	2	1	2		M	TESTIS	2							
BATT01-00393	F2 Adult	100	C	1	2700	1	1	2		M	TESTIS								
BATT01-00393	F2 Adult	100	D	1	2702	1	1	2		M	TESTIS								
BATT01-00393	F2 Adult	100	E	1	2704	1	1			M	TESTIS								
BATT01-00393	F2 Adult	100	F	1	2706	3	1	1		M	TESTIS	1							
BATT01-00393	F2 Adult	100	G	1	2708	3	1			M	TESTIS	1							
BATT01-00393	F2 Adult	100	H	1	2710	1	1			M	TESTIS	1							
BATT01-00393	F2 Adult	100	I	1	2712	2	1	1		M	TESTIS								
BATT01-00393	F2 Adult	100	J	1	2714	1	1	1	1	M	TESTIS								
BATT01-00393	F2 Adult	100	K	1	2716	3	1	2		M	TESTIS								
BATT01-00393	F2 Adult	100	L	1	2718	1	1	1		M	TESTIS								
BATT01-00393	F2 Adult	0.0 (Control)	J	1	2570					U	GONAD		P						P
BATT01-00393	F2 Adult	25	H	1	2662					U	GONAD				N				

FEL

Appendix G. STATISTICAL ANALYSES

Endocrine Disruptor Screening Program

USEPA Contract No: EP-W-11-063

Task Order No: 14

Final Statistical Analysis Report for

Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

FEL Study No. BATT01-00393

(MEOGRT #393)

June 22, 2018

BATTELLE

505 King Avenue

Columbus, Ohio 43201

COMPLIANCE STATEMENT

FEL Study Number: BATT01-00393

Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

Battelle Statistician / Report Originator: Ying-Liang Chou
Battelle Statistician / Technical Reviewer: Po-Hsu Chen

The statistical analysis portion of the above-referenced study was conducted in compliance with the Good Laboratory Practice regulations of the Environmental Protection Agency as stipulated by 40 CFR Part 160 (FIFRA), the study protocol, and all applicable amendments. Deviations, if present, can be found in study data file.

Ying-Liang Chou 6/22/18
Battelle Study Statistician Date

SIGNATURES

Name (Role)	Signature	Date
Ying-Liang Chou (Battelle Statistician / Report Originator)	Ying-Liang Chou	6/22/18
Po-Hsu Chen (Battelle Statistician / Technical Reviewer)	Po-Hsu Chen	6/22/18
Vince Brown (Program Manager)	Vince Brown	6/22/18

Quality Assurance Statement
Battelle

USEPA Contract No.: EP-W-11-063, TO 14
Study No. BATT01-00393

This study was inspected by the Quality Assurance Unit. Reports were submitted to the Study Director and Management as follows:

Audit	Date of Audit	Date Reported to Study Director and Management
Audit Study Data	August 28-31, 2017	August 31, 2017
Audit Draft Statistical Report	August 28-31, 2017 May 14, 2018 May 22, 2018	August 31, 2017 May 14, 2018 May 22, 2018
Audit Study File Addendum	May 14, 2018 May 22, 2018	May 14, 2018 May 22, 2018
Audit Final Statistical Report	June 12, 2018	June 12, 2018

Quality Assurance Unit, Battelle — Date: 6-22-18

INTRODUCTION

This report summarizes the statistical analysis of the data collected under the Fort Environmental Laboratories (FEL) Study Number BATT01-00393, "Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate" (MEOGRT #393).

MEOGRT was intended to measure chemical effects on reproduction and reproductive development in medaka exposed through multiple generations of their life-cycle. The test method began by exposing young adult fish (the F0 generation) to 2-Ethylhexyl 4-Hydroxybenzoate (2-EHHB). The test was performed using a flow-through system to expose three generations of fish (F0, F1, and F2), starting with young adults 10-15 weeks post fertilization (wpf), to 5 concentrations of 2-EHHB and a control over a 32-week period (includes F2 generation). The experimental designs are presented in Table 1-1 for the F0 generation and Tables 1-2 through 1-5 for various life stages (embryo, juvenile, subadult, and adult) per generation for the F1 and F2 generations. The F1 and F2 generations had the same experimental design.

Table 1-1. Experimental Design for F0 Generation.

Group Number	2-EHHB Treatment Group (µg/L)	Number of Replicates	Number of Animals per Replicate	Total Number of Animals per Treatment Group
1	0.0 (control)	12	2 (1M/1F)	24
2	6.3	6	2 (1M/1F)	12
3	12.5	6	2 (1M/1F)	12
4	25	6	2 (1M/1F)	12
5	50	6	2 (1M/1F)	12
6	100.0	6	2 (1M/1F)	12
TOTAL				84

Table 1-2. Experimental Design for Embryo Phase for F1 and F2 Generations.

Group Number	2-EHHB Treatment Group (µg/L)	Number of Replicates	Number of Embryos per Replicate	Total Number of Embryos per Treatment Group
1	0.0 (control)	12	20	240
2	6.3	6	20	120
3	12.5	6	20	120
4	25	6	20	120
5	50	6	20	120
6	100.0	6	20	120
TOTAL				840

Table 1-3. Experimental Design for Juvenile Phase for F1 and F2 Generations.

Group Number	2-EHHB Treatment Group (µg/L)	Number of Replicates	Number of Animals per Replicate	Total Number of Animals per Treatment Group
1	0.0 (control)	12	12	144
2	6.3	6	12	72
3	12.5	6	12	72
4	25	6	12	72
5	50	6	12	72
6	100.0	6	12	72
TOTAL				504

Table 1-4. Experimental Design for Subadult Phase for F1 and F2 Generations.

Group Number	2-EHHB Treatment Group (µg/L)	Number of Replicates	Number of Animals per Replicate	Total Number of Animals per Treatment Group
1	0.0 (control)	12	8	96
2	6.3	6	8	48
3	12.5	6	8	48
4	25	6	8	48
5	50	6	8	48
6	100.0	6	8	48
TOTAL				336

Table 1-5. Experimental Design for Adult Phase for F1 and F2 Generations.

Group Number	2-EHHB Treatment Group (µg/L)	Number of Replicates	Number of Animals per Replicate	Total Number of Animals per Treatment Group
1	0.0 (control)	24	2 (1M/1F)	48
2	6.3	12	2 (1M/1F)	24
3	12.5	12	2 (1M/1F)	24
4	25	12	2 (1M/1F)	24
5	50	12	2 (1M/1F)	24
6	100.0	12	2 (1M/1F)	24
TOTAL				168

STATISTICAL METHODS

Statistical analyses were performed according to OCSPP 890.2200 test guidelines (1), the TO 14 QAPP (2), and generally follow procedures described in the document "Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application" (3). Lowest observed effect concentration (LOEC) and no observed effect concentration (NOEC) were assessed for each response.

Biological data were collected across 3 generations (F0, F1, and F2), subadult and adult phases, and separately by sex if applicable. In this study, genotypic sex was the same as biologically determined phenotypic sex for all animals. Survivability data were collected across 3 generations on different life phases. However, since there was no mortality in this study, the survival analysis was not performed. Other biological endpoints that were statistically analyzed include: fecundity, fertility, body weight, and body length for F0 generation; percent hatchability, time to hatch, body weight, body length, liver weight, liver vitellogenin (VTG) [in the unit of log10 (copies VTG)/ng total RNA], fin papillae number (as secondary sex characteristics), and sex ratio for F1 and F2 generations subadult fish; and fecundity, fertility, body weight, body length, and anal fin papillae number (as secondary sex characteristics) for F1 and F2 generations adult fish. Note that F0 generation fish laid eggs that became F1 generation fish and F1 generation fish laid eggs that became F2 generation fish. Hatchability and time to hatch endpoints for these eggs were categorized and analyzed under generations F1 and F2 (instead of F0 and F1). Time to hatch was calculated from the median day of hatch of each replicate. Sex ratio (number of males/number of females) was calculated for each replicate from subadult phase (9 wpf) for both F1 and F2 generations. Note that all female anal fin papillae numbers were zeros for both F1 and F2 generations and for both subadult and adult phases. Also note that per OCSPP test guidelines (page 16), time to first spawn was recorded but statistical analysis of this data was not performed.

Descriptive statistics, including replicate mean, treatment mean, median, standard deviation, standard error of the mean (SEM), coefficient of variation (CV), minimum, first quartile (Q1), third quartile (Q3), and maximum were calculated for biological endpoints separately for 3 generations (F0, F1, and F2), 2 life phases (subadult and adult), and genotypic sex (if applicable). Note that hatchability was calculated in percentage and summarized by descriptive statistics.

Time to hatch data were analyzed using a mixed effects Cox proportional hazard model. The analysis was performed on the median day of hatch of each replicate. Due to control group having zero concentration, a nominal value of 1 was added to concentration so that log10 transformed data could be fitted to a mixed effect Cox proportional hazard model with replicate as random effect. The analysis was performed in a step-down fashion. LOEC and NOEC were assessed.

Fecundity data were statistically analyzed on square root transformed replicate means. For other biological endpoints, statistical analysis was performed on raw or transformed data. For transformed data, square root transformation was used on count data (anal fin papillae number), arc sine square root transformation was used on proportional data (hatchability); for

other continuous biological endpoints, natural-log transformation was used. Note that since arc sine square root transformation was used on hatchability data, hatchability was calculated in proportion for statistical analysis.

Data were first checked for monotonicity by rank transforming the data, fitting to a mixed effects ANOVA model, and evaluating linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant; otherwise the data were determined to be monotonic. For endpoints that followed a monotonic concentration-response, the Jonckheere-Terpstra test was applied in a step-down manner. For endpoints that were not consistent with a monotonic concentration-response, the data were evaluated for normality (Shapiro-Wilk's test) and homogeneity of variance (Levene's test). If a data set was found to have a non-normal distribution or a heterogeneous distribution of variance, a normalizing, variance stabilizing transformation was used. If data sets were normally distributed with homogeneous variance following transformation, the data set was evaluated using Dunnett's test. If the data set was normally distributed with heterogeneous variance following data transformation, the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used to evaluate the data. Where no normalizing transformation was found, the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used to evaluate the data sets. The Jonckheere-Terpstra test was performed on replicate medians, and the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as post hoc test and the Dunnett's test were performed on replicate means. Note that William's test was not used in the monotonic concentration-response parametric analysis; instead Jonckheere-Terpstra test was used for consistency with the other Task Order 14 assays (amphibian metamorphosis, larval amphibian growth and development, and fish short-term reproduction).

Potential statistical outliers were identified for biological endpoints. Statistical analyses were performed with and without potential statistical outliers. Potential statistical outliers were defined as those values' residuals from a mixed effects model fit outside the bounds determined by Q1 – 1.5*IQD and Q3 + 1.5*IQD, where IQD is the interquartile difference defined as Q3 minus Q1. Q1 and Q3 for statistical outlier determination were calculated from residuals of a mixed effects model fit to account for random replicate effect and data variability.

Histopathology data were in the form of severity scores or developmental stages. A RSCABS (Rao-Scott Cochran-Armitage by Slices) test (4), which uses a step-down Rao-Scott adjusted Cochran-Armitage trend test on severity slices in a histopathology response, was used to evaluate histopathology data. By slices (BS) works by splitting the severity scores associated with an endpoint into two groups based on the severity score being tested. One group contains all severity scores less than the target severity score and the other group contains all severity scores equal to or greater than the target severity score. Histopathology data with delayed development were analyzed as reported to detect acceleration in development and then manually inverted prior to a second analysis to detect a delay in development.

RSCABS analysis was performed on various histopathological endpoints for the following tissues: thyroid, liver, kidney, ovary, and testis for both F1 subadult and adult; and

liver, kidney, ovary, and testis for F2 adult. RSCABS analysis was performed separately for each of the histopathological determined phenotypic sex. There were very few fish with undetermined histopathological determined phenotypic sex. RSCABS analysis was not performed on those undetermined sex animals. Note that one F2 generation, control group, replicate C fish was genetically determined to be male, but was phenotypically determined in histopathology to be a female. This fish was included in RSCABS analysis as female, but included in biology endpoints statistical analysis as male. LOEC and NOEC were assessed.

The Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was performed using the statistical analysis software R (version 3.4.0) with PMCMR package (version 4.1) (5). The RSCABS analysis on histopathology data was performed using R software (version 3.4.0) with RSCABS package (version 0.9.2) (6). All other statistical analyses were performed using SAS® (versions 9.3 and 9.4). In all analyses, statistical significance was assessed at the 0.05 level (two-sided test for time to hatch; one-sided test for other continuous endpoints). The RSCABS analysis was performed at a one-sided 0.05 level at each slice.

RESULTS

In replicate G for F1generation Group 2 (6.3 µg/L), both of the adult fish were genotypic males. Fecundity and fertility were recorded as zeros for this replicate. Also, all 8 subadult fish were genotypic females in replicate B for F2 generation group 4 (25 µg/L). Sex ratio was calculated as zero for this replicate.

Tables 2-1 through 2-5b, Tables 3-1 through 3-14b, and Tables 4-1 through 4-14b present descriptive statistics for biological endpoints for F0, F1, and F2 generations, respectively. Tables 2-1, 3-1, and 4-1 summarize survival rates for F0, F1, and F2 generations, respectively. As noted above, all animals survived in the study; therefore, no statistical analysis was performed on survival data.

Tables 2-2, 3-10, and 4-10 present descriptive statistics for fecundity for F0, F1, and F2 generations, respectively. Tables 2-3, 3-11, and 4-11 present descriptive statistics for fertility for F0, F1, and F2 generations, respectively. Tables 3-2 and 4-2 present descriptive statistics for hatchability for F1 and F2 generations, respectively. Tables 3-3 and 4-3 present descriptive statistics for time to hatch for F1 and F2 generations, respectively.

Tables 2-4a, 2-4b, 3-4a, 3-4b, 3-12a, 3-12b, 4-4a, 4-4b, 4-12a, and 4-12b present descriptive statistics for body weight for F0 generation females, F0 generation males, F1 generation subadult females, F1 generation subadult males, F1 generation adult females, F1 generation adult males, F2 generation subadult females, F2 generation subadult males, F2 generation adult females, and F2 generation adult males, respectively.

Tables 2-5a, 2-5b, 3-5a, 3-5b, 3-13a, 3-13b, 4-5a, 4-5b, 4-13a, and 4-13b present descriptive statistics for body length for F0 generation females, F0 generation males, F1 generation subadult females, F1 generation subadult males, F1 generation adult females, F1

generation adult males, F2 generation subadult females, F2 generation subadult males, F2 generation adult females, and F2 generation adult males, respectively.

Tables 3-6a, 3-6b, 4-6a, and 4-6b present descriptive statistics for liver weight for F1 generation subadult females, F1 generation subadult males, F2 generation subadult females, and F2 generation subadult males, respectively. Tables 3-7a, 3-7b, 4-7a, and 4-7b present descriptive statistics for liver vitellogenin for F1 generation subadult females, F1 generation subadult males, F2 generation subadult females, and F2 generation subadult males, respectively. Note that the main assay report and the accompanying Liver Vitellogenin appendix detail the methods and results for this endpoint, which measured gene expression (RNA or mRNA) and not the protein. For consistency, the tables and discussion in this statistics report use the column headings and labels verbatim as they were provided on the Data Entry Spreadsheet Template at the time of data analysis. See the assay report and the Liver Vitellogenin appendix for specific methods and parameters.

Tables 3-8a, 3-8b, 3-14a, 3-14b, 4-8a, 4-8b, 4-14a, and 4-14b present descriptive statistics for anal fin papillae number for F1 generation subadult females, F1 generation subadult males, F1 generation adult females, F1 generation adult males, F2 generation subadult females, F2 generation subadult males, F2 generation adult females, and F2 generation adult males, respectively. Tables 3-9 and 4-9 present descriptive statistics for sex ratio for F1 generation subadult fish and F2 generation subadult fish, respectively.

Tables 5-1 and 5-2 present Cox proportional hazard model analysis results for time to hatch for F1 and F2 generations, respectively. Table 5-1 shows negative significant treatment effect on time to hatch for F1 generation when including the highest four treatment groups (100, 50, 25, 12.5 µg/L) in the model. The lowest observed effect concentration (LOEC) was at treatment group 3 (12.5 µg/L) and the no observed effect concentration (NOEC) was at treatment group 2 (6.3 µg/L) for F1 generation. Table 5-2 shows the no observed effect concentration (NOEC) was at the highest treatment level at group 6 (100 µg/L) for F2 generation.

Tables 6, 7-1, 7-2, 8-1, and 8-2 present statistical analysis results for biological endpoints for F0 generation, F1 generation juvenile and subadult, F1 generation adult, F2 generation juvenile and subadult, and F2 generation adult, respectively. Note that female anal fin papillae numbers were all zeros for both F1 and F2 generations and for both subadult and adult fish. This endpoint was not statistically analyzed. Statistically significant treatment effects as well as LOEC and NOEC were noted below.

Table 6 shows that for F0 generation:

- For fecundity and fertility, all 5 treatment groups showed significant decreasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
- For female body weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
- For male body weight, all 5 treatment groups showed significant increasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.

- For female body length, Groups 6, 5, 4, and 3 showed significant decreasing trend. LOEC was Group 3 (12.5 µg/L) and NOEC was Group 2 (6.3 µg/L).

Table 7-1 shows that for F1 generation juvenile and subadult:

- For female body weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
- For female body length, Groups 6 and 5 showed significant decreasing trend. LOEC was Group 5 (50 µg/L) and NOEC was Group 4 (25 µg/L).
- For male body length, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
- For female liver weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
- For male VTG, Group 6 showed significant increasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
- For male anal fin papillae number, Groups 6 and 5 showed significant decreasing trend. LOEC was Group 5 (50 µg/L) and NOEC was Group 4 (25 µg/L).
- For male liver weight, Group 2 showed significantly less than control.
- For hatchability, Groups 6, 3, and 2 showed significantly less than control. Kruskal-Wallis test p-value was less than 0.0001.

Table 7-2 shows that for F1 generation adult:

- For fecundity and fertility, all 5 treatment groups showed significant decreasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
- For female body weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
- For male body weight, Groups 6 and 5 showed significant decreasing trend. LOEC was Group 5 (50 µg/L) and NOEC was Group 4 (25 µg/L).

Table 8-1 shows that for F2 generation juvenile and subadult:

- For female body weight, Groups 6, 5, 4, and 3 showed significant increasing trend. LOEC was Group 3 (12.5 µg/L) and NOEC was Group 2 (6.3 µg/L).
- For male body weight, Group 6 showed significant increasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
- For female and male liver weights, all 5 treatment groups showed significant increasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
- For male VTG, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).

Table 8-2 shows that for F2 generation adult:

- For fecundity and fertility, all 5 treatment groups showed significant decreasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
- For both female and male body weights, Groups 5, 4, 3, 2 showed significantly greater than control. Both Kruskal-Wallis test p-values were less than 0.0001.
- For female body length, Groups 6, 5, 4, and 3 showed significant increasing trend. LOEC was Group 3 (12.5 µg/L) and NOEC was Group 2 (6.3 µg/L).
- For male anal fin papillae number, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).

Table 9a presents RSCABS results for thyroid histopathology data for F1 generation subadult females. NOEC was at treatment group 6 (100 µg/L) for severity slice 1. The findings were not remarkable for all thyroid endpoints for F1 generation subadult males. Therefore, NOEC was not found for thyroid endpoints for F1 generation subadult males.

Tables 10a and 10b present RSCABS results for thyroid histopathology data for F1 generation adult females and males, respectively. Tables 11a, 11b, 14a, and 14b present RSCABS results for liver histopathology data for F1 generation adult females, F1 generation adult males, F2 generation adult females, F2 generation adult males, respectively. Tables 12a, 12b, 15a, and 15b present RSCABS results for kidney histopathology data for F1 generation adult females, F1 generation adult males, F2 generation adult females, F2 generation adult males, respectively. Tables 13a and 16a present RSCABS results for ovary histopathology data for F1 and F2 generations adult females, respectively. Tables 13b and 16b present RSCABS results for testis histopathology data for F1 and F2 generations adult males, respectively.

Table 11a shows that for liver histopathological endpoint cytoplasmic inclusions, eosinophilic for F1 generation adult females, LOEC was at treatment group 5 (50 µg/L) and NOEC was at treatment group 4 (25 µg/L) for severity slice 1 and did not have NOEC for severity slice 2. Table 12a shows that kidney histopathological endpoint tubules, epithelium, eosinophilia for F1 generation adult females did not have NOEC for severity slice 1 and LOEC was at treatment group 6 (100 µg/L) and NOEC was at treatment group 5 (50 µg/L) for severity slice 2. Other RSCABS results tables in Tables 9 through 16 can be interpreted in a similar manner.

Tables in Appendix A present statistical analyses performed on data with potential statistical outliers removed. Tables A-1 through A-21 list potential statistical outliers. Note that anal fin papillae numbers for F2 generation subadult male fish were all zeros after outliers were removed, therefore, statistical analysis was not performed for this endpoint. Tables A-22, A-23, A-24, A-25, and A-26 present statistical analysis results for biological endpoints for F0 generation, F1 generation subadult, F1 generation adult, F2 generation subadult, and F2 generation adult, respectively, after potential statistical outliers were removed. The statistical analysis results were changed after potential statistical outliers were removed for the following endpoints:

- F1 generation subadult, for female body weight, LOEC at Group 6 (100 µg/L) and NOEC at Group 5 (50 µg/L) changed to LOEC at Group 5 (50 µg/L) and NOEC at Group 4 (25 µg/L) after outliers were removed.
- F1 generation subadult, for male body weight, NOEC at Group 6 (100 µg/L) changed to LOEC at Group 6 (100 µg/L) and NOEC at Group 5 (50 µg/L) after outliers were removed.
- F1 generation subadult, for male VTG, LOEC at Group 6 (100 µg/L) and NOEC at Group 5 (50 µg/L) changed to LOEC at Group 3 (12.5 µg/L) and NOEC at Group 2 (6.3 µg/L) after outliers were removed.
- F2 generation subadult, for male body weight, LOEC at Group 6 (100 µg/L) and NOEC at Group 5 (50 µg/L) changed to Group 3 showed significantly greater than control in a pairwise comparison after outliers were removed.
- F2 generation subadult, for male VTG, LOEC at Group 6 (100 µg/L) and NOEC at Group 5 (50 µg/L) changed to NOEC at Group 6 (100 µg/L) after outliers were removed.
- F2 generation adult, for male body weight, Groups 5, 4, 3, 2 showed significantly greater than control in a pairwise comparison to control changed to all 5 treatment groups showed significant increasing trend; LOEC at Group 2 (6.3 µg/L) and NOEC was not found after outliers were removed.
- F2 generation adult, for female body length, LOEC at Group 3 (12.5 µg/L) and NOEC at Group 2 (6.3 µg/L) changed to NOEC at Group 6 (100 µg/L) after outliers were removed.

The statistical analysis results were not changed after potential statistical outliers were removed for other endpoints.

Tables in Appendix B present RSCABS analysis results for histopathological endpoints from female/male liver, female/male kidney, ovary, and testis tissues for F1 generation subadult fish. RSCABS result tables in Appendix B can be interpreted in a similar manner as stated above for Tables 9 through 16.

DISCUSSION ON RSCABS ANALYSIS

RSCABS was used in statistical analysis for histopathology data. RSCABS uses a "step-down" procedure on treatment (concentration) level, which means that for a specified severity slice if a higher treatment (concentration) was not significant then a lower treatment (concentration) was inferred to be not significant. It has the monotonic assumption. Also, the by slices (BS) procedure in RSCABS splits the severity scores into two groups: one group contains all severity scores less than the target testing severity score, and the other group contains all severity scores equal to or greater than the target testing severity score. For a specified endpoint, the RSCABS summary tables present results for only those severity slices for which there were some specimens at that severity level or greater. For a severity slice that is included in the table, only those treatment levels are presented in the table for which were some specimens at that severity level or greater. For example, in Table 12a, kidney histopathological endpoint tubules, epithelium, eosinophilia for F1 generation adult females, there were no specimens with severity

level 0 (not remarkable) nor there were specimens with severity level 3 or greater. Therefore, RSCABS analysis could only be performed for severity slice 2. Also note that in RSCABS analysis result tables, a statistically significant treatment effect was based on statistical analysis alone and did not necessarily confer a toxicologically-relevant response related to treatment. Additionally, the delay in development noted in the RSCABS analysis result table footnote indicated a negative statistical trend but may not confer this response in a toxicological context. With the complexity in utilizing RSCABS in statistical analysis for histopathology data, use caution when interpreting RSCABS results. Consult a pathologist before applying the results and conclusions in this report.

STUDY ARCHIVAL

Supporting data and the final report were archived at Battelle.

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[F0 Generation]

Table 2-1. Summary of Survivability for F0 Generation.

		Adult Survivability - Survival from SD0 to SD21 (%)				
Treatment (µg/L)	Replicate	N	Replicate Percent	Mean	Std Dev	CV (%)
0.0	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
	G	2	100			
	H	2	100			
	I	2	100			
	J	2	100			
	K	2	100			
	L	2	100			
6.3	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
12.5	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
25	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
50	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			
100	A	2	100	100	0	0
	B	2	100			
	C	2	100			
	D	2	100			
	E	2	100			
	F	2	100			

Std dev Standard deviation.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.

Table 2-2. Descriptive Statistics for Fecundity for F0 Generation.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SE M	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	17.667	19.238	18.595	3.006	0.868	15.625	15.048	17.143	22.167	24.095
	B	1	15.048									
	C	1	16.619									
	D	1	15.857									
	E	1	18.476									
	F	1	19.190									
	G	1	18.714									
	H	1	17.714									
	I	1	21.190									
	J	1	23.143									
	K	1	23.143									
	L	1	24.095									
6.3	A	1	15.762	16.651	16.524	1.727	0.705	10.374	14.095	15.762	17.905	19.095
	B	1	16.429									
	C	1	16.619									
	D	1	14.095									
	E	1	19.095									
	F	1	17.905									
12.5	A	1	10.381	11.056	10.976	1.069	0.436	9.668	9.714	10.381	11.476	12.810
	B	1	12.810									
	C	1	10.667									
	D	1	11.476									
	E	1	9.714									
	F	1	11.286									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 2-2. Descriptive Statistics for Fecundity for F0 Generation. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	10.571	10.944	10.667	1.357	0.554	12.403	9.095	10.571	11.429	13.238
	B	1	11.429									
	C	1	10.619									
	D	1	13.238									
	E	1	10.714									
	F	1	9.095									
50	A	1	11.381	11.571	11.095	1.235	0.504	10.671	10.476	10.571	12.810	13.381
	B	1	10.810									
	C	1	13.381									
	D	1	12.810									
	E	1	10.476									
	F	1	10.571									
100	A	1	9.000	10.429	9.476	2.028	0.828	19.450	8.667	9.000	12.524	13.429
	B	1	8.667									
	C	1	9.810									
	D	1	9.143									
	E	1	13.429									
	F	1	12.524									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 2-3. Descriptive Statistics for Fertility for F0 Generation.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	17.619	19.198	18.595	2.992	0.864	15.586	15.048	17.095	22.071	24.000
	B	1	15.048									
	C	1	16.571									
	D	1	15.810									
	E	1	18.476									
	F	1	19.143									
	G	1	18.714									
	H	1	17.714									
	I	1	21.000									
	J	1	23.143									
	K	1	23.143									
	L	1	24.000									
6.3	A	1	15.762	16.619	16.429	1.734	0.708	10.434	14.095	15.762	17.905	19.095
	B	1	16.238									
	C	1	16.619									
	D	1	14.095									
	E	1	19.095									
	F	1	17.905									
12.5	A	1	10.381	10.952	10.881	1.028	0.420	9.386	9.571	10.381	11.429	12.571
	B	1	12.571									
	C	1	10.571									
	D	1	11.429									
	E	1	9.571									
	F	1	11.190									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 2-3. Descriptive Statistics for Fertility for F0 Generation. (continued).

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	10.571	10.833	10.667	1.230	0.502	11.350	8.952	10.571	11.429	12.714
	B	1	11.429									
	C	1	10.619									
	D	1	12.714									
	E	1	10.714									
	F	1	8.952									
50	A	1	11.381	11.508	11.048	1.227	0.501	10.658	10.429	10.524	12.619	13.381
	B	1	10.714									
	C	1	13.381									
	D	1	12.619									
	E	1	10.429									
	F	1	10.524									
100	A	1	8.810	10.302	9.381	2.012	0.822	19.534	8.619	8.810	12.286	13.333
	B	1	8.619									
	C	1	9.810									
	D	1	8.952									
	E	1	13.333									
	F	1	12.286									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 2-4a. Descriptive Statistics for Body Weight (g) for F0 Generation, Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	0.408	0.437	0.414	0.068	0.019	15.442	0.371	0.391	0.476	0.572
	B	1	0.372									
	C	1	0.419									
	D	1	0.572									
	E	1	0.389									
	F	1	0.552									
	G	1	0.420									
	H	1	0.401									
	I	1	0.485									
	J	1	0.371									
	K	1	0.393									
	L	1	0.466									
6.3	A	1	0.539	0.427	0.423	0.064	0.026	14.909	0.360	0.376	0.442	0.539
	B	1	0.360									
	C	1	0.409									
	D	1	0.436									
	E	1	0.442									
	F	1	0.376									
12.5	A	1	0.431	0.393	0.376	0.065	0.026	16.486	0.323	0.347	0.431	0.502
	B	1	0.502									
	C	1	0.379									
	D	1	0.373									
	E	1	0.347									
	F	1	0.323									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 2-4a. Descriptive Statistics for Body Weight (g) for F0 Generation, Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.507	0.404	0.393	0.088	0.036	21.808	0.294	0.331	0.506	0.507
	B	1	0.401									
	C	1	0.331									
	D	1	0.294									
	E	1	0.385									
	F	1	0.506									
50	A	1	0.283	0.405	0.420	0.114	0.047	28.261	0.260	0.283	0.503	0.541
	B	1	0.541									
	C	1	0.503									
	D	1	0.260									
	E	1	0.441									
	F	1	0.399									
100	A	1	0.280	0.307	0.306	0.033	0.014	10.836	0.265	0.280	0.335	0.352
	B	1	0.335									
	C	1	0.317									
	D	1	0.295									
	E	1	0.265									
	F	1	0.352									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 2-4b. Descriptive Statistics for Body Weight (g) for F0 Generation, Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	0.325	0.345	0.337	0.053	0.015	15.426	0.265	0.311	0.377	0.467
	B	1	0.467									
	C	1	0.299									
	D	1	0.381									
	E	1	0.342									
	F	1	0.265									
	G	1	0.360									
	H	1	0.292									
	I	1	0.331									
	J	1	0.385									
	K	1	0.373									
	L	1	0.323									
6.3	A	1	0.381	0.401	0.393	0.033	0.013	8.241	0.361	0.381	0.433	0.446
	B	1	0.361									
	C	1	0.381									
	D	1	0.446									
	E	1	0.433									
	F	1	0.405									
12.5	A	1	0.339	0.431	0.436	0.078	0.032	18.088	0.339	0.361	0.456	0.557
	B	1	0.421									
	C	1	0.361									
	D	1	0.557									
	E	1	0.456									
	F	1	0.451									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 2-4b. Descriptive Statistics for Body Weight (g) for F0 Generation, Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.251	0.425	0.426	0.112	0.046	26.458	0.251	0.394	0.452	0.600
	B	1	0.409									
	C	1	0.452									
	D	1	0.443									
	E	1	0.394									
	F	1	0.600									
50	A	1	0.329	0.402	0.386	0.071	0.029	17.648	0.329	0.347	0.445	0.522
	B	1	0.391									
	C	1	0.380									
	D	1	0.347									
	E	1	0.445									
	F	1	0.522									
100	A	1	0.597	0.483	0.485	0.135	0.055	27.896	0.323	0.356	0.597	0.653
	B	1	0.653									
	C	1	0.545									
	D	1	0.356									
	E	1	0.323									
	F	1	0.425									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 2-5a. Descriptive Statistics for Body Length (mm) for F0 Generation, Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	37.0	37.32	36.80	1.443	0.417	3.868	35.70	36.50	37.55	40.50
	B	1	36.5									
	C	1	37.4									
	D	1	40.5									
	E	1	36.7									
	F	1	39.9									
	G	1	36.9									
	H	1	35.7									
	I	1	36.4									
	J	1	36.5									
	K	1	36.6									
	L	1	37.7									
6.3	A	1	38.6	36.38	36.45	1.402	0.572	3.853	34.70	35.10	37.00	38.60
	B	1	35.1									
	C	1	36.3									
	D	1	37.0									
	E	1	36.6									
	F	1	34.7									
12.5	A	1	34.0	33.75	33.55	1.228	0.501	3.637	32.20	32.90	35.10	35.20
	B	1	35.2									
	C	1	33.1									
	D	1	35.1									
	E	1	32.2									
	F	1	32.9									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 2-5a. Descriptive Statistics for Body Length (mm) for F0 Generation, Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	33.9	33.37	33.40	1.699	0.694	5.092	30.80	32.70	33.90	36.00
	B	1	33.1									
	C	1	32.7									
	D	1	30.8									
	E	1	33.7									
	F	1	36.0									
50	A	1	31.4	33.55	34.40	2.749	1.122	8.193	29.30	31.40	35.60	36.20
	B	1	35.6									
	C	1	36.2									
	D	1	29.3									
	E	1	35.5									
	F	1	33.3									
100	A	1	31.3	31.68	31.45	1.219	0.498	3.847	30.30	30.90	32.20	33.80
	B	1	32.2									
	C	1	31.6									
	D	1	30.3									
	E	1	30.9									
	F	1	33.8									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 2-5b. Descriptive Statistics for Body Length (mm) for F0 Generation, Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	35.3	34.44	34.45	1.951	0.563	5.663	31.50	33.20	35.85	37.70
	B	1	37.7									
	C	1	32.5									
	D	1	36.8									
	E	1	34.0									
	F	1	31.6									
	G	1	33.9									
	H	1	31.5									
	I	1	34.3									
	J	1	36.4									
	K	1	34.7									
	L	1	34.6									
6.3	A	1	36.5	36.18	36.40	0.449	0.183	1.241	35.40	35.90	36.50	36.50
	B	1	36.5									
	C	1	35.9									
	D	1	36.5									
	E	1	35.4									
	F	1	36.3									
12.5	A	1	31.6	33.67	34.15	1.097	0.448	3.257	31.60	33.30	34.30	34.50
	B	1	34.5									
	C	1	33.3									
	D	1	34.0									
	E	1	34.3									
	F	1	34.3									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 2-5b. Descriptive Statistics for Body Length (mm) for F0 Generation, Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	27.8	32.78	33.15	2.842	1.160	8.669	27.80	32.20	34.10	36.30
	B	1	34.1									
	C	1	32.5									
	D	1	33.8									
	E	1	32.2									
	F	1	36.3									
50	A	1	33.4	33.48	34.10	1.932	0.789	5.771	30.90	31.40	35.10	35.30
	B	1	30.9									
	C	1	34.8									
	D	1	31.4									
	E	1	35.1									
	F	1	35.3									
100	A	1	39.3	35.30	35.10	2.647	1.081	7.499	32.20	33.10	37.00	39.30
	B	1	37.0									
	C	1	36.0									
	D	1	33.1									
	E	1	32.2									
	F	1	34.2									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

[F1 Generation]

Table 3-1. Summary of Survivability for F1 Generation.

		Juvenile Survivability - Survival to 4 WPF (%)					Subadult Survivability - Survival from 4 to 9 WPF (%)					Adult Survivability - Survival from 9 to 15 WPF (%)				
Treatment (µg/L)	Replicate	N	Replicate Percent	Mean	Std Dev	CV (%)	N	Replicate Percent	Mean	Std Dev	CV (%)	N	Replicate Percent	Mean	Std Dev	CV (%)
0.0	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
	G	12	100				12	100				2	100			
	H	12	100				12	100				2	100			
	I	12	100				12	100				2	100			
	J	12	100				12	100				2	100			
	K	12	100				12	100				2	100			
	L	12	100				12	100				2	100			
6.3	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
12.5	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
25	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
50	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
100	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			

Std dev Standard deviation.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.

Table 3-2. Descriptive Statistics for Hatchability (%) for F1 Generation.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	100.0	100.000	100.00	0.000	0.000	0.000	100.00	100.00	100.00	100.00
	B	2	100.0									
	C	2	100.0									
	D	2	100.0									
	E	2	100.0									
	F	2	100.0									
	G	2	100.0									
	H	2	100.0									
	I	2	100.0									
	J	2	100.0									
	K	2	100.0									
	L	2	100.0									
6.3	A	2	90.0	91.000	89.75	3.536	1.443	3.885	88.50	89.00	91.00	98.00
	B	2	89.5									
	C	2	88.5									
	D	2	98.0									
	E	2	89.0									
	F	2	91.0									
12.5	A	2	93.0	90.083	90.00	2.084	0.851	2.313	87.00	89.00	91.50	93.00
	B	2	90.5									
	C	2	89.5									
	D	2	87.0									
	E	2	89.0									
	F	2	91.5									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-2. Descriptive Statistics for Hatchability (%) for F1 Generation. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	2	93.0	96.500	98.25	4.427	1.807	4.588	89.50	93.00	100.00	100.00
	B	2	100.0									
	C	2	100.0									
	D	2	96.5									
	E	2	89.5									
	F	2	100.0									
50	A	2	100.0	96.833	96.25	2.840	1.160	2.933	94.00	94.50	100.00	100.00
	B	2	94.5									
	C	2	100.0									
	D	2	98.0									
	E	2	94.5									
	F	2	94.0									
100	A	2	90.5	95.167	94.50	3.371	1.376	3.543	90.50	93.50	98.00	100.00
	B	2	94.5									
	C	2	98.0									
	D	2	93.5									
	E	2	100.0									
	F	2	94.5									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-3. Descriptive Statistics for Median Time to Hatch (days) for F1 Generation.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	9.0	9.42	9.00	0.515	0.149	5.468	9.00	9.00	10.00	10.00
	B	1	10.0									
	C	1	10.0									
	D	1	9.0									
	E	1	10.0									
	F	1	9.0									
	G	1	9.0									
	H	1	10.0									
	I	1	9.0									
	J	1	9.0									
	K	1	10.0									
	L	1	9.0									
6.3	A	1	11.0	10.50	11.00	0.837	0.342	7.968	9.00	10.00	11.00	11.00
	B	1	10.0									
	C	1	11.0									
	D	1	9.0									
	E	1	11.0									
	F	1	11.0									
12.5	A	1	10.0	10.50	10.50	0.548	0.224	5.216	10.00	10.00	11.00	11.00
	B	1	11.0									
	C	1	10.0									
	D	1	11.0									
	E	1	11.0									
	F	1	10.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-3. Descriptive Statistics for Median Time to Hatch (days) for F1 Generation. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	11.0	10.50	10.50	0.548	0.224	5.216	10.00	10.00	11.00	11.00
	B	1	10.0									
	C	1	10.0									
	D	1	11.0									
	E	1	11.0									
	F	1	10.0									
50	A	1	10.0	10.50	10.50	0.548	0.224	5.216	10.00	10.00	11.00	11.00
	B	1	10.0									
	C	1	11.0									
	D	1	11.0									
	E	1	10.0									
	F	1	11.0									
100	A	1	11.0	10.33	10.00	0.516	0.211	4.997	10.00	10.00	11.00	11.00
	B	1	10.0									
	C	1	10.0									
	D	1	11.0									
	E	1	10.0									
	F	1	10.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-4a. Descriptive Statistics for Body Weight (g) for F1 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	0.412	0.127	0.104	0.093	0.027	72.935	0.061	0.089	0.124	0.412
	B	2	0.096									
	C	3	0.061									
	D	4	0.067									
	E	3	0.092									
	F	3	0.086									
	G	4	0.141									
	H	3	0.102									
	I	5	0.106									
	J	4	0.128									
	K	4	0.120									
	L	5	0.115									
6.3	A	6	0.099	0.096	0.095	0.014	0.006	14.664	0.076	0.093	0.099	0.120
	B	4	0.120									
	C	3	0.093									
	D	3	0.095									
	E	4	0.095									
	F	3	0.076									
12.5	A	6	0.090	0.101	0.092	0.035	0.014	34.330	0.075	0.081	0.099	0.170
	B	4	0.094									
	C	6	0.099									
	D	7	0.075									
	E	2	0.170									
	F	5	0.081									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 3-4a. Descriptive Statistics for Body Weight (g) for F1 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.214	0.110	0.094	0.061	0.025	55.254	0.052	0.060	0.147	0.214
	B	4	0.092									
	C	1	0.060									
	D	2	0.147									
	E	1	0.052									
	F	4	0.097									
50	A	2	0.048	0.073	0.072	0.022	0.009	29.755	0.048	0.054	0.086	0.108
	B	7	0.068									
	C	4	0.108									
	D	6	0.077									
	E	6	0.086									
	F	3	0.054									
100	A	2	0.053	0.054	0.054	0.006	0.003	11.684	0.045	0.048	0.060	0.061
	B	3	0.061									
	C	2	0.060									
	D	2	0.056									
	E	5	0.048									
	F	4	0.045									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-4b. Descriptive Statistics for Body Weight (g) for F1 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	0.081	0.114	0.116	0.025	0.007	21.910	0.078	0.094	0.127	0.156
	B	6	0.078									
	C	5	0.090									
	D	4	0.109									
	E	5	0.148									
	F	5	0.105									
	G	4	0.098									
	H	5	0.129									
	I	3	0.156									
	J	4	0.125									
	K	4	0.124									
	L	3	0.125									
6.3	A	2	0.122	0.105	0.107	0.021	0.008	19.802	0.069	0.099	0.122	0.125
	B	4	0.115									
	C	5	0.099									
	D	5	0.099									
	E	4	0.069									
	F	5	0.125									
12.5	A	2	0.086	0.115	0.109	0.033	0.014	29.075	0.082	0.086	0.130	0.172
	B	4	0.103									
	C	2	0.115									
	D	1	0.082									
	E	6	0.172									
	F	3	0.130									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-4b. Descriptive Statistics for Body Weight (g) for F1 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	7	0.166	0.126	0.127	0.030	0.012	24.033	0.082	0.104	0.149	0.166
	B	4	0.082									
	C	7	0.104									
	D	6	0.149									
	E	7	0.121									
	F	4	0.134									
50	A	6	0.139	0.140	0.141	0.078	0.032	55.861	0.035	0.082	0.178	0.261
	B	1	0.143									
	C	4	0.261									
	D	2	0.082									
	E	2	0.035									
	F	5	0.178									
100	A	6	0.056	0.087	0.077	0.044	0.018	50.354	0.055	0.056	0.087	0.172
	B	5	0.066									
	C	6	0.087									
	D	6	0.055									
	E	3	0.087									
	F	4	0.172									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-5a. Descriptive Statistics for Body Length (mm) for F1 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	16.750	20.131	20.705	2.550	0.736	12.667	16.400	17.508	22.258	23.050
	B	2	20.450									
	C	3	16.433									
	D	4	16.400									
	E	3	20.033									
	F	3	18.267									
	G	4	22.975									
	H	3	21.733									
	I	5	20.960									
	J	4	23.050									
	K	4	22.275									
	L	5	22.240									
6.3	A	6	19.483	20.299	19.675	1.716	0.700	8.453	18.800	19.367	20.725	23.550
	B	4	23.550									
	C	3	19.367									
	D	3	19.867									
	E	4	20.725									
	F	3	18.800									
12.5	A	6	19.433	20.437	19.892	1.927	0.787	9.430	18.857	19.000	20.983	24.000
	B	4	20.350									
	C	6	20.983									
	D	7	18.857									
	E	2	24.000									
	F	5	19.000									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 3-5a. Descriptive Statistics for Body Length (mm) for F1 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	25.600	20.300	19.913	3.475	1.419	17.119	15.200	19.075	22.100	25.600
	B	4	19.075									
	C	1	20.700									
	D	2	22.100									
	E	1	15.200									
	F	4	19.125									
50	A	2	18.200	18.093	18.017	1.011	0.413	5.588	16.500	17.686	19.117	19.225
	B	7	17.686									
	C	4	19.225									
	D	6	17.833									
	E	6	19.117									
	F	3	16.500									
100	A	2	16.250	16.538	16.600	0.902	0.368	5.454	15.320	15.825	17.133	17.750
	B	3	17.133									
	C	2	17.750									
	D	2	16.950									
	E	5	15.320									
	F	4	15.825									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-5b. Descriptive Statistics for Body Length (mm) for F1 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	23.300	22.008	22.717	1.769	0.511	8.040	19.433	20.425	23.125	25.067
	B	6	19.433									
	C	5	19.760									
	D	4	20.350									
	E	5	22.600									
	F	5	20.500									
	G	4	20.800									
	H	5	22.900									
	I	3	25.067									
	J	4	23.600									
	K	4	22.950									
	L	3	22.833									
6.3	A	2	20.250	21.038	20.555	1.599	0.653	7.600	19.600	19.640	22.280	23.600
	B	4	23.600									
	C	5	20.860									
	D	5	19.640									
	E	4	19.600									
	F	5	22.280									
12.5	A	2	19.000	22.008	22.150	2.671	1.091	12.138	19.000	19.100	24.650	25.000
	B	4	21.100									
	C	2	23.200									
	D	1	19.100									
	E	6	24.650									
	F	3	25.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-5b. Descriptive Statistics for Body Length (mm) for F1 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	7	25.029	22.527	22.139	1.977	0.807	8.775	19.700	21.657	24.500	25.029
	B	4	19.700									
	C	7	21.657									
	D	6	24.500									
	E	7	21.729									
	F	4	22.550									
50	A	6	23.400	20.898	21.500	3.225	1.317	15.435	16.660	18.000	23.600	24.125
	B	1	23.600									
	C	4	24.125									
	D	2	19.600									
	E	2	18.000									
	F	5	16.660									
100	A	6	17.767	19.035	18.117	2.638	1.077	13.859	17.167	17.560	19.000	24.250
	B	5	17.560									
	C	6	19.000									
	D	6	17.167									
	E	3	18.467									
	F	4	24.250									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-6a. Descriptive Statistics for Liver Weight (g) for F1 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	0.007	0.009	0.009	0.003	0.001	29.400	0.005	0.007	0.011	0.013
	B	2	0.005									
	C	3	0.005									
	D	4	0.008									
	E	3	0.009									
	F	3	0.011									
	G	4	0.011									
	H	3	0.008									
	I	5	0.012									
	J	4	0.010									
	K	4	0.013									
	L	5	0.009									
6.3	A	6	0.009	0.007	0.007	0.002	0.001	33.224	0.003	0.005	0.008	0.009
	B	4	0.005									
	C	3	0.008									
	D	2	0.003									
	E	3	0.007									
	F	3	0.008									
12.5	A	5	0.008	0.012	0.008	0.007	0.003	60.835	0.006	0.007	0.021	0.022
	B	4	0.008									
	C	5	0.007									
	D	5	0.021									
	E	2	0.022									
	F	5	0.006									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-6a. Descriptive Statistics for Liver Weight (g) for F1 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.023	0.011	0.010	0.007	0.003	66.536	0.003	0.005	0.012	0.023
	B	3	0.009									
	C	1	0.003									
	D	2	0.012									
	E	1	0.005									
	F	4	0.011									
50	A	2	0.005	0.008	0.009	0.002	0.001	24.903	0.005	0.007	0.009	0.011
	B	5	0.009									
	C	2	0.008									
	D	6	0.007									
	E	6	0.011									
	F	2	0.009									
100	A	2	0.006	0.005	0.005	0.001	0.001	25.911	0.003	0.004	0.006	0.006
	B	3	0.006									
	C	2	0.005									
	D	2	0.004									
	E	4	0.005									
	F	4	0.003									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-6b. Descriptive Statistics for Liver Weight (g) for F1 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	0	.	0.011	0.011	0.004	0.001	39.619	0.006	0.008	0.011	0.020
	B	4	0.006									
	C	3	0.008									
	D	2	0.011									
	E	3	0.011									
	F	3	0.007									
	G	2	0.008									
	H	3	0.011									
	I	1	0.017									
	J	2	0.020									
	K	2	0.008									
	L	1	0.011									
6.3	A	0	.	0.006	0.006	0.003	0.001	49.028	0.002	0.005	0.007	0.011
	B	2	0.007									
	C	3	0.002									
	D	4	0.005									
	E	3	0.006									
	F	3	0.011									
12.5	A	1	0.010	0.010	0.009	0.004	0.001	36.852	0.006	0.007	0.013	0.014
	B	2	0.007									
	C	1	0.013									
	D	1	0.006									
	E	4	0.014									
	F	1	0.007									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-6b. Descriptive Statistics for Liver Weight (g) for F1 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	5	0.009	0.011	0.012	0.003	0.001	27.771	0.007	0.009	0.014	0.015
	B	3	0.007									
	C	5	0.010									
	D	4	0.014									
	E	5	0.013									
	F	2	0.015									
50	A	4	0.012	0.010	0.011	0.002	0.001	23.274	0.007	0.008	0.012	0.012
	B	1	0.012									
	C	4	0.010									
	D	0	.									
	E	0	.									
	F	4	0.007									
100	A	4	0.006	0.009	0.007	0.004	0.002	46.975	0.005	0.005	0.011	0.016
	B	3	0.005									
	C	4	0.011									
	D	4	0.005									
	E	2	0.008									
	F	2	0.016									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-7a. Descriptive Statistics for Liver Vitellogenin [Log10(copies VTG)/ng total RNA] for F1 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	3.212	3.048	2.949	0.738	0.213	24.208	2.047	2.593	3.371	4.395
	B	2	3.055									
	C	3	3.530									
	D	4	2.900									
	E	3	2.047									
	F	3	2.113									
	G	4	4.395									
	H	3	2.677									
	I	5	2.510									
	J	4	2.850									
	K	4	4.293									
	L	5	2.998									
6.3	A	6	3.275	2.436	2.408	0.580	0.237	23.811	1.503	2.293	2.730	3.275
	B	4	2.415									
	C	3	2.400									
	D	2	2.730									
	E	3	1.503									
	F	3	2.293									
12.5	A	5	3.790	3.742	3.732	0.262	0.107	6.989	3.436	3.560	3.790	4.202
	B	4	3.755									
	C	5	3.708									
	D	5	3.436									
	E	2	3.560									
	F	5	4.202									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 3-7a. Descriptive Statistics for Liver Vitellogenin [Log10(copies VTG)/ng total RNA] for F1 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	5.090	3.898	3.797	0.795	0.325	20.400	3.020	3.220	4.465	5.090
	B	3	3.507									
	C	1	3.220									
	D	2	4.465									
	E	1	3.020									
	F	4	4.088									
50	A	2	3.790	3.268	3.304	0.795	0.325	24.332	2.323	2.465	3.790	4.420
	B	5	3.408									
	C	2	4.420									
	D	6	3.200									
	E	6	2.323									
	F	2	2.465									
100	A	2	2.930	3.093	3.068	0.346	0.141	11.179	2.680	2.930	3.090	3.725
	B	3	3.070									
	C	2	3.725									
	D	2	3.090									
	E	4	3.065									
	F	4	2.680									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 3-7b. Descriptive Statistics for Liver Vitellogenin [Log10(copies VTG)/ng total RNA] for F1 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	0	.	2.098	2.227	0.558	0.168	26.602	1.110	1.490	2.553	2.710
	B	4	2.473									
	C	3	2.250									
	D	2	2.710									
	E	3	2.693									
	F	3	2.227									
	G	2	1.110									
	H	3	2.553									
	I	1	1.300									
	J	2	2.055									
	K	2	2.220									
	L	1	1.490									
6.3	A	0	.	2.417	2.400	0.680	0.304	28.116	1.570	1.967	2.900	3.250
	B	2	3.250									
	C	3	2.900									
	D	4	2.400									
	E	3	1.570									
	F	3	1.967									
12.5	A	1	4.460	3.223	2.888	0.915	0.374	28.388	2.415	2.430	4.260	4.460
	B	2	2.415									
	C	1	4.260									
	D	1	3.080									
	E	4	2.695									
	F	1	2.430									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 3-7b. Descriptive Statistics for Liver Vitellogenin [Log10(copies VTG)/ng total RNA] for F1 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	5	1.744	2.755	2.717	0.592	0.242	21.492	1.744	2.648	3.350	3.356
	B	3	2.690									
	C	5	3.356									
	D	4	2.648									
	E	5	2.744									
	F	2	3.350									
50	A	4	2.068	2.717	2.514	0.742	0.371	27.300	2.068	2.228	3.206	3.773
	B	1	2.640									
	C	4	3.773									
	D	0	.									
	E	0	.									
	F	4	2.388									
100	A	4	2.755	3.299	3.265	0.604	0.247	18.314	2.543	2.755	3.965	4.000
	B	3	3.167									
	C	4	3.363									
	D	4	2.543									
	E	2	3.965									
	F	2	4.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-8a. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	2	0.000									
	C	3	0.000									
	D	4	0.000									
	E	3	0.000									
	F	3	0.000									
	G	4	0.000									
	H	3	0.000									
	I	5	0.000									
	J	4	0.000									
	K	4	0.000									
	L	5	0.000									
6.3	A	6	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	4	0.000									
	C	3	0.000									
	D	3	0.000									
	E	4	0.000									
	F	3	0.000									
12.5	A	6	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	4	0.000									
	C	6	0.000									
	D	7	0.000									
	E	2	0.000									
	F	5	0.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-8a. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	4	0.000									
	C	1	0.000									
	D	2	0.000									
	E	1	0.000									
	F	4	0.000									
50	A	2	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	7	0.000									
	C	4	0.000									
	D	6	0.000									
	E	6	0.000									
	F	3	0.000									
100	A	2	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	3	0.000									
	C	2	0.000									
	D	2	0.000									
	E	5	0.000									
	F	4	0.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-8b. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	40.000	24.226	24.500	11.493	3.318	47.441	7.500	14.375	35.000	40.000
	B	6	7.500									
	C	5	19.400									
	D	4	16.750									
	E	5	30.600									
	F	5	8.800									
	G	4	28.250									
	H	5	34.000									
	I	3	36.667									
	J	4	36.000									
	K	4	20.750									
	L	3	12.000									
6.3	A	2	0.000	5.942	6.500	5.637	2.301	94.873	0.000	0.000	10.250	12.400
	B	4	10.250									
	C	5	12.400									
	D	5	2.800									
	E	4	0.000									
	F	5	10.200									
12.5	A	2	0.000	17.500	13.750	19.587	7.996	111.925	0.000	0.000	27.833	49.667
	B	4	5.500									
	C	2	22.000									
	D	1	0.000									
	E	6	27.833									
	F	3	49.667									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-8b. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	7	51.857	23.284	23.661	18.357	7.494	78.840	0.000	7.857	32.667	51.857
	B	4	0.000									
	C	7	7.857									
	D	6	32.667									
	E	7	23.571									
	F	4	23.750									
50	A	6	20.500	8.125	0.000	12.824	5.235	157.828	0.000	0.000	20.500	28.250
	B	1	0.000									
	C	4	28.250									
	D	2	0.000									
	E	2	0.000									
	F	5	0.000									
100	A	6	0.000	5.208	0.000	12.758	5.208	244.949	0.000	0.000	0.000	31.250
	B	5	0.000									
	C	6	0.000									
	D	6	0.000									
	E	3	0.000									
	F	4	31.250									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-9. Descriptive Statistics for External Sex Ratio for F1 Generation, Subadult.

		Sex Ratio (M:F)										
Treatment (µg/L)	Replicate	N	Replicate Mean	Mean	Median	Std	Sem	CV (%)	Min	Q1	Q3	Max
0.0	A	1	0.333	1.267	1.000	0.719	0.208	56.775	0.333	0.800	1.667	3.000
	B	1	3.000									
	C	1	1.667									
	D	1	1.000									
	E	1	1.667									
	F	1	1.667									
	G	1	1.000									
	H	1	1.667									
	I	1	0.600									
	J	1	1.000									
	K	1	1.000									
	L	1	0.600									
6.3	A	1	0.333	1.222	1.333	0.544	0.222	44.536	0.333	1.000	1.667	1.667
	B	1	1.000									
	C	1	1.667									
	D	1	1.667									
	E	1	1.000									
	F	1	1.667									
12.5	A	1	0.333	0.902	0.467	1.070	0.437	118.690	0.143	0.333	1.000	3.000
	B	1	1.000									
	C	1	0.333									
	D	1	0.143									
	E	1	3.000									
	F	1	0.600									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-9. Descriptive Statistics for External Sex Ratio for F1 Generation, Subadult. (continued)

		Sex Ratio (M:F)										
Treatment (µg/L)	Replicate	N	Replicate Mean	Mean	Median	Std	Sem	CV (%)	Min	Q1	Q3	Max
25	A	1	7.000	4.333	5.000	3.011	1.229	69.487	1.000	1.000	7.000	7.000
	B	1	1.000									
	C	1	7.000									
	D	1	3.000									
	E	1	7.000									
	F	1	1.000									
50	A	1	3.000	1.079	0.667	1.098	0.448	101.745	0.143	0.333	1.667	3.000
	B	1	0.143									
	C	1	1.000									
	D	1	0.333									
	E	1	0.333									
	F	1	1.667									
100	A	1	3.000	2.044	2.333	1.101	0.449	53.846	0.600	1.000	3.000	3.000
	B	1	1.667									
	C	1	3.000									
	D	1	3.000									
	E	1	0.600									
	F	1	1.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-10. Descriptive Statistics for Fecundity for F1 Generation, Adult.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	20.048	19.054	18.881	1.892	0.386	9.931	15.286	18.024	20.571	22.238
	B	1	18.238									
	C	1	18.190									
	D	1	21.714									
	E	1	19.667									
	F	1	22.238									
	G	1	20.524									
	H	1	18.762									
	I	1	19.000									
	J	1	17.619									
	K	1	21.381									
	L	1	20.714									
	M	1	16.190									
	N	1	16.810									
	O	1	18.667									
	P	1	19.667									
	Q	1	21.857									
	R	1	20.619									
	S	1	19.714									
	T	1	15.286									
	U	1	18.143									
	V	1	17.905									
	W	1	16.190									
	X	1	18.143									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-10. Descriptive Statistics for Fecundity for F1 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	13.143	13.187	14.024	4.309	1.244	32.678	0.000	13.286	14.952	17.190
	B	1	13.429									
	C	1	13.429									
	D	1	14.286									
	E	1	13.762									
	F	1	14.857									
	G	1	0.000									
	H	1	15.095									
	I	1	17.190									
	J	1	13.143									
	K	1	15.000									
	L	1	14.905									
12.5	A	1	13.667	12.508	12.429	1.141	0.329	9.123	10.810	11.690	13.452	14.476
	B	1	13.238									
	C	1	11.762									
	D	1	11.762									
	E	1	11.619									
	F	1	11.143									
	G	1	14.476									
	H	1	13.714									
	I	1	12.143									
	J	1	10.810									
	K	1	13.048									
	L	1	12.714									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-10. Descriptive Statistics for Fecundity for F1 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	12.143	11.540	11.524	0.751	0.217	6.506	10.524	10.857	12.143	12.667
	B	1	12.667									
	C	1	10.571									
	D	1	11.095									
	E	1	12.143									
	F	1	11.476									
	G	1	11.429									
	H	1	12.619									
	I	1	10.524									
	J	1	11.619									
	K	1	10.619									
	L	1	11.571									
50	A	1	8.714	7.802	7.881	0.506	0.146	6.490	7.048	7.381	8.167	8.714
	B	1	8.286									
	C	1	7.143									
	D	1	7.429									
	E	1	8.238									
	F	1	8.095									
	G	1	7.571									
	H	1	7.333									
	I	1	7.810									
	J	1	7.048									
	K	1	8.000									
	L	1	7.952									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-10. Descriptive Statistics for Fecundity for F1 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	5.238	5.813	6.000	0.692	0.200	11.908	4.619	5.190	6.286	6.857
	B	1	6.571									
	C	1	4.619									
	D	1	5.810									
	E	1	6.048									
	F	1	6.286									
	G	1	5.143									
	H	1	4.905									
	I	1	6.857									
	J	1	5.952									
	K	1	6.048									
	L	1	6.286									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-11. Descriptive Statistics for Fertility for F1 Generation, Adult.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	19.952	18.986	18.881	1.919	0.392	10.106	15.095	17.881	20.524	22.238
	B	1	18.048									
	C	1	18.190									
	D	1	21.667									
	E	1	19.619									
	F	1	22.238									
	G	1	20.476									
	H	1	18.762									
	I	1	19.000									
	J	1	17.619									
	K	1	21.286									
	L	1	20.714									
	M	1	16.143									
	N	1	16.762									
	O	1	18.619									
	P	1	19.619									
	Q	1	21.857									
	R	1	20.571									
	S	1	19.524									
	T	1	15.095									
	U	1	18.095									
	V	1	17.762									
	W	1	16.048									
	X	1	18.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-11. Descriptive Statistics for Fertility for F1 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	13.143	13.071	13.976	4.252	1.227	32.530	0.000	13.262	14.690	16.905
	B	1	13.381									
	C	1	13.429									
	D	1	14.238									
	E	1	13.714									
	F	1	14.714									
	G	1	0.000									
	H	1	14.952									
	I	1	16.905									
	J	1	13.048									
	K	1	14.667									
	L	1	14.667									
12.5	A	1	13.524	12.222	12.214	1.222	0.353	9.997	10.333	11.357	13.286	14.238
	B	1	13.143									
	C	1	11.429									
	D	1	11.429									
	E	1	11.286									
	F	1	10.762									
	G	1	14.238									
	H	1	13.429									
	I	1	11.810									
	J	1	10.333									
	K	1	12.667									
	L	1	12.619									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-11. Descriptive Statistics for Fertility for F1 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	11.714	11.119	11.119	0.814	0.235	7.322	9.857	10.500	11.714	12.333
	B	1	12.333									
	C	1	10.095									
	D	1	10.905									
	E	1	11.714									
	F	1	11.095									
	G	1	11.238									
	H	1	12.238									
	I	1	9.857									
	J	1	11.048									
	K	1	10.048									
	L	1	11.143									
50	A	1	8.190	7.135	7.167	0.574	0.166	8.048	6.048	6.738	7.524	8.190
	B	1	7.667									
	C	1	6.619									
	D	1	6.905									
	E	1	7.571									
	F	1	7.476									
	G	1	6.810									
	H	1	6.667									
	I	1	7.000									
	J	1	6.048									
	K	1	7.333									
	L	1	7.333									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-11. Descriptive Statistics for Fertility for F1 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	3.762	4.790	4.833	0.692	0.200	14.448	3.762	4.167	5.214	5.857
	B	1	5.857									
	C	1	3.905									
	D	1	4.714									
	E	1	4.857									
	F	1	5.238									
	G	1	4.333									
	H	1	4.000									
	I	1	5.810									
	J	1	4.810									
	K	1	5.190									
	L	1	5.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-12a. Descriptive Statistics for Body Weight (g) for F1 Generation, Adult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	0.292	0.367	0.375	0.058	0.012	15.756	0.213	0.324	0.409	0.451
	B	1	0.442									
	C	1	0.406									
	D	1	0.409									
	E	1	0.419									
	F	1	0.378									
	G	1	0.293									
	H	1	0.310									
	I	1	0.433									
	J	1	0.310									
	K	1	0.408									
	L	1	0.371									
	M	1	0.339									
	N	1	0.418									
	O	1	0.310									
	P	1	0.360									
	Q	1	0.353									
	R	1	0.367									
	S	1	0.405									
	T	1	0.213									
	U	1	0.405									
	V	1	0.451									
	W	1	0.380									
	X	1	0.338									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-12a. Descriptive Statistics for Body Weight (g) for F1 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	0.432	0.381	0.370	0.072	0.022	18.851	0.236	0.356	0.432	0.493
	B	1	0.411									
	C	1	0.430									
	D	1	0.493									
	E	1	0.439									
	F	1	0.370									
	G	0	.									
	H	1	0.370									
	I	1	0.236									
	J	1	0.294									
	K	1	0.362									
	L	1	0.356									
12.5	A	1	0.335	0.364	0.366	0.070	0.020	19.229	0.250	0.325	0.421	0.456
	B	1	0.328									
	C	1	0.351									
	D	1	0.250									
	E	1	0.411									
	F	1	0.408									
	G	1	0.380									
	H	1	0.322									
	I	1	0.456									
	J	1	0.431									
	K	1	0.446									
	L	1	0.251									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-12a. Descriptive Statistics for Body Weight (g) for F1 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.367	0.370	0.360	0.069	0.020	18.512	0.276	0.324	0.404	0.541
	B	1	0.413									
	C	1	0.541									
	D	1	0.401									
	E	1	0.313									
	F	1	0.334									
	G	1	0.387									
	H	1	0.352									
	I	1	0.406									
	J	1	0.276									
	K	1	0.347									
	L	1	0.308									
50	A	1	0.460	0.368	0.338	0.097	0.028	26.276	0.250	0.290	0.461	0.550
	B	1	0.338									
	C	1	0.328									
	D	1	0.469									
	E	1	0.462									
	F	1	0.338									
	G	1	0.550									
	H	1	0.259									
	I	1	0.250									
	J	1	0.306									
	K	1	0.274									
	L	1	0.376									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-12a. Descriptive Statistics for Body Weight (g) for F1 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	0.281	0.325	0.315	0.049	0.014	14.951	0.268	0.284	0.359	0.427
	B	1	0.382									
	C	1	0.313									
	D	1	0.268									
	E	1	0.329									
	F	1	0.364									
	G	1	0.427									
	H	1	0.287									
	I	1	0.305									
	J	1	0.273									
	K	1	0.317									
	L	1	0.354									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-12b. Descriptive Statistics for Body Weight (g) for F1 Generation, Adult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	0.278	0.301	0.300	0.045	0.009	15.014	0.223	0.278	0.325	0.404
	B	1	0.283									
	C	1	0.298									
	D	1	0.226									
	E	1	0.382									
	F	1	0.223									
	G	1	0.259									
	H	1	0.288									
	I	1	0.316									
	J	1	0.301									
	K	1	0.319									
	L	1	0.404									
	M	1	0.364									
	N	1	0.302									
	O	1	0.334									
	P	1	0.330									
	Q	1	0.232									
	R	1	0.270									
	S	1	0.313									
	T	1	0.285									
	U	1	0.302									
	V	1	0.347									
	W	1	0.277									
	X	1	0.293									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-12b. Descriptive Statistics for Body Weight (g) for F1 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	0.242	0.304	0.287	0.056	0.016	18.438	0.242	0.259	0.347	0.402
	B	1	0.394									
	C	1	0.284									
	D	1	0.298									
	E	1	0.402									
	F	1	0.282									
	G	2	0.290									
	H	1	0.258									
	I	1	0.320									
	J	1	0.251									
	K	1	0.259									
	L	1	0.373									
12.5	A	1	0.224	0.312	0.311	0.060	0.017	19.242	0.224	0.267	0.344	0.439
	B	1	0.337									
	C	1	0.336									
	D	1	0.267									
	E	1	0.317									
	F	1	0.282									
	G	1	0.267									
	H	1	0.439									
	I	1	0.248									
	J	1	0.305									
	K	1	0.350									
	L	1	0.376									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-12b. Descriptive Statistics for Body Weight (g) for F1 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.267	0.298	0.294	0.045	0.013	15.013	0.246	0.268	0.309	0.387
	B	1	0.269									
	C	1	0.299									
	D	1	0.246									
	E	1	0.309									
	F	1	0.251									
	G	1	0.296									
	H	1	0.387									
	I	1	0.291									
	J	1	0.270									
	K	1	0.377									
	L	1	0.309									
50	A	1	0.346	0.252	0.241	0.063	0.018	25.022	0.177	0.193	0.305	0.348
	B	1	0.285									
	C	1	0.271									
	D	1	0.188									
	E	1	0.348									
	F	1	0.324									
	G	1	0.261									
	H	1	0.220									
	I	1	0.191									
	J	1	0.177									
	K	1	0.217									
	L	1	0.195									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-12b. Descriptive Statistics for Body Weight (g) for F1 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	0.181	0.274	0.264	0.074	0.021	26.930	0.160	0.227	0.333	0.396
	B	1	0.265									
	C	1	0.218									
	D	1	0.257									
	E	1	0.380									
	F	1	0.236									
	G	1	0.264									
	H	1	0.334									
	I	1	0.263									
	J	1	0.160									
	K	1	0.396									
	L	1	0.331									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-13a. Descriptive Statistics for Body Length (mm) for F1 Generation, Adult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	25.4	27.78	27.95	1.696	0.346	6.105	23.10	26.90	29.00	30.30
	B	1	26.7									
	C	1	29.8									
	D	1	28.5									
	E	1	28.8									
	F	1	27.7									
	G	1	26.1									
	H	1	26.0									
	I	1	30.3									
	J	1	27.1									
	K	1	29.7									
	L	1	28.0									
	M	1	28.4									
	N	1	28.5									
	O	1	25.6									
	P	1	27.1									
	Q	1	27.6									
	R	1	27.5									
	S	1	29.7									
	T	1	23.1									
	U	1	29.2									
	V	1	29.4									
	W	1	28.6									
	X	1	27.9									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-13a. Descriptive Statistics for Body Length (mm) for F1 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	29.3	27.69	28.80	2.496	0.753	9.013	22.20	26.30	29.30	31.30
	B	1	29.2									
	C	1	28.8									
	D	1	31.3									
	E	1	28.9									
	F	1	29.3									
	G	0	.									
	H	1	26.3									
	I	1	22.2									
	J	1	25.2									
	K	1	27.1									
	L	1	27.0									
12.5	A	1	26.4	27.31	26.80	2.298	0.663	8.415	23.00	25.75	29.40	30.40
	B	1	25.6									
	C	1	26.1									
	D	1	25.9									
	E	1	30.4									
	F	1	28.4									
	G	1	27.2									
	H	1	25.5									
	I	1	30.4									
	J	1	29.4									
	K	1	29.4									
	L	1	23.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-13a. Descriptive Statistics for Body Length (mm) for F1 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	27.7	28.14	27.65	1.802	0.520	6.404	24.80	27.20	29.50	31.90
	B	1	27.6									
	C	1	31.9									
	D	1	29.7									
	E	1	27.1									
	F	1	28.0									
	G	1	29.8									
	H	1	27.4									
	I	1	29.3									
	J	1	27.2									
	K	1	27.2									
	L	1	24.8									
50	A	1	30.4	26.81	26.35	2.705	0.781	10.090	23.30	24.65	29.65	30.50
	B	1	27.6									
	C	1	27.2									
	D	1	29.9									
	E	1	29.4									
	F	1	24.6									
	G	1	30.5									
	H	1	23.3									
	I	1	23.6									
	J	1	25.0									
	K	1	24.7									
	L	1	25.5									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-13a. Descriptive Statistics for Body Length (mm) for F1 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	28.2	28.60	28.75	2.385	0.688	8.338	25.70	25.95	30.75	32.30
	B	1	29.3									
	C	1	31.2									
	D	1	26.0									
	E	1	29.7									
	F	1	32.3									
	G	1	30.9									
	H	1	27.5									
	I	1	25.9									
	J	1	25.9									
	K	1	25.7									
	L	1	30.6									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-13b. Descriptive Statistics for Body Length (mm) for F1 Generation, Adult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	26.8	27.07	27.20	1.607	0.328	5.937	22.90	25.95	28.05	30.60
	B	1	25.0									
	C	1	25.6									
	D	1	22.9									
	E	1	28.2									
	F	1	25.5									
	G	1	25.7									
	H	1	26.8									
	I	1	28.1									
	J	1	28.0									
	K	1	28.0									
	L	1	30.6									
	M	1	28.6									
	N	1	27.7									
	O	1	29.3									
	P	1	27.9									
	Q	1	26.4									
	R	1	25.6									
	S	1	27.5									
	T	1	26.4									
	U	1	27.0									
	V	1	28.5									
	W	1	26.2									
	X	1	27.4									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-13b. Descriptive Statistics for Body Length (mm) for F1 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	27.1	27.38	27.20	2.118	0.611	7.734	23.90	25.80	28.90	31.20
	B	1	29.3									
	C	1	27.3									
	D	1	26.6									
	E	1	31.2									
	F	1	27.7									
	G	2	25.3									
	H	1	23.9									
	I	1	28.5									
	J	1	26.1									
	K	1	25.5									
	L	1	30.1									
12.5	A	1	24.9	27.18	26.80	2.198	0.635	8.087	24.80	25.10	28.80	31.40
	B	1	27.3									
	C	1	26.0									
	D	1	24.8									
	E	1	27.7									
	F	1	26.3									
	G	1	25.1									
	H	1	31.4									
	I	1	25.1									
	J	1	28.5									
	K	1	30.0									
	L	1	29.1									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-13b. Descriptive Statistics for Body Length (mm) for F1 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	26.5	27.28	27.50	1.005	0.290	3.685	26.00	26.50	27.85	29.50
	B	1	27.6									
	C	1	27.8									
	D	1	26.5									
	E	1	27.9									
	F	1	26.0									
	G	1	27.7									
	H	1	29.5									
	I	1	27.9									
	J	1	26.1									
	K	1	26.5									
	L	1	27.4									
50	A	1	28.3	25.14	24.95	2.972	0.858	11.823	21.60	22.50	27.40	30.40
	B	1	27.6									
	C	1	27.2									
	D	1	22.4									
	E	1	30.4									
	F	1	27.1									
	G	1	26.0									
	H	1	22.6									
	I	1	23.9									
	J	1	22.8									
	K	1	21.6									
	L	1	21.8									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-13b. Descriptive Statistics for Body Length (mm) for F1 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	24.8	28.59	28.65	2.532	0.731	8.856	24.80	26.30	30.60	32.70
	B	1	25.4									
	C	1	25.3									
	D	1	28.4									
	E	1	28.9									
	F	1	27.2									
	G	1	28.3									
	H	1	30.6									
	I	1	32.7									
	J	1	29.7									
	K	1	30.6									
	L	1	31.2									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-14a. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Adult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									
	M	1	0.0									
	N	1	0.0									
	O	1	0.0									
	P	1	0.0									
	Q	1	0.0									
	R	1	0.0									
	S	1	0.0									
	T	1	0.0									
	U	1	0.0									
	V	1	0.0									
	W	1	0.0									
	X	1	0.0									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 3-14a. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	0	.									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									
12.5	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-14a. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									
50	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-14a. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-14b. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Adult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	88.0	65.58	68.00	12.864	2.626	19.614	40.00	57.00	73.50	89.00
	B	1	74.0									
	C	1	70.0									
	D	1	63.0									
	E	1	77.0									
	F	1	82.0									
	G	1	40.0									
	H	1	74.0									
	I	1	63.0									
	J	1	71.0									
	K	1	73.0									
	L	1	66.0									
	M	1	48.0									
	N	1	89.0									
	O	1	56.0									
	P	1	58.0									
	Q	1	59.0									
	R	1	51.0									
	S	1	52.0									
	T	1	59.0									
	U	1	70.0									
	V	1	73.0									
	W	1	72.0									
	X	1	46.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-14b. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	98.0	64.79	66.50	20.072	5.794	30.979	18.50	55.00	74.50	98.00
	B	1	66.0									
	C	1	57.0									
	D	1	72.0									
	E	1	87.0									
	F	1	60.0									
	G	2	18.5									
	H	1	50.0									
	I	1	67.0									
	J	1	73.0									
	K	1	76.0									
	L	1	53.0									
12.5	A	1	67.0	61.92	61.00	8.140	2.350	13.147	50.00	58.00	65.50	81.00
	B	1	61.0									
	C	1	61.0									
	D	1	59.0									
	E	1	50.0									
	F	1	51.0									
	G	1	68.0									
	H	1	57.0									
	I	1	81.0									
	J	1	64.0									
	K	1	61.0									
	L	1	63.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-14b. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	74.0	61.50	63.50	15.258	4.405	24.810	29.00	54.00	73.00	82.00
	B	1	54.0									
	C	1	67.0									
	D	1	54.0									
	E	1	29.0									
	F	1	56.0									
	G	1	71.0									
	H	1	76.0									
	I	1	72.0									
	J	1	60.0									
	K	1	82.0									
	L	1	43.0									
50	A	1	53.0	59.08	54.50	12.817	3.700	21.692	39.00	49.50	70.00	81.00
	B	1	55.0									
	C	1	49.0									
	D	1	50.0									
	E	1	73.0									
	F	1	63.0									
	G	1	81.0									
	H	1	67.0									
	I	1	76.0									
	J	1	54.0									
	K	1	49.0									
	L	1	39.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 3-14b. Descriptive Statistics for Anal Fin Papillae Number for F1 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	46.0	65.25	66.00	12.174	3.514	18.657	46.00	55.00	74.50	83.00
	B	1	72.0									
	C	1	50.0									
	D	1	76.0									
	E	1	56.0									
	F	1	54.0									
	G	1	73.0									
	H	1	67.0									
	I	1	83.0									
	J	1	65.0									
	K	1	60.0									
	L	1	81.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

[F2 Generation]

Table 4-1. Summary of Survivability for F2 Generation.

		Juvenile Survivability - Survival to 4 WPF (%)					Subadult Survivability - Survival from 4 to 9 WPF (%)					Adult Survivability - Survival from 9 to 15 WPF (%)				
Treatment (µg/L)	Replicate	N	Replicate Percent	Mean	Std Dev	CV (%)	N	Replicate Percent	Mean	Std Dev	CV (%)	N	Replicate Percent	Mean	Std Dev	CV (%)
0.0	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
	G	12	100				12	100				2	100			
	H	12	100				12	100				2	100			
	I	12	100				12	100				2	100			
	J	12	100				12	100				2	100			
	K	12	100				12	100				2	100			
	L	12	100				12	100				2	100			
6.3	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
12.5	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
25	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
50	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			
100	A	12	100	100	0	0	12	100	100	0	0	2	100	100	0	0
	B	12	100				12	100				2	100			
	C	12	100				12	100				2	100			
	D	12	100				12	100				2	100			
	E	12	100				12	100				2	100			
	F	12	100				12	100				2	100			

Std dev Standard deviation.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.

Table 4-2. Descriptive Statistics for Hatchability (%) for F2 Generation.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	91.5	92.188	92.50	2.870	0.586	3.113	87.50	89.75	94.00	99.00
	B	2	87.5									
	C	2	88.5									
	D	2	92.0									
	E	2	89.5									
	F	2	88.5									
	G	2	94.0									
	H	2	94.5									
	I	2	92.5									
	J	2	93.0									
	K	2	90.0									
	L	2	94.0									
	M	2	87.5									
	N	2	94.5									
	O	2	99.0									
	P	2	92.5									
	Q	2	92.5									
	R	2	93.5									
	S	2	94.0									
	T	2	91.5									
	U	2	88.5									
	V	2	93.5									
	W	2	96.5									
	X	2	93.5									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-2. Descriptive Statistics for Hatchability (%) for F2 Generation. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	2	100.0	97.773	100.00	4.221	1.273	4.317	87.50	95.50	100.00	100.00
	B	2	87.5									
	C	2	100.0									
	D	2	100.0									
	E	2	100.0									
	F	2	100.0									
	G	0	.									
	H	2	100.0									
	I	2	100.0									
	J	2	95.5									
	K	2	100.0									
	L	2	92.5									
12.5	A	2	95.0	96.458	96.25	3.271	0.944	3.392	89.50	95.25	100.00	100.00
	B	2	100.0									
	C	2	100.0									
	D	2	95.5									
	E	2	92.5									
	F	2	96.5									
	G	2	100.0									
	H	2	100.0									
	I	2	96.0									
	J	2	96.0									
	K	2	96.5									
	L	2	89.5									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-2. Descriptive Statistics for Hatchability (%) for F2 Generation. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	2	90.5	94.833	95.00	3.916	1.130	4.129	89.50	91.00	98.25	100.00
	B	2	89.5									
	C	2	94.0									
	D	2	96.5									
	E	2	90.0									
	F	2	100.0									
	G	2	100.0									
	H	2	96.0									
	I	2	94.0									
	J	2	91.5									
	K	2	100.0									
	L	2	96.0									
50	A	2	100.0	93.250	94.25	6.017	1.737	6.453	80.50	89.50	98.00	100.00
	B	2	87.0									
	C	2	96.0									
	D	2	86.5									
	E	2	94.5									
	F	2	94.0									
	G	2	100.0									
	H	2	80.5									
	I	2	95.0									
	J	2	93.5									
	K	2	100.0									
	L	2	92.0									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 4-2. Descriptive Statistics for Hatchability (%) for F2 Generation. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	2	83.5	88.458	89.25	6.236	1.800	7.049	80.00	82.25	92.75	100.00
	B	2	81.0									
	C	2	91.5									
	D	2	94.0									
	E	2	89.0									
	F	2	80.0									
	G	2	80.5									
	H	2	87.5									
	I	2	100.0									
	J	2	89.5									
	K	2	94.0									
	L	2	91.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-3. Descriptive Statistics for Median Time to Hatch (days) for F2 Generation.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	10.0	10.44	10.00	0.742	0.151	7.107	9.00	10.00	11.00	12.00
	B	1	11.0									
	C	1	11.0									
	D	1	11.0									
	E	1	11.0									
	F	1	10.0									
	G	1	10.0									
	H	1	10.0									
	I	1	11.0									
	J	1	10.0									
	K	1	9.0									
	L	1	11.0									
	M	1	10.0									
	N	1	11.0									
	O	1	10.0									
	P	1	10.0									
	Q	1	12.0									
	R	1	11.0									
	S	1	11.0									
	T	1	10.0									
	U	1	11.5									
	V	1	10.0									
	W	1	9.0									
	X	1	10.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-3. Descriptive Statistics for Median Time to Hatch (days) for F2 Generation. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	10.0	9.64	10.00	0.505	0.152	5.236	9.00	9.00	10.00	10.00
	B	1	9.0									
	C	1	10.0									
	D	1	9.0									
	E	1	10.0									
	F	1	9.0									
	G	0	.									
	H	1	10.0									
	I	1	10.0									
	J	1	9.0									
	K	1	10.0									
	L	1	10.0									
12.5	A	1	10.0	9.92	10.00	0.515	0.149	5.193	9.00	10.00	10.00	11.00
	B	1	10.0									
	C	1	10.0									
	D	1	10.0									
	E	1	11.0									
	F	1	10.0									
	G	1	10.0									
	H	1	9.0									
	I	1	10.0									
	J	1	10.0									
	K	1	9.0									
	L	1	10.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-3. Descriptive Statistics for Median Time to Hatch (days) for F2 Generation. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	9.0	10.00	10.00	0.603	0.174	6.030	9.00	10.00	10.00	11.00
	B	1	10.0									
	C	1	11.0									
	D	1	10.0									
	E	1	11.0									
	F	1	10.0									
	G	1	10.0									
	H	1	10.0									
	I	1	10.0									
	J	1	10.0									
	K	1	10.0									
	L	1	9.0									
50	A	1	10.0	9.83	10.00	0.444	0.128	4.513	9.00	9.75	10.00	10.50
	B	1	10.0									
	C	1	10.0									
	D	1	10.0									
	E	1	9.0									
	F	1	10.0									
	G	1	10.0									
	H	1	10.0									
	I	1	10.5									
	J	1	9.5									
	K	1	10.0									
	L	1	9.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-3. Descriptive Statistics for Median Time to Hatch (days) for F2 Generation. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	10.0	10.00	10.00	0.369	0.107	3.693	9.50	10.00	10.00	11.00
	B	1	10.0									
	C	1	10.0									
	D	1	10.0									
	E	1	9.5									
	F	1	10.0									
	G	1	9.5									
	H	1	10.0									
	I	1	10.0									
	J	1	11.0									
	K	1	10.0									
	L	1	10.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-4a. Descriptive Statistics for Body Weight (g) for F2 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	0.103	0.076	0.082	0.017	0.005	22.563	0.051	0.061	0.089	0.103
	B	5	0.091									
	C	5	0.083									
	D	4	0.054									
	E	4	0.083									
	F	4	0.051									
	G	3	0.058									
	H	4	0.065									
	I	4	0.065									
	J	7	0.087									
	K	5	0.081									
	L	5	0.092									
6.3	A	7	0.082	0.081	0.079	0.012	0.005	14.892	0.066	0.072	0.095	0.096
	B	3	0.076									
	C	4	0.072									
	D	5	0.066									
	E	4	0.096									
	F	6	0.095									
12.5	A	7	0.114	0.101	0.103	0.011	0.005	11.256	0.084	0.094	0.111	0.114
	B	7	0.111									
	C	6	0.106									
	D	4	0.094									
	E	4	0.084									
	F	6	0.100									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-4a. Descriptive Statistics for Body Weight (g) for F2 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	6	0.082	0.084	0.084	0.007	0.003	8.772	0.074	0.079	0.091	0.094
	B	8	0.094									
	C	6	0.091									
	D	6	0.074									
	E	5	0.085									
	F	3	0.079									
50	A	2	0.092	0.092	0.091	0.006	0.002	6.605	0.084	0.089	0.096	0.102
	B	5	0.096									
	C	6	0.102									
	D	4	0.089									
	E	5	0.084									
	F	6	0.091									
100	A	5	0.084	0.087	0.085	0.007	0.003	8.050	0.080	0.083	0.093	0.098
	B	7	0.098									
	C	2	0.083									
	D	1	0.093									
	E	5	0.080									
	F	6	0.085									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-4b. Descriptive Statistics for Body Weight (g) for F2 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	0.102	0.093	0.095	0.020	0.006	21.078	0.062	0.079	0.107	0.122
	B	3	0.113									
	C	3	0.088									
	D	4	0.072									
	E	4	0.085									
	F	4	0.096									
	G	5	0.068									
	H	4	0.062									
	I	4	0.093									
	J	1	0.121									
	K	3	0.101									
	L	3	0.122									
6.3	A	1	0.102	0.096	0.097	0.010	0.004	9.937	0.084	0.088	0.102	0.109
	B	5	0.088									
	C	4	0.092									
	D	3	0.084									
	E	4	0.102									
	F	2	0.109									
12.5	A	1	0.158	0.122	0.122	0.024	0.010	19.233	0.090	0.108	0.135	0.158
	B	1	0.135									
	C	2	0.090									
	D	4	0.115									
	E	4	0.108									
	F	2	0.129									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-4b. Descriptive Statistics for Body Weight (g) for F2 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	2	0.084	0.091	0.084	0.012	0.005	12.739	0.082	0.083	0.103	0.105
	B	0	.									
	C	2	0.103									
	D	2	0.082									
	E	3	0.083									
	F	5	0.105									
50	A	6	0.106	0.104	0.104	0.004	0.002	4.208	0.098	0.101	0.108	0.109
	B	3	0.109									
	C	2	0.108									
	D	4	0.102									
	E	3	0.098									
	F	2	0.101									
100	A	3	0.112	0.110	0.108	0.020	0.008	17.979	0.090	0.093	0.121	0.143
	B	1	0.143									
	C	6	0.104									
	D	7	0.090									
	E	3	0.093									
	F	2	0.121									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-5a. Descriptive Statistics for Body Length (mm) for F2 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	15.550	15.309	15.080	0.921	0.266	6.018	14.350	14.625	15.700	17.500
	B	5	14.760									
	C	5	15.360									
	D	4	14.350									
	E	4	15.700									
	F	4	14.575									
	G	3	14.433									
	H	4	14.675									
	I	4	14.800									
	J	7	15.700									
	K	5	16.300									
	L	5	17.500									
6.3	A	7	16.643	15.526	15.508	0.879	0.359	5.664	14.420	14.875	16.200	16.643
	B	3	15.000									
	C	4	14.875									
	D	5	14.420									
	E	4	16.200									
	F	6	16.017									
12.5	A	7	15.986	16.201	16.110	0.627	0.256	3.869	15.475	15.650	16.829	17.033
	B	7	16.829									
	C	6	17.033									
	D	4	15.650									
	E	4	15.475									
	F	6	16.233									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-5a. Descriptive Statistics for Body Length (mm) for F2 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
25	A	6	15.117	15.369	15.278	0.674	0.275	4.388	14.433	15.050	15.775	16.400
	B	8	15.775									
	C	6	15.050									
	D	6	14.433									
	E	5	15.440									
	F	3	16.400									
50	A	2	15.950	16.409	16.158	0.804	0.328	4.898	15.740	15.900	16.575	17.920
	B	5	17.920									
	C	6	16.367									
	D	4	16.575									
	E	5	15.740									
	F	6	15.900									
100	A	5	14.920	15.619	15.627	0.597	0.244	3.824	14.920	15.000	16.100	16.440
	B	7	15.571									
	C	2	15.000									
	D	1	16.100									
	E	5	16.440									
	F	6	15.683									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-5b. Descriptive Statistics for Body Length (mm) for F2 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	16.200	16.541	16.288	1.344	0.388	8.123	14.950	15.550	17.267	19.600
	B	3	15.733									
	C	3	15.367									
	D	4	14.950									
	E	4	16.375									
	F	4	17.025									
	G	5	15.960									
	H	4	14.950									
	I	4	17.100									
	J	1	17.800									
	K	3	17.433									
	L	3	19.600									
6.3	A	1	18.000	16.570	16.073	0.900	0.367	5.430	15.900	15.975	17.400	18.000
	B	5	15.980									
	C	4	15.975									
	D	3	16.167									
	E	4	15.900									
	F	2	17.400									
12.5	A	1	17.800	17.646	17.550	0.715	0.292	4.053	16.700	17.175	18.400	18.500
	B	1	18.500									
	C	2	16.700									
	D	4	17.175									
	E	4	17.300									
	F	2	18.400									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-5b. Descriptive Statistics for Body Length (mm) for F2 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	2	14.600	15.761	15.800	1.023	0.457	6.488	14.600	15.150	15.933	17.320
	B	0	.									
	C	2	15.800									
	D	2	15.150									
	E	3	15.933									
	F	5	17.320									
50	A	6	17.300	16.756	17.233	0.877	0.358	5.233	15.567	15.700	17.300	17.500
	B	3	17.167									
	C	2	15.700									
	D	4	17.300									
	E	3	15.567									
	F	2	17.500									
100	A	3	15.400	16.626	16.375	1.045	0.427	6.288	15.400	15.857	17.650	18.100
	B	1	18.100									
	C	6	16.483									
	D	7	15.857									
	E	3	16.267									
	F	2	17.650									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-6a. Descriptive Statistics for Liver Weight (g) for F2 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	0.003	0.003	0.003	0.001	0.000	20.196	0.002	0.003	0.004	0.005
	B	5	0.003									
	C	5	0.005									
	D	4	0.003									
	E	4	0.004									
	F	4	0.003									
	G	3	0.003									
	H	4	0.003									
	I	4	0.002									
	J	7	0.004									
	K	5	0.003									
	L	5	0.003									
6.3	A	7	0.004	0.005	0.004	0.002	0.001	38.142	0.004	0.004	0.004	0.009
	B	3	0.004									
	C	4	0.004									
	D	5	0.004									
	E	4	0.009									
	F	6	0.004									
12.5	A	7	0.005	0.006	0.005	0.001	0.000	21.044	0.005	0.005	0.007	0.008
	B	7	0.006									
	C	6	0.005									
	D	4	0.005									
	E	4	0.007									
	F	6	0.008									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-6a. Descriptive Statistics for Liver Weight (g) for F2 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	6	0.005	0.006	0.006	0.001	0.000	20.160	0.004	0.005	0.006	0.007
	B	8	0.004									
	C	6	0.006									
	D	6	0.005									
	E	5	0.007									
	F	3	0.006									
50	A	2	0.005	0.005	0.005	0.001	0.000	14.040	0.004	0.005	0.006	0.006
	B	5	0.005									
	C	6	0.006									
	D	4	0.005									
	E	5	0.004									
	F	6	0.006									
100	A	5	0.004	0.005	0.005	0.001	0.000	15.253	0.004	0.004	0.005	0.006
	B	7	0.005									
	C	2	0.005									
	D	1	0.006									
	E	5	0.004									
	F	6	0.004									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-6b. Descriptive Statistics for Liver Weight (g) for F2 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	0.003	0.003	0.003	0.001	0.000	23.277	0.002	0.003	0.004	0.005
	B	3	0.003									
	C	3	0.005									
	D	4	0.003									
	E	4	0.005									
	F	4	0.003									
	G	5	0.002									
	H	4	0.003									
	I	4	0.004									
	J	1	0.003									
	K	3	0.004									
	L	3	0.005									
6.3	A	1	0.004	0.004	0.005	0.001	0.000	17.667	0.003	0.004	0.005	0.005
	B	5	0.004									
	C	4	0.005									
	D	3	0.005									
	E	4	0.005									
	F	2	0.003									
12.5	A	1	0.013	0.007	0.006	0.003	0.001	39.883	0.005	0.005	0.007	0.013
	B	1	0.006									
	C	2	0.005									
	D	4	0.005									
	E	4	0.006									
	F	2	0.007									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-6b. Descriptive Statistics for Liver Weight (g) for F2 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	2	0.005	0.007	0.007	0.001	0.000	15.491	0.005	0.006	0.007	0.008
	B	0	.									
	C	2	0.006									
	D	2	0.007									
	E	3	0.007									
	F	5	0.008									
50	A	6	0.004	0.005	0.005	0.001	0.000	15.311	0.004	0.005	0.005	0.006
	B	3	0.006									
	C	2	0.005									
	D	4	0.005									
	E	3	0.005									
	F	2	0.005									
100	A	3	0.005	0.006	0.005	0.002	0.001	29.366	0.004	0.004	0.007	0.009
	B	1	0.009									
	C	6	0.004									
	D	7	0.005									
	E	3	0.004									
	F	2	0.007									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-7a. Descriptive Statistics for Liver Vitellogenin [Log10(copies VTG)/ng total RNA] for F2 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	3.767	2.907	2.900	0.606	0.175	20.856	1.775	2.448	3.462	3.767
	B	5	2.360									
	C	5	2.654									
	D	4	2.493									
	E	4	3.618									
	F	4	2.403									
	G	3	3.357									
	H	4	1.775									
	I	4	3.090									
	J	7	3.567									
	K	5	2.732									
	L	5	3.068									
6.3	A	7	2.253	3.090	3.348	0.717	0.293	23.194	2.153	2.253	3.690	3.748
	B	3	2.153									
	C	4	3.528									
	D	5	3.168									
	E	4	3.748									
	F	6	3.690									
12.5	A	7	3.589	3.574	3.620	0.692	0.282	19.350	2.355	3.388	4.231	4.232
	B	7	4.231									
	C	6	3.652									
	D	4	2.355									
	E	4	3.388									
	F	6	4.232									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-7a. Descriptive Statistics for Liver Vitellogenin [Log10(copies VTG)/ng total RNA] for F2 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	6	2.448	2.407	2.303	0.576	0.235	23.932	1.828	1.908	2.746	3.353
	B	8	2.746									
	C	6	2.157									
	D	6	1.828									
	E	5	1.908									
	F	3	3.353									
50	A	2	3.485	3.565	3.435	0.591	0.241	16.577	2.782	3.218	4.214	4.308
	B	5	4.214									
	C	6	4.308									
	D	4	3.385									
	E	5	3.218									
	F	6	2.782									
100	A	5	2.888	2.712	2.738	0.522	0.213	19.241	2.160	2.165	2.946	3.522
	B	7	2.946									
	C	2	2.165									
	D	1	2.160									
	E	5	3.522									
	F	6	2.588									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-7b. Descriptive Statistics for Liver Vitellogenin [Log10(copies VTG)/ng total RNA] for F2 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	3.355	3.101	2.918	0.641	0.185	20.666	2.140	2.776	3.466	4.243
	B	3	2.793									
	C	3	3.017									
	D	4	2.820									
	E	4	2.793									
	F	4	3.578									
	G	5	3.056									
	H	4	2.460									
	I	4	4.243									
	J	1	2.140									
	K	3	4.193									
	L	3	2.760									
6.3	A	1	5.490	3.627	3.458	1.126	0.460	31.056	2.470	2.658	4.227	5.490
	B	5	2.658									
	C	4	2.470									
	D	3	4.227									
	E	4	3.755									
	F	2	3.160									
12.5	A	1	2.920	3.154	3.101	0.602	0.246	19.088	2.555	2.600	3.405	4.160
	B	1	4.160									
	C	2	2.555									
	D	4	3.405									
	E	4	3.283									
	F	2	2.600									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-7b. Descriptive Statistics for Liver Vitellogenin [Log10(copies VTG)/ng total RNA] for F2 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	2	2.025	2.501	2.520	0.295	0.132	11.796	2.025	2.468	2.735	2.757
	B	0	.									
	C	2	2.735									
	D	2	2.520									
	E	3	2.757									
	F	5	2.468									
50	A	6	2.987	2.907	3.111	0.528	0.216	18.164	2.135	2.387	3.240	3.457
	B	3	2.387									
	C	2	3.240									
	D	4	3.235									
	E	3	3.457									
	F	2	2.135									
100	A	3	2.727	2.542	2.538	0.515	0.210	20.266	1.840	2.150	3.067	3.120
	B	1	2.350									
	C	6	3.120									
	D	7	3.067									
	E	3	2.150									
	F	2	1.840									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-8a. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Subadult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	6	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	5	0.000									
	C	5	0.000									
	D	4	0.000									
	E	4	0.000									
	F	4	0.000									
	G	3	0.000									
	H	4	0.000									
	I	4	0.000									
	J	7	0.000									
	K	5	0.000									
	L	5	0.000									
6.3	A	7	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	3	0.000									
	C	4	0.000									
	D	5	0.000									
	E	4	0.000									
	F	6	0.000									
12.5	A	7	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	7	0.000									
	C	6	0.000									
	D	4	0.000									
	E	4	0.000									
	F	6	0.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-8a. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Subadult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	6	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	8	0.000									
	C	6	0.000									
	D	6	0.000									
	E	5	0.000									
	F	3	0.000									
50	A	2	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	5	0.000									
	C	6	0.000									
	D	4	0.000									
	E	5	0.000									
	F	6	0.000									
100	A	5	0.000	0.000	0.000	0.000	0.000	.	0.000	0.000	0.000	0.000
	B	7	0.000									
	C	2	0.000									
	D	1	0.000									
	E	5	0.000									
	F	6	0.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-8b. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Subadult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	2	3.000	1.467	0.000	2.801	0.809	190.978	0.000	0.000	2.300	9.333
	B	3	0.000									
	C	3	0.000									
	D	4	0.000									
	E	4	0.000									
	F	4	0.000									
	G	5	1.600									
	H	4	0.000									
	I	4	0.000									
	J	1	0.000									
	K	3	3.667									
	L	3	9.333									
6.3	A	1	0.000	0.708	0.000	1.229	0.502	173.504	0.000	0.000	1.250	3.000
	B	5	0.000									
	C	4	3.000									
	D	3	0.000									
	E	4	1.250									
	F	2	0.000									
12.5	A	1	23.000	5.500	1.500	9.006	3.677	163.737	0.000	0.000	7.000	23.000
	B	1	0.000									
	C	2	3.000									
	D	4	0.000									
	E	4	0.000									
	F	2	7.000									

Std dev	Standard deviation.
SEM	Standard error of the mean.
CV(%)	Coefficient of variation = (standard deviation / mean) × 100.
Min	Minimum.
Q1	First quartile.
Q3	Third quartile.
Max	Maximum.

Table 4-8b. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Subadult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
25	A	2	0.000	1.840	0.000	4.114	1.840	223.607	0.000	0.000	0.000	9.200
	B	0	.									
	C	2	0.000									
	D	2	0.000									
	E	3	0.000									
	F	5	9.200									
50	A	6	1.333	6.319	3.792	7.358	3.004	116.428	0.000	0.000	13.000	17.333
	B	3	17.333									
	C	2	13.000									
	D	4	6.250									
	E	3	0.000									
	F	2	0.000									
100	A	3	0.000	2.897	2.940	2.691	1.098	92.886	0.000	0.000	5.500	6.000
	B	1	0.000									
	C	6	4.167									
	D	7	1.714									
	E	3	6.000									
	F	2	5.500									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-9. Descriptive Statistics for External Sex Ratio for F2 Generation, Subadult.

		Sex Ratio (M:F)										
Treatment (µg/L)	Replicate	N	Replicate Mean	Mean	Median	Std	Sem	CV (%)	Min	Q1	Q3	Max
0.0	A	1	0.333	0.795	0.800	0.400	0.115	50.306	0.143	0.600	1.000	1.667
	B	1	0.600									
	C	1	0.600									
	D	1	1.000									
	E	1	1.000									
	F	1	1.000									
	G	1	1.667									
	H	1	1.000									
	I	1	1.000									
	J	1	0.143									
	K	1	0.600									
	L	1	0.600									
6.3	A	1	0.143	0.790	0.800	0.551	0.225	69.755	0.143	0.333	1.000	1.667
	B	1	1.667									
	C	1	1.000									
	D	1	0.600									
	E	1	1.000									
	F	1	0.333									
12.5	A	1	0.143	0.492	0.333	0.403	0.164	81.811	0.143	0.143	1.000	1.000
	B	1	0.143									
	C	1	0.333									
	D	1	1.000									
	E	1	1.000									
	F	1	0.333									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-9. Descriptive Statistics for External Sex Ratio for F2 Generation, Subadult. (continued)

		Sex Ratio (M:F)										
Treatment (µg/L)	Replicate	N	Replicate Mean	Mean	Median	Std	Sem	CV (%)	Min	Q1	Q3	Max
25	A	1	0.333	0.544	0.333	0.582	0.238	106.866	0.000	0.333	0.600	1.667
	B	1	0.000									
	C	1	0.333									
	D	1	0.333									
	E	1	0.600									
	F	1	1.667									
50	A	1	3.000	0.978	0.600	1.020	0.417	104.358	0.333	0.333	1.000	3.000
	B	1	0.600									
	C	1	0.333									
	D	1	1.000									
	E	1	0.600									
	F	1	0.333									
100	A	1	0.600	1.946	0.600	2.688	1.097	138.132	0.143	0.333	3.000	7.000
	B	1	0.143									
	C	1	3.000									
	D	1	7.000									
	E	1	0.600									
	F	1	0.333									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-10. Descriptive Statistics for Fecundity for F2 Generation, Adult.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	19.381	19.835	19.310	1.779	0.363	8.968	17.571	18.524	20.952	24.000
	B	1	20.286									
	C	1	20.333									
	D	1	19.238									
	E	1	18.190									
	F	1	18.905									
	G	1	18.381									
	H	1	17.810									
	I	1	18.286									
	J	1	21.048									
	K	1	19.524									
	L	1	19.000									
	M	1	22.095									
	N	1	17.810									
	O	1	19.667									
	P	1	24.000									
	Q	1	20.857									
	R	1	19.048									
	S	1	21.762									
	T	1	18.667									
	U	1	18.667									
	V	1	23.190									
	W	1	22.333									
	X	1	17.571									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-10. Descriptive Statistics for Fecundity for F2 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	17.381	18.119	18.476	1.462	0.422	8.068	15.000	17.095	19.071	20.048
	B	1	18.810									
	C	1	17.190									
	D	1	17.000									
	E	1	18.857									
	F	1	18.619									
	G	1	18.333									
	H	1	20.048									
	I	1	16.952									
	J	1	15.000									
	K	1	19.286									
	L	1	19.952									
12.5	A	1	13.619	13.377	13.405	0.340	0.098	2.542	12.810	13.167	13.643	13.952
	B	1	13.095									
	C	1	13.476									
	D	1	13.333									
	E	1	13.333									
	F	1	13.238									
	G	1	13.952									
	H	1	12.810									
	I	1	13.476									
	J	1	13.667									
	K	1	13.667									
	L	1	12.857									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-10. Descriptive Statistics for Fecundity for F2 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	8.381	8.905	9.048	0.622	0.180	6.984	7.762	8.524	9.405	9.714
	B	1	8.714									
	C	1	9.476									
	D	1	9.000									
	E	1	9.286									
	F	1	9.714									
	G	1	9.429									
	H	1	9.381									
	I	1	9.095									
	J	1	7.762									
	K	1	7.952									
	L	1	8.667									
50	A	1	6.667	6.837	6.738	0.553	0.159	8.081	6.000	6.429	7.190	7.952
	B	1	6.476									
	C	1	7.524									
	D	1	6.381									
	E	1	6.381									
	F	1	6.810									
	G	1	7.952									
	H	1	7.048									
	I	1	6.000									
	J	1	6.571									
	K	1	7.333									
	L	1	6.905									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-10. Descriptive Statistics for Fecundity for F2 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	5.048	5.389	5.405	0.426	0.123	7.911	4.619	5.119	5.714	6.048
	B	1	5.429									
	C	1	5.381									
	D	1	4.619									
	E	1	6.048									
	F	1	5.857									
	G	1	5.190									
	H	1	5.286									
	I	1	5.571									
	J	1	5.667									
	K	1	5.762									
	L	1	4.810									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-11. Descriptive Statistics for Fertility for F2 Generation, Adult.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	19.286	19.583	19.095	1.746	0.356	8.916	17.095	18.310	20.714	23.619
	B	1	20.238									
	C	1	20.190									
	D	1	19.048									
	E	1	17.952									
	F	1	18.714									
	G	1	18.190									
	H	1	17.571									
	I	1	18.048									
	J	1	20.857									
	K	1	19.143									
	L	1	18.857									
	M	1	21.857									
	N	1	17.667									
	O	1	19.381									
	P	1	23.619									
	Q	1	20.571									
	R	1	18.667									
	S	1	21.571									
	T	1	18.476									
	U	1	18.429									
	V	1	22.810									
	W	1	21.762									
	X	1	17.095									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-11. Descriptive Statistics for Fertility for F2 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	17.095	17.778	18.048	1.505	0.434	8.466	14.571	16.738	18.786	19.952
	B	1	18.381									
	C	1	16.714									
	D	1	16.619									
	E	1	18.524									
	F	1	18.190									
	G	1	17.905									
	H	1	19.952									
	I	1	16.762									
	J	1	14.571									
	K	1	19.048									
	L	1	19.571									
12.5	A	1	13.000	12.901	12.976	0.446	0.129	3.454	12.000	12.786	13.071	13.619
	B	1	12.857									
	C	1	12.714									
	D	1	13.000									
	E	1	13.048									
	F	1	12.952									
	G	1	13.619									
	H	1	12.190									
	I	1	12.952									
	J	1	13.095									
	K	1	13.381									
	L	1	12.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-11. Descriptive Statistics for Fertility for F2 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	7.810	8.222	8.190	0.579	0.167	7.043	7.286	7.810	8.667	9.190
	B	1	7.810									
	C	1	8.762									
	D	1	8.238									
	E	1	8.476									
	F	1	9.190									
	G	1	8.857									
	H	1	8.571									
	I	1	8.095									
	J	1	7.286									
	K	1	7.429									
	L	1	8.143									
50	A	1	5.000	5.210	5.214	0.625	0.180	11.995	4.238	4.881	5.500	6.476
	B	1	4.333									
	C	1	5.905									
	D	1	5.143									
	E	1	5.381									
	F	1	5.524									
	G	1	6.476									
	H	1	5.286									
	I	1	4.238									
	J	1	4.762									
	K	1	5.476									
	L	1	5.000									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-11. Descriptive Statistics for Fertility for F2 Generation, Adult. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	2.381	3.063	2.881	0.535	0.155	17.477	2.286	2.833	3.524	4.000
	B	1	2.810									
	C	1	2.857									
	D	1	2.857									
	E	1	4.000									
	F	1	3.714									
	G	1	2.857									
	H	1	3.000									
	I	1	2.905									
	J	1	3.333									
	K	1	3.762									
	L	1	2.286									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-12a. Descriptive Statistics for Body Weight (g) for F2 Generation, Adult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	0.261	0.363	0.362	0.102	0.021	28.040	0.199	0.273	0.434	0.545
	B	1	0.270									
	C	1	0.199									
	D	1	0.224									
	E	1	0.253									
	F	1	0.275									
	G	1	0.238									
	H	1	0.286									
	I	1	0.327									
	J	1	0.469									
	K	1	0.545									
	L	1	0.439									
	M	1	0.374									
	N	1	0.366									
	O	1	0.344									
	P	1	0.357									
	Q	1	0.389									
	R	1	0.388									
	S	1	0.538									
	T	1	0.384									
	U	1	0.501									
	V	1	0.429									
	W	1	0.515									
	X	1	0.338									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-12a. Descriptive Statistics for Body Weight (g) for F2 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	0.503	0.461	0.444	0.079	0.023	17.228	0.369	0.398	0.523	0.614
	B	1	0.399									
	C	1	0.614									
	D	1	0.557									
	E	1	0.412									
	F	1	0.396									
	G	1	0.433									
	H	1	0.542									
	I	1	0.479									
	J	1	0.369									
	K	1	0.455									
	L	1	0.370									
12.5	A	1	0.521	0.557	0.547	0.037	0.011	6.553	0.496	0.536	0.586	0.615
	B	1	0.568									
	C	1	0.496									
	D	1	0.542									
	E	1	0.538									
	F	1	0.539									
	G	1	0.572									
	H	1	0.609									
	I	1	0.615									
	J	1	0.534									
	K	1	0.552									
	L	1	0.599									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-12a. Descriptive Statistics for Body Weight (g) for F2 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.574	0.495	0.502	0.064	0.019	12.947	0.406	0.436	0.560	0.575
	B	1	0.458									
	C	1	0.575									
	D	1	0.501									
	E	1	0.410									
	F	1	0.413									
	G	1	0.406									
	H	1	0.509									
	I	1	0.474									
	J	1	0.569									
	K	1	0.503									
	L	1	0.551									
50	A	1	0.506	0.474	0.515	0.093	0.027	19.612	0.354	0.382	0.546	0.589
	B	1	0.534									
	C	1	0.523									
	D	1	0.538									
	E	1	0.554									
	F	1	0.383									
	G	1	0.589									
	H	1	0.582									
	I	1	0.354									
	J	1	0.381									
	K	1	0.388									
	L	1	0.356									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-12a. Descriptive Statistics for Body Weight (g) for F2 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	0.322	0.353	0.363	0.042	0.012	11.814	0.277	0.319	0.390	0.399
	B	1	0.315									
	C	1	0.277									
	D	1	0.387									
	E	1	0.399									
	F	1	0.392									
	G	1	0.358									
	H	1	0.337									
	I	1	0.367									
	J	1	0.398									
	K	1	0.384									
	L	1	0.301									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-12b. Descriptive Statistics for Body Weight (g) for F2 Generation, Adult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	0.191	0.282	0.270	0.065	0.013	22.940	0.190	0.242	0.346	0.393
	B	1	0.190									
	C	1	0.194									
	D	1	0.191									
	E	1	0.244									
	F	1	0.265									
	G	1	0.245									
	H	1	0.204									
	I	1	0.250									
	J	1	0.240									
	K	1	0.297									
	L	1	0.289									
	M	1	0.267									
	N	1	0.273									
	O	1	0.319									
	P	1	0.337									
	Q	1	0.256									
	R	1	0.313									
	S	1	0.356									
	T	1	0.372									
	U	1	0.372									
	V	1	0.354									
	W	1	0.393									
	X	1	0.358									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-12b. Descriptive Statistics for Body Weight (g) for F2 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	0.373	0.384	0.393	0.030	0.009	7.839	0.338	0.355	0.406	0.430
	B	1	0.396									
	C	1	0.408									
	D	1	0.404									
	E	1	0.338									
	F	1	0.356									
	G	1	0.344									
	H	1	0.353									
	I	1	0.415									
	J	1	0.430									
	K	1	0.391									
	L	1	0.395									
12.5	A	1	0.379	0.415	0.420	0.037	0.011	9.045	0.358	0.385	0.432	0.489
	B	1	0.391									
	C	1	0.423									
	D	1	0.358									
	E	1	0.389									
	F	1	0.380									
	G	1	0.437									
	H	1	0.462									
	I	1	0.427									
	J	1	0.416									
	K	1	0.489									
	L	1	0.423									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-12b. Descriptive Statistics for Body Weight (g) for F2 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.417	0.401	0.400	0.036	0.010	8.938	0.347	0.384	0.418	0.480
	B	1	0.350									
	C	1	0.419									
	D	1	0.411									
	E	1	0.393									
	F	1	0.347									
	G	1	0.381									
	H	1	0.480									
	I	1	0.390									
	J	1	0.386									
	K	1	0.407									
	L	1	0.430									
50	A	1	0.425	0.394	0.436	0.104	0.030	26.491	0.222	0.306	0.466	0.501
	B	1	0.443									
	C	1	0.461									
	D	1	0.374									
	E	1	0.428									
	F	1	0.470									
	G	1	0.474									
	H	1	0.501									
	I	1	0.460									
	J	1	0.222									
	K	1	0.238									
	L	1	0.226									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-12b. Descriptive Statistics for Body Weight (g) for F2 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	0.224	0.284	0.292	0.035	0.010	12.474	0.224	0.265	0.311	0.332
	B	1	0.265									
	C	1	0.332									
	D	1	0.291									
	E	1	0.319									
	F	1	0.265									
	G	1	0.297									
	H	1	0.303									
	I	1	0.267									
	J	1	0.293									
	K	1	0.227									
	L	1	0.326									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-13a. Descriptive Statistics for Body Length (mm) for F2 Generation, Adult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	28.1	26.11	26.45	2.445	0.499	9.366	20.70	25.05	27.85	30.00
	B	1	27.5									
	C	1	25.1									
	D	1	20.7									
	E	1	22.9									
	F	1	21.8									
	G	1	24.3									
	H	1	25.5									
	I	1	28.9									
	J	1	26.2									
	K	1	25.2									
	L	1	28.7									
	M	1	26.7									
	N	1	27.6									
	O	1	25.1									
	P	1	27.5									
	Q	1	27.5									
	R	1	26.7									
	S	1	30.0									
	T	1	25.0									
	U	1	28.7									
	V	1	25.3									
	W	1	29.1									
	X	1	22.5									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-13a. Descriptive Statistics for Body Length (mm) for F2 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	26.0	25.78	26.10	1.960	0.566	7.602	23.10	23.95	27.30	29.10
	B	1	23.3									
	C	1	29.1									
	D	1	27.4									
	E	1	26.2									
	F	1	24.9									
	G	1	24.6									
	H	1	27.5									
	I	1	27.2									
	J	1	23.1									
	K	1	26.9									
	L	1	23.2									
12.5	A	1	28.0	28.18	28.35	1.794	0.518	6.367	23.80	27.85	29.55	30.20
	B	1	29.6									
	C	1	26.1									
	D	1	28.4									
	E	1	28.3									
	F	1	23.8									
	G	1	27.7									
	H	1	30.2									
	I	1	30.1									
	J	1	28.1									
	K	1	29.5									
	L	1	28.4									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-13a. Descriptive Statistics for Body Length (mm) for F2 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	30.0	27.53	27.25	1.989	0.574	7.225	24.60	26.00	29.20	30.40
	B	1	30.4									
	C	1	27.4									
	D	1	29.1									
	E	1	26.2									
	F	1	25.8									
	G	1	24.8									
	H	1	29.3									
	I	1	24.6									
	J	1	27.1									
	K	1	26.7									
	L	1	28.9									
50	A	1	23.9	27.32	27.05	1.723	0.497	6.308	23.90	26.60	28.70	30.20
	B	1	25.5									
	C	1	26.6									
	D	1	27.1									
	E	1	26.7									
	F	1	28.8									
	G	1	27.0									
	H	1	27.5									
	I	1	29.3									
	J	1	30.2									
	K	1	28.6									
	L	1	26.6									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-13a. Descriptive Statistics for Body Length (mm) for F2 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	29.3	27.12	27.35	1.713	0.495	6.319	23.80	25.80	28.55	29.40
	B	1	27.3									
	C	1	25.9									
	D	1	28.3									
	E	1	28.8									
	F	1	26.2									
	G	1	27.7									
	H	1	25.7									
	I	1	27.4									
	J	1	25.6									
	K	1	29.4									
	L	1	23.8									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-13b. Descriptive Statistics for Body Length (mm) for F2 Generation, Adult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	26.1	25.83	25.60	1.327	0.271	5.135	23.60	24.70	27.00	28.20
	B	1	25.6									
	C	1	24.5									
	D	1	26.0									
	E	1	24.4									
	F	1	23.6									
	G	1	25.3									
	H	1	24.1									
	I	1	27.4									
	J	1	24.5									
	K	1	27.4									
	L	1	25.1									
	M	1	25.6									
	N	1	25.0									
	O	1	26.5									
	P	1	27.9									
	Q	1	24.4									
	R	1	27.6									
	S	1	27.0									
	T	1	28.2									
	U	1	26.7									
	V	1	25.2									
	W	1	27.0									
	X	1	24.9									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-13b. Descriptive Statistics for Body Length (mm) for F2 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	25.5	25.18	25.35	1.214	0.351	4.821	23.20	24.30	25.95	27.20
	B	1	26.4									
	C	1	25.2									
	D	1	25.6									
	E	1	23.8									
	F	1	24.8									
	G	1	25.2									
	H	1	23.2									
	I	1	27.2									
	J	1	23.4									
	K	1	25.8									
	L	1	26.1									
12.5	A	1	26.9	26.18	26.05	1.382	0.399	5.282	24.00	25.20	26.75	28.80
	B	1	25.3									
	C	1	25.7									
	D	1	24.8									
	E	1	26.6									
	F	1	28.3									
	G	1	26.5									
	H	1	24.0									
	I	1	26.0									
	J	1	25.1									
	K	1	28.8									
	L	1	26.1									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-13b. Descriptive Statistics for Body Length (mm) for F2 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	25.7	25.64	25.45	1.522	0.439	5.937	22.90	25.10	26.80	28.20
	B	1	22.9									
	C	1	26.3									
	D	1	27.4									
	E	1	27.3									
	F	1	23.6									
	G	1	25.7									
	H	1	28.2									
	I	1	25.1									
	J	1	25.1									
	K	1	25.2									
	L	1	25.2									
50	A	1	25.1	25.39	25.40	1.269	0.366	4.997	23.10	24.55	26.30	27.50
	B	1	27.5									
	C	1	26.1									
	D	1	23.1									
	E	1	24.0									
	F	1	25.3									
	G	1	26.5									
	H	1	25.4									
	I	1	25.4									
	J	1	25.6									
	K	1	26.8									
	L	1	23.9									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-13b. Descriptive Statistics for Body Length (mm) for F2 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	24.3	26.65	26.45	1.605	0.463	6.022	24.30	25.80	27.30	30.00
	B	1	26.5									
	C	1	28.8									
	D	1	26.7									
	E	1	27.6									
	F	1	26.0									
	G	1	26.3									
	H	1	27.0									
	I	1	25.6									
	J	1	30.0									
	K	1	24.6									
	L	1	26.4									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-14a. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Adult Female.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									
	M	1	0.0									
	N	1	0.0									
	O	1	0.0									
	P	1	0.0									
	Q	1	0.0									
	R	1	0.0									
	S	1	0.0									
	T	1	0.0									
	U	1	0.0									
	V	1	0.0									
	W	1	0.0									
	X	1	0.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-14a. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									
12.5	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-14a. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									
50	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-14a. Descriptive Statistics for Anal Fin Papiliae Number for F2 Generation, Adult Female. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	0.0	0.00	0.00	0.000	0.000	.	0.00	0.00	0.00	0.00
	B	1	0.0									
	C	1	0.0									
	D	1	0.0									
	E	1	0.0									
	F	1	0.0									
	G	1	0.0									
	H	1	0.0									
	I	1	0.0									
	J	1	0.0									
	K	1	0.0									
	L	1	0.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-14b. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Adult Male.

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
0.0	A	1	61.0	57.92	60.00	10.934	2.232	18.879	34.00	51.50	64.00	82.00
	B	1	59.0									
	C	1	62.0									
	D	1	40.0									
	E	1	60.0									
	F	1	60.0									
	G	1	61.0									
	H	1	56.0									
	I	1	58.0									
	J	1	34.0									
	K	1	63.0									
	L	1	52.0									
	M	1	60.0									
	N	1	82.0									
	O	1	51.0									
	P	1	67.0									
	Q	1	46.0									
	R	1	65.0									
	S	1	70.0									
	T	1	68.0									
	U	1	59.0									
	V	1	70.0									
	W	1	43.0									
	X	1	43.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-14b. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
6.3	A	1	71.0	64.42	61.50	9.070	2.618	14.080	53.00	59.50	68.50	88.00
	B	1	70.0									
	C	1	62.0									
	D	1	58.0									
	E	1	88.0									
	F	1	61.0									
	G	1	64.0									
	H	1	67.0									
	I	1	61.0									
	J	1	53.0									
	K	1	57.0									
	L	1	61.0									
12.5	A	1	66.0	68.08	68.50	9.959	2.875	14.627	53.00	63.50	70.50	93.00
	B	1	61.0									
	C	1	70.0									
	D	1	68.0									
	E	1	93.0									
	F	1	71.0									
	G	1	73.0									
	H	1	56.0									
	I	1	53.0									
	J	1	70.0									
	K	1	69.0									
	L	1	67.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-14b. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
25	A	1	71.0	65.92	70.00	10.975	3.168	16.650	51.00	55.50	73.50	84.00
	B	1	51.0									
	C	1	75.0									
	D	1	84.0									
	E	1	70.0									
	F	1	52.0									
	G	1	77.0									
	H	1	55.0									
	I	1	56.0									
	J	1	72.0									
	K	1	70.0									
	L	1	58.0									
50	A	1	32.0	46.08	42.50	15.048	4.344	32.654	25.00	34.00	57.50	72.00
	B	1	38.0									
	C	1	37.0									
	D	1	31.0									
	E	1	25.0									
	F	1	65.0									
	G	1	58.0									
	H	1	36.0									
	I	1	72.0									
	J	1	55.0									
	K	1	57.0									
	L	1	47.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 4-14b. Descriptive Statistics for Anal Fin Papillae Number for F2 Generation, Adult Male. (continued)

Treatment (µg/L)	Replicate			Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean									
100	A	1	29.0	43.83	44.50	9.989	2.884	22.789	28.00	39.50	48.00	66.00
	B	1	38.0									
	C	1	66.0									
	D	1	49.0									
	E	1	46.0									
	F	1	42.0									
	G	1	47.0									
	H	1	47.0									
	I	1	41.0									
	J	1	43.0									
	K	1	50.0									
	L	1	28.0									

Std dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile.
Q3 Third quartile.
Max Maximum.

Table 5-1. Cox Proportional Hazard Model Analysis Results for Time to Hatch (Days) for F1 Generation.

Number of Concentrations Included	Slope Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Chi-Square Test P-value
6	-0.6024	0.2546	-1.1013	-0.1034	0.0180*
5	-0.8049	0.3090	-1.4106	-0.1993	0.0092*
4	-0.9917	0.3877	-1.7515	-0.2318	0.0105*
3	-1.2319	0.5242	-2.2593	-0.2045	0.0188*
2	-1.6656	0.8913	-3.4125	0.0812	0.0616

* Indicates statistically significant treatment effect (at the 0.05 level) when including 6, 5, 4, or 3 treatment groups. The lowest observed effect concentration (LOEC) was at treatment group 3 (12.5 µg/L) and the no observed effect concentration (NOEC) was at treatment group 2 (6.3 µg/L).

Table 5-2. Cox Proportional Hazard Model Analysis Results for Time to Hatch (Days) for F2 Generation.

Number of Concentrations Included	Slope Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Chi-Square Test P-value
6**	0.2853	0.1528	-0.0142	0.5848	0.0619

** Indicates analysis stopped due to step-down procedure since treatment effect was not statistically significant at the 0.05 level. The no observed effect concentration (NOEC) was at treatment group 6 (100 µg/L).

Table 6. Statistical Analysis Results for Biological Endpoints for F0 Generation.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Fecundity[7]	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0414)	NP	NP
Fertility	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0458)	NP	NP
Body Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0027)	NP	NP
Body Weight (g), Male	Monotonic	NP	NP	Group 6 (0.0039) Group 5 (0.0102) Group 4 (0.0020) Group 3 (0.0026) Group 2 (0.0121)	NP	NP
Body Length (mm), Female	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (0.0003)	NP	NP
Body Length (mm), Male	Monotonic	NP	NP	NS	NP	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   * For fecundity and fertility, all 5 treatment groups showed significant decreasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
   * For female body weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
   * For male body weight, all 5 treatment groups showed significant increasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
   * For female body length, Groups 6, 5, 4, and 3 showed significant decreasing trend. LOEC was Group 3 (12.5 µg/L) and NOEC was Group 2 (6.3 µg/L).
5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
7. Fecundity data were analyzed on square root transformed replicate means.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Table 7-1. Statistical Analysis Results for Embryo Hatchability and Biological Endpoints for F1 Generation, Subadult.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Hatchability	Non-Monotonic	Non-Normal	Homogenous	NP	NP	Group 6 (0.0156) Group 3 (<.0001) Group 2 (<.0001)
Body Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0007)	NP	NP
Body Weight (g), Male	Monotonic	NP	NP	NS	NP	NP
Body Length (mm), Female	Monotonic	NP	NP	Group 6 (0.0003) Group 5 (0.0279)	NP	NP
Body Length (mm), Male	Monotonic	NP	NP	Group 6 (0.0355)	NP	NP
Liver Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0392)	NP	NP
Liver Weight (g), Male	Non-Monotonic	Log-Normal[7]	Homogeneous	NP	Group 2 (0.0248)	NP
Liver Vitellogenin [Log10(copies VTG)/ng total RNA], Female	Monotonic	NP	NP	NS	NP	NP
Liver Vitellogenin [Log10(copies VTG)/ng total RNA], Male	Monotonic	NP	NP	Group 6 (0.0070)	NP	NP
Anal Fin Papillae Number, Female[8]	NP	NP	NP	NP	NP	NP
Anal Fin Papillae Number, Male	Monotonic	NP	NP	Group 6 (0.0070) Group 5 (0.0473)	NP	NP
Sex Ratio	Monotonic	NP	NP	NS	NP	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   * For female body weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
   * For female body length, Groups 6 and 5 showed significant decreasing trend. LOEC was Group 5 (50 µg/L) and NOEC was Group 4 (25 µg/L).
   * For male body length, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
   * For female liver weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
   * For male VTG, Group 6 showed significant increasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).

* For male anal fin papillae number, Groups 6 and 5 showed significant decreasing trend. LOEC was Group 5 (50 µg/L) and NOEC was Group 4 (25 µg/L).

5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
   * For male liver weight, Group 2 showed significantly less than control.
6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
   * For hatchability (analysis was performed on proportion), Groups 6, 3, and 2 showed significantly less than control. Kruskal-Wallis test p-value was less than 0.0001.
7. Normal when natural-log transformed.
8. Female anal fin papillae numbers were all zeros.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Table 7-2. Statistical Analysis Results for Biological Endpoints for F1 Generation, Adult.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Fecundity[7]	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (<.0001)	NP	NP
Fertility	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (<.0001)	NP	NP
Body Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0407)	NP	NP
Body Weight (g), Male	Monotonic	NP	NP	Group 6 (0.0169) Group 5 (0.0417)	NP	NP
Body Length (mm), Female	Monotonic	NP	NP	NS	NP	NP
Body Length (mm), Male	Monotonic	NP	NP	NS	NP	NP
Anal Fin Papillae Number, Female[8]	NP	NP	NP	NP	NP	NP
Anal Fin Papillae Number, Male	Monotonic	NP	NP	NS	NP	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   * For fecundity and fertility, all 5 treatment groups showed significant decreasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
   * For female body weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
   * For male body weight, Groups 6 and 5 showed significant decreasing trend. LOEC was Group 5 (50 µg/L) and NOEC was Group 4 (25 µg/L).
5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
7. Fecundity data were analyzed on square root transformed replicate means.
8. Female anal fin papillae numbers were all zeros.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Table 8-1. Statistical Analysis Results for Embryo Hatchability and Biological Endpoints for F2 Generation, Subadult.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Hatchability	Monotonic	NP	NP	NS	NP	NP
Body Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0243) Group 5 (0.0098) Group 4 (0.0278) Group 3 (0.0018)	NP	NP
Body Weight (g), Male	Monotonic	NP	NP	Group 6 (0.0446)	NP	NP
Body Length (mm), Female	Monotonic	NP	NP	NS	NP	NP
Body Length (mm), Male	Monotonic	NP	NP	NS	NP	NP
Liver Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0005)	NP	NP
Liver Weight (g), Male	Monotonic	NP	NP	Group 6 (0.0002) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0273)	NP	NP
Liver Vitellogenin [Log10(copies VTG)/ng total RNA], Female	Monotonic	NP	NP	NS	NP	NP
Liver Vitellogenin [Log10(copies VTG)/ng total RNA], Male	Monotonic	NP	NP	Group 6 (0.0491)	NP	NP
Anal Fin Papillae Number, Female[7]	NP	NP	NP	NP	NP	NP
Anal Fin Papillae Number, Male	Monotonic	NP	NP	NS	NP	NP
Sex Ratio	Monotonic	NP	NP	NS	NP	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   * For female body weight, Groups 6, 5, 4, and 3 showed significant increasing trend. LOEC was Group 3 (12.5 µg/L) and NOEC was Group 2 (6.3 µg/L).
   * For male body weight, Group 6 showed significant increasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
   * For female and male liver weights, all 5 treatment groups showed significant increasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.

* For male VTG, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).

5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons were with one-sided test p-values listed.

6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.

7. Female anal fin papillae numbers were all zeros.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Table 8-2. Statistical Analysis Results for Biological Endpoints for F2 Generation, Adult.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Fecundity[7]	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0059)	NP	NP
Fertility	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0038)	NP	NP
Body Weight (g), Female	Non-Monotonic	Normal	Heterogeneous	NP	NP	Group 5 (0.0052) Group 4 (0.0004) Group 3 (<.0001) Group 2 (0.0058)
Body Weight (g), Male	Non-Monotonic	Normal	Heterogeneous	NP	NP	Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0004)
Body Length (mm), Female	Monotonic	NP	NP	Group 6 (0.0354) Group 5 (0.0192) Group 4 (0.0127) Group 3 (0.0179)	NP	NP
Body Length (mm), Male	Monotonic	NP	NP	NS	NP	NP
Anal Fin Papillae Number, Female[8]	NP	NP	NP	NP	NP	NP
Anal Fin Papillae Number, Male	Monotonic	NP	NP	Group 6 (0.0074)	NP	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   * For fecundity and fertility, all 5 treatment groups showed significant decreasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
   * For female body length, Groups 6, 5, 4, and 3 showed significant increasing trend. LOEC was Group 3 (12.5 µg/L) and NOEC was Group 2 (6.3 µg/L).

* For male anal fin papillae number, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).

5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.

6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.

* For both female and male body weights, Groups 5, 4, 3, 2 showed significantly greater than control. Both Kruskal-Wallis test p-values were less than 0.0001.

7. Fecundity data were analyzed on square root transformed replicate means.

8. Female anal fin papillae numbers were all zeros.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Table 9a. Summary of RSCABS Results (p-values) for Thyroid Glands Histopathology for F1 Subadult, Female.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Hypoplasia / Atrophy	1	6[3]	0.4385	0.3305	

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations).

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) Only control and treatment group 6 (100 µg/L) were evaluated.

Note: There were no variation (all not remarkable) in four thyroid gland endpoints (thyroid gland hypertrophy; thyroid gland atrophy; follicular cell hypertrophy; and follicular cell hyperplasia) for F1 sub-adult, females.

Table 9b. Summary of RSCABS Results (p-values) for Thyroid Glands Histopathology for F1 Subadult, Male.

Note: There were no variation (all not remarkable) in all five thyroid gland endpoints (hypoplasia / atrophy; thyroid gland hypertrophy; thyroid gland atrophy; follicular cell hypertrophy; and follicular cell hyperplasia) for F1 sub-adult, males.

Table 10a. Summary of RSCABS Results (p-values) for Thyroid Glands Histopathology for F1 Adult, Female.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Follicular Cell Hypertrophy / Hyperplasia	1	6(3)	1.4331	0.0759	
Hypoplasia / Atrophy	1	6(3)	1.4331	0.0759	

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations).

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) Only control and treatment group 6 (100 µg/L) were evaluated.

Note: There were no variation (all not remarkable) in five thyroid gland endpoints (thyroid gland hypertrophy; thyroid gland atrophy; follicular cell hypertrophy; follicular cell hyperplasia; and follicular cells, hyaline degeneration) for F1 adult, females.

Table 10b. Summary of RSCABS Results (p-values) for Thyroid Glands Histopathology for F1 Adult, Male.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Follicular Cell Hypertrophy / Hyperplasia	1	6(3)	-0.4337	0.3322	
	2	6(3)	0.2301	0.4090	
Follicular Cells, Hyaline Degeneration	1	6(3)	-1.0761	0.1410	
	2	6(3)	-1.0761	0.1410	

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations).

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) Only control and treatment group 6 (100 µg/L) were evaluated.

Note: There were no variation (all not remarkable) in five thyroid gland endpoints (hypoplasia atrophy; thyroid gland hypertrophy; thyroid gland atrophy; follicular cell hypertrophy; and follicular cell hyperplasia) for F1 adult, males.

Table 11a. Summary of RSCABS Results (p-values) for Liver Histopathology for F1 Adult, Female.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Basophilia	1	6	1.3088	0.0953	
	2	6	1.3088	0.0953	
	3	6	0.2824	0.3888	
Cystic Degeneration	1	6	0.5234	0.3004	
	2	6	-0.8386	0.2009	
Cytoplasmic Inclusions, Eosinophilic	1	6	2.4968	0.0063	*
	1	**5**	1.7149	0.0432	*
	1	4	-1.0232	0.1531	
	2	6	1.5291	0.0631	
Focus of Cellular Alteration	1	6	-0.7360	0.2309	
	2	6	-0.1675	0.4335	
Hepatocellular Vacuolation, Glycogen-Type	1	6	-1.5291	0.0631	
	2	6	-4.7258	0.0000	**
	2	**5**	-2.5043	0.0061	**
	2	4	-1.0301	0.1515	
	3	6	-2.3440	0.0095	**
	3	**5**	-1.7656	0.0387	**
	3	4	-0.8650	0.1935	
Individual Cell Necrosis	1	6	-0.4282	0.3342	
	2	6	0.4420	0.3292	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis: 6 = 6 highest concentrations (all concentrations), 5 = lowest 5 concentrations, 4 = lowest 4 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 50 µg/L.

Note: There were no variation (all not remarkable) in four liver endpoints (cellular infiltrate, mononuclear cell; hepatocytes, fatty change, regional; inflammation, granulomatous; and hepatocellular adenoma) for F1 adult, females.

Table 11b. Summary of RSCABS Results (p-values) for Liver Histopathology for F1 Adult, Male.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Cellular Infiltrate, Mononuclear Cell	1	6	0.2042	0.4191	
Cystic Degeneration	1	6	-0.4401	0.3299	
	2	6	-0.5535	0.2900	
Focus of Cellular Alteration	1	**6**	-1.7899	0.0367	**
	1	5	-1.4379	0.0752	
	2	6	-1.7343	0.0414	**
	2	**5**	-1.6456	0.0499	**
	2	4	-1.5269	0.0634	
	3	6	-1.2190	0.1114	
Hepatocellular Vacuolation, Glycogen-Type	1	6	-1.5352	0.0624	
	2	6	-5.7741	0.0000	**
	2	5	-3.0561	0.0011	**
	2	**4**	-2.6434	0.0041	**
	3	6	-5.0935	0.0000	**
	3	5	-4.4995	0.0000	**
	3	4	-3.5586	0.0002	**
	3	**3**	-1.7204	0.0427	**
	3	2	-1.2220	0.1108	
Hepatocytes, Fatty, Change, Regional	1	6	-0.8496	0.1978	
Individual Cell Necrosis	1	6	0.9790	0.1638	
Inflammation, Granulomatous	1	6	0.4344	0.3320	

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),
5 = lowest 5 concentrations,
4 = lowest 4 concentrations,
3 = lowest 3 concentrations,
2 = lowest 2 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L; 5 indicates the LOEC was the 5th concentration, 50 µg/L; 4 indicates the LOEC was the 4th concentration, 25 µg/L; and 3 indicates the LOEC was the 3rd concentration, 12.5 µg/L.

Note: There were no variation (all not remarkable) in three liver endpoints (basophilia; cytoplasmic inclusions, eosinophilic; and hepatocellular adenoma) for F1 adult, males.

Table 12a. Summary of RSCABS Results (p-values) for Kidney Histopathology for F1 Adult, Female.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Glomeruli, Hyaline Inclusions	1	6	0.9799	0.1636	
	2	6	0.9799	0.1636	
Glomerulomegaly	1	6	0.9799	0.1636	
Inflammation, Granulomatous	1	6	0.9799	0.1636	
Tubules, Cellular Debris / Casts	1	6	-0.922	0.1783	
	2	6	0.2172	0.4140	
Tubules, Dilation	1	6	0.2464	0.4027	
	2	6	0.2810	0.3894	
	3	6	-1.2116	0.1128	
Tubules, Epithelium, Eosinophilia[3]	2	**6**	2.8680	0.0021	*
	2	5	1.5165	0.0647	
Tubules, Epithelium, Eosinophilic Inclusions	1	6	-0.0151	0.4940	
	2	6	0.9799	0.1636	
Tubules, Epithelium, Vacuolation	1	6	-0.2587	0.3979	
	2	6	-1.1923	0.1166	
Tubules, Mineralization	1	6	-0.1232	0.4510	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),
5 = lowest 5 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with severity level 0 (not remarkable) nor there were specimens with severity level 3 or greater. Therefore, RSCABS analysis could only be performed for severity slice 2.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L.

Table 12b. Summary of RSCABS Results (p-values) for Kidney Histopathology for F1 Adult, Male.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Inflammation, Granulomatous	1	6	-0.5711	0.2840	
Tubules, Cellular Debris / Casts	1	**6**	-1.861	0.0314	**
	1	5	-0.0016	0.4994	
	2	6	-0.9597	0.1686	
Tubules, Dilation	1	**6**	-2.0006	0.0227	**
	1	5	0.2528	0.4002	
	2	**6**	-2.7061	0.0034	**
	2	5	-1.0212	0.1536	
	3	**6**	-1.8026	0.0357	**
	3	5	-1.0334	0.1507	
Tubules, Epithelium, Vacuolation	1	6	0.4601	0.3227	
	2	6	-0.1858	0.4263	
	3	6	0.9790	0.1638	
Tubules, Mineralization	1	6	-0.3726	0.3547	
	2	6	1.0145	0.1552	

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),
5 = lowest 5 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L.

Note: There were no variation in four kidney endpoints (tubules, epithelium, eosinophilia (all moderate); tubules, epithelium, eosinophilic inclusions (all not remarkable); glomerulomegaly (all not remarkable); and glomeruli, hyaline inclusions (all not remarkable)) for F1 adult, males.

Table 13a. Summary of RSCABS Results (p-values) for Ovary Histopathology for F1 Adult, Female.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Inflammation, Granulomatous	1	6	0.4849	0.3139	
	2	6	1.0284	0.1519	
Oocyte Atresia	1	6	-0.4654	0.3208	
	2	6	1.0284	0.1519	
	3	6	1.5291	0.0631	
Ovary Stage(3)	2	6	1.1923	0.1166	
	3	6	0.7569	0.2245	
	4	6	1.0003	0.1586	
Post-ovulatory Follicles	1	6	-1.0856	0.1388	
	2	6	-1.4113	0.0791	
	3	6	0.2172	0.4140	
Post-ovulatory Follicles, Accelerated Necrosis	1	**6**	1.8141	0.0348	*
	1	5	1.5165	0.0647	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),
5 = lowest 5 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with ovary stage 0 Therefore, RSCABS analysis could not be performed for severity slice 1.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L.

Note: There was no variation in two ovary endpoints (gonad phenotype score (all severity score = 5, i.e., ovarian tissue entirely); hypoplasia / atrophy (all not remarkable)) for F1 adult, females.

Table 13b. Summary of RSCABS Results (p-values) for Testis Histopathology for F1 Adult, male.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Histiocytic Cells, Intraluminal	1	6	-1.219	0.1114	
	2	6	-1.219	0.1114	
	3	6	-1.219	0.1114	
Hypoplasia / Atrophy	1	6	-0.1496	0.4405	
Increased Spermatagonia	1	6	-1.2190	0.1114	
Interstitial Cells, Increased	1	6	0.3465	0.3645	
	2	6	-0.9562	0.1695	
Interstitial Fibrosis	1	6	-1.7343	0.0414	**
	1	**5**	-1.6456	0.0499	**
	1	4	-1.5269	0.0634	
	2	6	-1.2190	0.1114	
Testicular Degeneration	1	6	2.4563	0.0070	*
	1	5	2.4623	0.0069	*
	1	4	1.8262	0.0339	*
	1	3	1.9107	0.0280	*
	1	**2**	2.0975	0.0180	*
	2	6	0.4083	0.3415	
Testis Stage(3)	2	6	-1.1967	0.1157	
	3	6	0.0208	0.4917	
	4	6	-0.2020	0.4199	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),
5 = lowest 5 concentrations,
4 = lowest 4 concentrations,
3 = lowest 3 concentrations,
2 = lowest 2 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with testis stage 0 Therefore, RSCABS analysis could

not be performed for severity slice 1.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L; and 2 indicates the LOEC was the 2nd concentration, 6.3 µg/L.

Note: There was no variation in one endpoint (gonad phenotype score (all severity score = 1, i.e., testicular tissue entirely)) for F1 adult, females.

Table 14a. Summary of RSCABS Results (p-values) for Liver Histopathology for F2 Adult, Female.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Basophilia	1	6	1.2895	0.0986	
	2	6	1.3635	0.0864	
	3	**6**	2.0897	0.0183	*
	3	5	0.8597	0.1950	
Cellular Infiltrate, Mononuclear Cell	1	6	-1.4365	0.0754	
Cystic Degeneration	1	6	1.7615	0.0391	*
	1	5	3.0223	0.0013	*
	1	**4**	2.8803	0.0020	*
	1	3	1.5936	0.0555	
	2	6	1.8536	0.0319	*
	2	5	1.6587	0.0486	*
	2	**4**	2.6189	0.0044	*
	2	3	0.9743	0.1650	
	3	6	0.1857	0.4263	
Cytoplasmic Inclusions, Eosinophilic	1	6	0.2258	0.4107	
Focus of Cellular Alteration	1	6	-1.0255	0.1526	
	2	6	-1.1208	0.1312	
	3	6	-0.5340	0.2967	
Hepatocellular Vacuolation, Glycogen-Type	1	6	1.2898	0.0986	
	2	**6**	-2.8270	0.0023	**
	2	5	-0.6386	0.2615	
	3	6	-0.7109	0.2386	
Hepatocellular Vacuolation, Lipid-Type	1	6	1.3900	0.0823	
Individual Cell Necrosis	1	6	1.0628	0.1439	
Inflammation Granulomatous	1	**6**	-1.7512	0.0400	**
	1	5	-1.5524	0.0603	
	2	**6**	-1.6717	0.0473	**
	2	5	-1.5635	0.0590	
	3	6	-1.1756	0.1199	
Oval Cell Proliferation	1	6	-1.1756	0.1199	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment:	The number of concentrations (including the control) that were included in the RSCABS analysis: 6 = 6 highest concentrations (all concentrations), 5 = lowest 5 concentrations, 4 = lowest 4 concentrations, 3 = lowest 3 concentrations.
Severity grade:	Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.
(1)	Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.
(2)	For a given severity slice, treatment levels for which there were no pathological findings were not included in table.
Note:	Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L; and 4 indicates the LOEC was the 4th concentration, 25 µg/L.
Note:	There was no variation (all not remarkable) in one liver endpoint (metastatic dysgerminoma) for F2 adult, females.

Table 14b. Summary of RSCABS Results (p-values) for Liver Histopathology for F2 Adult, Male.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Basophilia	1	6	0.2440	0.4036	
Cellular Infiltrate, Mononuclear Cell	1	6	-0.5266	0.2992	
Cystic Degeneration	1	**6**	2.0002	0.0227	*
	1	5	0.9785	0.1639	
	2	6	1.0955	0.1366	
	3	6	-0.5642	0.2863	
Cytoplasmic Inclusions,Eosinophilic	1	6	0.4359	0.3315	
Focus of Cellular Alteration	1	6	-0.8045	0.2106	
	2	6	-0.6376	0.2619	
Hepatocellular Vacuolation, Glycogen-Type	1	6	0.6376	0.2619	
	2	6	-1.8868	0.0296	**
	2	**5**	-1.7942	0.0364	**
	2	4	-1.5372	0.0621	
	3	6	-2.0985	0.0179	**
	3	**5**	-1.8239	0.0341	**
	3	4	-1.3534	0.0880	
Oval Cell Proliferation	1	6	-0.0994	0.4604	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis: 6 = 6 highest concentrations (all concentrations), 5 = lowest 5 concentrations, 4 = lowest 4 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L; and 5 indicates the LOEC was the 5th concentration, 50 µg/L.

Note: There were no variation (all not remarkable) in four liver endpoints (individual cell necrosis; inflammation, granulomatous; hepatocellular vacuolation, lipid-type; and metastatic dysgerminoma) for F2 adult, males.

Table 15a. Summary of RSCABS Results (p-values) for Kidney Histopathology for F2 Adult, Female.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Hematopoietic Tissue, Increased	1	6	-1.373	0.0849	
	2	6	-1.028	0.1520	
	3	6	-0.4991	0.3088	
Inflammation, Granulomatous	1	6	0.4306	0.3334	
	2	6	0.9772	0.1642	
Tubules, Cellular Debris / Casts	1	6	-1.1705	0.1209	
	2	6	-0.1565	0.4378	
Tubules, Dilation	1	6	-2.0299	0.0212	**
	1	5	-1.9674	0.0246	**
	1	4	-1.1351	0.1282	
	2	6	-1.6088	0.0538	
	3	6	0.4225	0.3363	
	4	6	1.4503	0.0735	
Tubule, Epithelium, Eosinophilia(3)	2	6	0.4437	0.3286	
Tubules, Epithelium, Eosinophilic Inclusions	1	6	-0.6116	0.2704	
	2	6	-0.6116	0.2704	
Tubules, Epithelium, Vacuolation	1	6	-0.9179	0.1793	
Tubules, Mineralization	1	6	-1.5908	0.0558	
	2	6	-1.1756	0.1199	

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),
5 = lowest 5 concentrations,
4 = lowest 5 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with severity level 0 (not remarkable) nor there were specimens with severity level 3 or greater. Therefore, RSCABS analysis could only be performed for severity slice 2.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 50 µg/L.

Note: There was no variation (all not remarkable) in one kidney endpoint (hematopoietic tissue, decreased) for F2 adult, females.

Table 15b. Summary of RSCABS Results (p-values) for Kidney Histopathology for F2 Adult, Male.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Hematopoietic Tissue, Increased	1	6	-0.9642	0.1675	
	2	6	-1.480	0.0694	
Inflammation, Granulomatous	1	6	-0.8444	0.1992	
Tubules, Cellular Debris / Casts	1	**6**	1.6737	0.0471	*
	1	5	1.4163	0.0783	
	2	6	0.8020	0.2113	
Tubules, Dilation	1	6	0.5152	0.3032	
	2	6	0.6659	0.2527	
	3	6	0.0123	0.4951	
	4	6	0.5201	0.3015	
Tubule, Epithelium, Eosinophilia[3]	3	6	1.4800	0.0694	
Tubules, Mineralization	1	**6**	-2.1084	0.0175	**
	1	5	-1.1072	0.1341	
	2	6	-0.1553	0.4383	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),
5 = lowest 5 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with severity levels 0 (not remarkable) or 1 nor there were specimens with severity level 4. Therefore, RSCABS analysis could only be performed for severity slice 3.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L.

Note: There were no variation (all not remarkable) in three kidney endpoints (tubules, epithelium, vacuolation; hematopoietic tissue, increased; and tubules, epithelium, eosinophilic inclusions) for F2 adult, males.

Table 16a. Summary of RSCABS Results (p-values) for Ovary Histopathology for F2 Adult, Female.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Decreased Yolk Formation	1	6	-0.1337	0.4468	
	2	6	-0.6116	0.2704	
	3	6	-0.6116	0.2704	
Inflammation, Granulomatous	1	6	-1.8794	0.0301	**
	1	**5**	-1.6813	0.0464	**
	1	4	-1.3352	0.0909	
	2	6	-1.4471	0.0739	
	3	6	-1.0280	0.1520	
	4	6	-0.4991	0.3088	
Oocyte Atresia	1	6	-0.9761	0.1645	
	2	6	-0.478	0.3163	
	3	6	0.2258	0.4107	
	4	6	1.5219	0.0640	
Oocyte Retention	1	6	-0.9965	0.1595	
	2	6	-0.6311	0.2640	
	3	6	-0.4548	0.3246	
	4	**6**	-1.6717	0.0473	**
	4	5	-1.5635	0.0590	
Ovarian Spermatogenesis	1	6	1.5219	0.0640	
Ovary, Edema	1	6	0.1142	0.4545	
	2	6	0.0112	0.4955	
	3	6	-0.8105	0.2088	
	4	6	-1.1756	0.1199	
Ovary Stage[3]	2	6	1.8712	0.0307	*
	2	**5**	1.6922	0.0453	*
	2	4	1.4057	0.0799	
	3	6	0.7841	0.2165	
	4	6	0.3059	0.3799	
Post-ovulatory Follicles	1	6	0.3433	0.3657	
	2	6	0.7832	0.2167	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),

5 = lowest 5 concentrations,
4 = lowest 4 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with ovary stage 0 Therefore, RSCABS analysis could not be performed for severity slice 1.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L; and 5 indicates the LOEC was the 5th concentration, 50 µg/L.

Note: There was no variation in one ovary endpoint (gonad phenotype score (all severity score = 5, i.e., ovarian tissue entirely)) for F2 adult, females.

Table 16b. Summary of RSCABS Results (p-values) for Testis Histopathology for F2 Adult, male.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Asynchronous Development / Maldevelopment	1	6	-1.2077	0.1136	
Decreased Spermatozoa	1	6	-0.5632	0.2867	
	2	6	0.4359	0.3315	
Histiocytic Cells, Intraluminal	1	6	1.5336	0.0626	
Increased Spermatagonia	1	6	0.6299	0.2644	
	2	6	0.9798	0.1636	
Interstitial Cells, Increased	1	6	2.2538	0.0121	*
	1	5	1.8196	0.0344	*
	1	**4**	2.3085	0.0105	*
	1	3	1.2053	0.1140	
	2	6	1.1752	0.1200	
Testicular Degeneration	1	6	0.4347	0.3319	
	2	6	0.6590	0.2549	
	3	6	-1.2077	0.1136	
Testis, Exfoliated Cells	1	6	-1.2077	0.1136	
Testis Stage(3)	2	6	1.1549	0.1241	
	3	6	0.7291	0.2330	
	4	6	0.5759	0.2823	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis: 6 = 6 highest concentrations (all concentrations), 5 = lowest 5 concentrations, 4 = lowest 4 concentrations, 3 = lowest 3 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with testis stage 0 Therefore, RSCABS analysis could not be performed for severity slice 1.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 4 indicates the LOEC was the 4th concentration, 25 µg/L.

Note: There was no variation two one testis endpoints (gonad phenotype score (all severity score = 1, i.e., testicular tissue entirely); dysgerminoma, malignant (all not remarkable)) for F2 adult, males.

Appendix A

Statistical Analyses Performed on Data with Potential Statistical Outliers Removed

Table A-1. Potential Statistical Outliers for Fecundity.

generation	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	mean_fecundity	Residual
F1	0.0	-0.7460	0.8353	1.5813	-3.1181	3.2073	T	15.2857	-3.7679
F1	6.3	-0.7460	0.8353	1.5813	-3.1181	3.2073	G	0.0000	-13.1865
F1							I	17.1905	4.0040
F2	0.0	-0.5883	0.4970	1.0853	-2.2163	2.1250	M	22.0952	2.2599
F2							P	24.0000	4.1647
F2							V	23.1905	3.3552
F2							W	22.3333	2.4980
F2							X	17.5714	-2.2639
F2	6.3	-0.5883	0.4970	1.0853	-2.2163	2.1250	J	15.0000	-3.1190

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-2. Potential Statistical Outliers for Fertility.

generation	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	mean_fertility	Residual
F1	0.0	-0.7937	0.9931	1.7867	-3.4737	3.6731	T	15.0952	-3.8909
F1	6.3	-0.7937	0.9931	1.7867	-3.4737	3.6731	G	0.0000	-13.0714
F1							I	16.9048	3.8333
F2	0.0	-0.7183	0.6052	1.3234	-2.7034	2.5903	P	23.6190	4.0357
F2							V	22.8095	3.2262
F2	6.3	-0.7183	0.6052	1.3234	-2.7034	2.5903	J	14.5714	-3.2063

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-3. Potential Statistical Outliers for Hatchability (%).

generation	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	MEAN_HATCHED	Residual
F1	6.3	-1.5000	1.1667	2.6667	-5.5000	5.1667	D	98.0	7.0000
F1	25	-1.5000	1.1667	2.6667	-5.5000	5.1667	E	89.5	-7.0000
F2	50	-2.9235	2.3397	5.2632	-10.8182	10.2345	H	80.5	-12.5962
F2	100	-2.9235	2.3397	5.2632	-10.8182	10.2345	I	100.0	10.8851

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-4. Potential Statistical Outliers for Body Weight (g), F0 Generation.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	terminal_bw_g	Residual
M	25	-0.0463	0.0357	0.0820	-0.1693	0.1587	A	2	0.251	-0.17383
M							F	2	0.600	0.17517
M	100	-0.0463	0.0357	0.0820	-0.1693	0.1587	B	2	0.653	0.16983

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-5. Potential Statistical Outliers for Body Length (mm), F0 Generation.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	terminal_bl_mm	Residual
F	0.0	-0.8167	0.6167	1.4333	-2.9667	2.7667	D	1	40.5	3.18333
F	50	-0.8167	0.6167	1.4333	-2.9667	2.7667	D	1	29.3	-4.25000
M	25	-0.7833	1.0167	1.8000	-3.4833	3.7167	A	2	27.8	-4.98333
M	100	-0.7833	1.0167	1.8000	-3.4833	3.7167	A	2	39.3	4.00000

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-6. Potential Statistical Outliers for Body Weight (g), F1 Generation, Subadult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	interim_bw_g	Residual
F	0.0	-0.0317	0.0071	0.0388	-0.0900	0.0654	A	3	2.1329	1.98927
F							A	4	0.0313	-0.11233
F							C	8	0.0375	-0.10613
F							D	7	0.0448	-0.09883
F							J	8	0.2179	0.07427
F	6.3	-0.0317	0.0071	0.0388	-0.0900	0.0654	C	8	0.1658	0.06839
F	12.5	-0.0317	0.0071	0.0388	-0.0900	0.0654	E	8	0.2083	0.11588
F	25	-0.0317	0.0071	0.0388	-0.0900	0.0654	A	8	0.2137	0.10805
F							D	8	0.1853	0.07965
F	50	-0.0317	0.0071	0.0388	-0.0900	0.0654	C	8	0.2765	0.20001
M	0.0	-0.0336	0.0176	0.0512	-0.1104	0.0945	E	4	0.2212	0.10811
M	12.5	-0.0336	0.0176	0.0512	-0.1104	0.0945	E	6	0.2446	0.11584
M							E	7	0.2255	0.09674
M	50	-0.0336	0.0176	0.0512	-0.1104	0.0945	C	3	0.6230	0.46540
M							E	1	0.0378	-0.11981
M							E	2	0.0323	-0.12531
M							F	1	0.0249	-0.13271
M							F	3	0.0403	-0.11731
M							F	6	0.6510	0.49340
M	100	-0.0336	0.0176	0.0512	-0.1104	0.0945	C	8	0.2313	0.14895
M							F	2	0.2081	0.12575
M							F	3	0.1818	0.09945
M							F	8	0.2550	0.17265

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-7. Potential Statistical Outliers for Body Length (mm), F1 Generation, Subadult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	interim_bl_mm	Residual
F	0.0	-1.4924	1.0949	2.5874	-5.3735	4.9760	I	5	25.9	5.1677
F							J	8	28.7	6.5321
F	6.3	-1.4924	1.0949	2.5874	-5.3735	4.9760	C	5	14.9	-5.8134
F	25	-1.4924	1.0949	2.5874	-5.3735	4.9760	A	8	25.6	6.1146
F							B	2	14.4	-6.2078
F	50	-1.4924	1.0949	2.5874	-5.3735	4.9760	C	8	28.7	10.3312
M	50	-2.0041	1.4642	3.4683	-7.2065	6.6666	C	3	28.3	7.3928
M							C	4	27.8	6.8928
M							E	2	13.2	-7.7018
M							F	1	12.3	-8.6718
M	100	-2.0041	1.4642	3.4683	-7.2065	6.6666	C	8	28.4	9.5997
M							F	2	26.6	7.7350
M							F	3	25.7	6.8350
M							F	8	30.1	11.2350

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-8. Potential Statistical Outliers for Liver Weight (g), F1 Generation, Subadult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	interim_lw_g	Residual
F	12.5	-0.0034	0.0018	0.0052	-0.0112	0.0095	D	5	0.0760	0.064869
F							E	8	0.0273	0.016169
F	25	-0.0034	0.0018	0.0052	-0.0112	0.0095	A	8	0.0229	0.012283
M	0.0	-0.0028	0.0018	0.0047	-0.0098	0.0088	J	4	0.0237	0.011393
M	25	-0.0028	0.0018	0.0047	-0.0098	0.0088	D	3	0.0203	0.009478
M	100	-0.0028	0.0018	0.0047	-0.0098	0.0088	C	8	0.0264	0.018150
M							F	8	0.0213	0.012161

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-9. Potential Statistical Outliers for VTG [Log10(copies VTG)/ng total RNA], F1 Generation, Subadult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	interim_liver _vtg_log10	Residual
M	6.3	-0.7093	0.5490	1.2583	-2.5967	2.4364	B	7	4.96	2.60599

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-10. Potential Statistical Outliers for Anal Fin Papillae Number, F1 Generation, Subadult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	interim_anal_ fin_papillae_num	Residual
M	25	-12.6320	9.8124	22.4444	-46.2986	43.4790	A	7	79	48.4839
M	50	-12.6320	9.8124	22.4444	-46.2986	43.4790	C	3	58	49.0361
M							C	4	55	46.0361
M	100	-12.6320	9.8124	22.4444	-46.2986	43.4790	F	2	63	56.1471
M							F	3	62	55.1471

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-11. Potential Statistical Outliers for Sex Ratio.

generation	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	SEX_RATIO	Residual
F1	25	-0.7460	0.4444	1.1905	-2.5317	2.2302	A	7.00000	2.66667
F1							B	1.00000	-3.33333
F1							C	7.00000	2.66667
F1							E	7.00000	2.66667
F1							F	1.00000	-3.33333
F2	50	-0.4571	0.2048	0.6619	-1.4500	1.1976	A	3.00000	2.02222
F2	100	-0.4571	0.2048	0.6619	-1.4500	1.1976	B	0.14286	-1.80317
F2							D	7.00000	5.05397
F2							F	0.33333	-1.61270

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-12. Potential Statistical Outliers for Body Weight (g), F1 Generation, Adult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	terminal_bw_g	Residual
F	50	-0.0435	0.0428	0.0863	-0.1730	0.1723	G	2	0.55	0.17732

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-13. Potential Statistical Outliers for Body Length (mm), F1 Generation, Adult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	terminal_bl_mm	Residual
M	50	-1.3061	1.1441	2.4502	-4.9814	4.8194	E	1	30.4	4.82802

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-14. Potential Statistical Outliers for Anal Fin Papillae Number, F1 Generation, Adult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	terminal_anal_fin_papillae_num	Residual
M	6.3	-8.2308	8.4167	16.6474	-33.2019	33.3878	A	2	98	36.7692
M							G	1	0	-61.2308

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-15. Potential Statistical Outliers for Body Weight (g), F2 Generation, Subadult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	interim_bw_g	Residual
F	0.0	-0.0119	0.0112	0.0232	-0.0467	0.0460	A	6	0.162	0.078412
F	12.5	-0.0119	0.0112	0.0232	-0.0467	0.0460	B	8	0.157	0.047826
M	0.0	-0.0150	0.0106	0.0256	-0.0533	0.0490	F	1	0.155	0.056470
M							K	1	0.145	0.049580
M	100	-0.0150	0.0106	0.0256	-0.0533	0.0490	C	1	0.160	0.057640

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-16. Potential Statistical Outliers for Liver Weight (g), F2 Generation, Subadult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	interim_lw_g	Residual
F	0.0	-0.0011	0.0009	0.0020	-0.0040	0.0038	C	8	0.0094	.005953013
F	6.3	-0.0011	0.0009	0.0020	-0.0040	0.0038	E	4	0.0123	.007075192
F							E	5	0.0100	.004775192
F							E	6	0.0100	.004775192
F	12.5	-0.0011	0.0009	0.0020	-0.0040	0.0038	F	5	0.0107	.004762235
F							F	8	0.0098	.003862235
F	50	-0.0011	0.0009	0.0020	-0.0040	0.0038	F	3	0.0095	.004144077
F	100	-0.0011	0.0009	0.0020	-0.0040	0.0038	B	1	0.0086	.004178257
M	12.5	-0.0012	0.0011	0.0023	-0.0047	0.0045	A	3	0.0125	.006228571

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-17. Potential Statistical Outliers for VTG [Log10(copies VTG)/ng total RNA], F2 Generation, Subadult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	interim_liver_vtg_log10	Residual
M	0.0	-0.6252	0.5035	1.1287	-2.3183	2.1965	K	1	6.12	2.89460
M	6.3	-0.6252	0.5035	1.1287	-2.3183	2.1965	D	3	6.02	2.60532
M	25	-0.6252	0.5035	1.1287	-2.3183	2.1965	F	8	4.77	2.31629

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-18. Potential Statistical Outliers for Anal Fin Papillae Number, F2 Generation, Subadult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	interim_anal_fin_papillae_num	Residual
M	0.0	-3.0714	-0.8947	2.1767	-6.3365	2.3703	A	7	6	4.6750
M							G	1	8	6.6750
M							K	1	11	9.6750
M							L	2	28	26.6750
M	6.3	-3.0714	-0.8947	2.1767	-6.3365	2.3703	C	2	12	11.1053
M							E	1	5	4.1053
M	12.5	-3.0714	-0.8947	2.1767	-6.3365	2.3703	A	3	23	19.9286
M							C	3	6	2.9286
M							F	2	14	10.9286
M	25	-3.0714	-0.8947	2.1767	-6.3365	2.3703	F	1	46	42.7143
M	50	-3.0714	-0.8947	2.1767	-6.3365	2.3703	A	2	8	2.4500
M							B	1	22	16.4500
M							B	2	30	24.4500
M							C	1	26	20.4500
M							D	1	25	19.4500
M	100	-3.0714	-0.8947	2.1767	-6.3365	2.3703	C	1	25	22.0000
M							D	1	12	9.0000
M							E	1	18	15.0000
M							F	2	11	8.0000

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-19. Potential Statistical Outliers for Body Weight (g), F2 Generation, Adult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	terminal_bw_g	Residual
M	50	-0.0313	0.0347	0.0660	-0.1304	0.1338	J	1	0.222	-0.1715
M							K	1	0.238	-0.1555
M							L	1	0.226	-0.1675

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-20. Potential Statistical Outliers for Body Length (mm), F2 Generation, Adult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	terminal_bl_mm	Residual
F	0.0	-1.1458	1.4875	2.6333	-5.0958	5.4375	D	2	20.7	-5.40833

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-21. Potential Statistical Outliers for Anal Fin Papillae Number, F2 Generation, Adult.

Sex	Treatment (µg/L)	Q1	Q3	IQD	LO	HI	Replicate	Fish ID	terminal_anal_fin_papillae_num	Residual
M	50	-7.6667	5.3750	13.0417	-27.2292	24.9375	I	1	72	25.9167

Note. Q1 and Q3 were calculated from residuals of a mixed effects model fit.
IQD = Q3 – Q1. LO = Q1 – 1.5*IQD. HI = Q3 + 1.5*IQD.

Table A-22. Statistical Analysis Results for Biological Endpoints for F0 Generation, Less Outliers.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Body Weight (g), Male	Monotonic	NP	NP	Group 6 (0.0057) Group 5 (0.0056) Group 4 (0.0007) Group 3 (0.0026) Group 2 (0.0121)	NP	NP
Body Length (mm), Female	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (0.0005)	NP	NP
Body Length (mm), Male	Monotonic	NP	NP	NS	NP	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   * For male body weight, all 5 treatment groups showed significant increasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
   * For female body length, Groups 6, 5, 4, and 3 showed significant decreasing trend. LOEC was Group 3 (12.5 µg/L) and NOEC was Group 2 (6.3 µg/L).
5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Table A-23. Statistical Analysis Results for Embryo Hatchability and Biological Endpoints for F1 Generation, Subadult, Less Outliers.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Hatchability	Non-Monotonic	Non-Normal	Heterogeneous	NP	NP	Group 6 (0.0157) Group 3 (<.0001) Group 2 (<.0001)
Body Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0002) Group 5 (0.0229)	NP	NP
Body Weight (g), Male	Monotonic	NP	NP	Group 6 (0.0126)	NP	NP
Body Length (mm), Female	Monotonic	NP	NP	Group 6 (0.0003) Group 5 (0.0238)	NP	NP
Body Length (mm), Male	Monotonic	NP	NP	Group 6 (0.0043)	NP	NP
Liver Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0235)	NP	NP
Liver Weight (g), Male	Non-Monotonic	Normal	Homogeneous	NP	Group 2 (0.0370)	NP
Liver Vitellogenin [Log10(copies VTG)/ng total RNA], Male	Monotonic	NP	NP	Group 6 (0.0039) Group 5 (0.0391) Group 4 (0.0268) Group 3 (0.0102)	NP	NP
Anal Fin Papillae Number, Male	Monotonic	NP	NP	Group 6 (0.0005) Group 5 (0.0165)	NP	NP
Sex Ratio	Monotonic	NP	NP	NS	NP	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   - For female body weight, Groups 6 and 5 showed significant decreasing trend. LOEC was Group 5 (50 µg/L) and NOEC was Group 4 (25 µg/L).
   - For male body weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
   - For female body length, Groups 6 and 5 showed significant decreasing trend. LOEC was Group 5 (50 µg/L) and NOEC was Group 4 (25 µg/L).
   - For male body length, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
   - For female liver weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
   - For male VTG, Groups 6, 5, 4, and 3 showed significant increasing trend. LOEC was Group 3 (12.5 µg/L) and NOEC was Group 2 (6.3 µg/L).
   - For male anal fin papillae number, Groups 6 and 5 showed significant decreasing trend. LOEC was Group 5 (50 µg/L) and NOEC was Group 4 (25 µg/L).

5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
   * For male liver weight, Group 2 showed significantly less than control.
6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
   * For hatchability (analysis was performed on proportion), Groups 6, 3, and 2 showed significantly less than control. Kruskal-Wallis test p-value was less than 0.0001.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Table A-24. Statistical Analysis Results for Biological Endpoints for F1 Generation, Adult, Less Outliers.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Fecundity[7]	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (<.0001)	NP	NP
Fertility	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (<.0001)	NP	NP
Body Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0245)	NP	NP
Body Length (mm), Male	Monotonic	NP	NP	NS	NP	NP
Anal Fin Papillae Number, Male	Monotonic	NP	NP	NS	NP	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   * For fecundity and fertility, all 5 treatment groups showed significant decreasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
   * For female body weight, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
7. Fecundity data were analyzed on square root transformed replicate means.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Table A-25. Statistical Analysis Results for Embryo Hatchability and Biological Endpoints for F2 Generation, Subadult, Less Outliers.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Hatchability	Monotonic	NP	NP	NS	NP	NP
Body Weight (g), Female	Monotonic	NP	NP	Group 6 (0.0213) Group 5 (0.0081) Group 4 (0.0266) Group 3 (0.0018)	NP	NP
Body Weight (g), Male	Non-Monotonic	Normal	Homogeneous	NP	Group 3 (0.0017)	NP
Liver Weight (g), Female	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0065)	NP	NP
Liver Weight (g), Male	Monotonic	NP	NP	Group 6 (0.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (0.0001) Group 2 (0.0273)	NP	NP
Liver Vitellogenin [Log10(copies VTG)/ng total RNA], Male	Monotonic	NP	NP	NS	NP	NP
Anal Fin Papillae Number, Male[7]	NP	NP	NP	NP	NP	NP
Sex Ratio	Non-Monotonic	Log-Normal[8]	Homogeneous	NP	NS	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   * For female body weight, Groups 6, 5, 4, and 3 showed significant increasing trend. LOEC was Group 3 (12.5 µg/L) and NOEC was Group 2 (6.3 µg/L).
   * For female and male liver weights, all 5 treatment groups showed significant increasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
   * For male body weight, Group 3 showed significantly greater than control.
6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
7. After removed outliers, male anal fin papillae numbers were all zeros.
8. Normal when natural-log transformed.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Table A-26. Statistical Analysis Results for Biological Endpoints for F2 Generation, Adult, Less Outliers.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra Test[4]	Dunnett's Test[5]	Kruskal-Wallis Test with Post hoc Dunn's Test[6]
Fecundity[7]	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0337)	NP	NP
Fertility	Monotonic	NP	NP	Group 6 (<.0001) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (0.0155)	NP	NP
Body Weight (g), Male	Monotonic	NP	NP	Group 6 (0.0010) Group 5 (<.0001) Group 4 (<.0001) Group 3 (<.0001) Group 2 (<.0001)	NP	NP
Body Length (mm), Female	Monotonic	NP	NP	NS	NP	NP
Anal Fin Papillae Number, Male	Monotonic	NP	NP	Group 6 (0.0044)	NP	NP

1. Monotonicity was assessed by fitting a mixed effects ANOVA model on rank transformed data and determining linear and quadratic contrasts. The data were determined to be non-monotonic if the linear contrast was not significant and the quadratic contrast was significant. Otherwise the data were determined to be monotonic.
2. Shapiro-Wilk test for normality was performed on the residuals from the mixed effect ANOVA model.
3. Levene's test for homogeneity of variance was performed on the residuals from the mixed effect ANOVA model.
4. Jonckheere-Terpstra step-down test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment trends with one-sided test p-values were listed. The lowest observed effect concentration (LOEC) and the no observed effect concentration (NOEC) were noted below.
   * For fecundity and fertility, all 5 treatment groups showed significant decreasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
   * For male body weight, all 5 treatment groups showed significant increasing trend. LOEC was Group 2 (6.3 µg/L) and NOEC was not found.
   * For male anal fin papillae number, Group 6 showed significant decreasing trend. LOEC was Group 6 (100 µg/L) and NOEC was Group 5 (50 µg/L).
5. For non-monotonic, normally distributed, and homogeneous variance data, Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
6. For other types of data (e.g., non-monotonic, normally distributed, and heterogeneous variance data), the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-value as a post hoc test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 6. Only statistically significant pairwise comparisons with one-sided test p-values were listed.
7. Fecundity data were analyzed on square root transformed replicate means.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra step-down test, Dunnett's test, or the Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test as a post hoc test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 6 (100 µg/L).

Appendix B

RSCABS Analysis Results for Histopathological Endpoints from Liver, Kidney, Ovary, and Testis for F1 Generation Subadult

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Table B-1a. Summary of RSCABS Results (p-values) for Liver Histopathology for F1 Subadult, Female.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Anisokaryosis	1	6	0.9738	0.1651	
Cystic Degeneration	1	6	0.0544	0.4783	
Hepatocellular Vacuolation, Glycogen-Type[3]	2	6	1.2248	0.1103	
	3	6	-0.0049	0.4981	
Hepatocytes, Hypertrophy	1	6	0.9738	0.1651	
Individual Cell Necrosis	1	6	0.9738	0.1651	

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis: 6 = 6 highest concentrations (all concentrations).

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with hepatocellular vacuolation, glycogen-type grade 0 (not remarkable). Therefore, RSCABS analysis could not be performed for severity slice 1.

Table B-1b. Summary of RSCABS Results (p-values) for Liver Histopathology for F1 Subadult, Male.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Cystic Degeneration	1	6	-1.2332	0.1088	
	2	6	-0.7216	0.2353	
	3	6	0.0914	0.4636	
Hepatocellular Vacuolation, Glycogen-Type[3]	2	6	1.1318	0.1289	
	3	6	0.7259	0.2339	

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis: 6 = 6 highest concentrations (all concentrations),

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with hepatocellular vacuolation, glycogen-type grade 0 (not remarkable). Therefore, RSCABS analysis could not be performed for severity slice 1.

Table B-2a. Summary of RSCABS Results (p-values) for Kidney Histopathology for F1 Subadult, Female.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Tubules, Cellular Debris/Casts	1	6	-2.2238	0.0131	**
	1	**5**	-1.6565	0.0488	**
	1	4	-0.9045	0.1829	
Tubules, Dilation	1	**6**	-1.6559	0.0489	**
	1	5	-1.4187	0.078	
	2	6	1.4176	0.0781	
Tubules, Epithelium, Eosinophilia	1	6	-0.2188	0.4134	
	2	6	0.9738	0.1651	
Tubules, Epithelium, Vacuolation	1	6	-2.1424	0.0161	**
	1	5	-1.8405	0.0328	**
	1	4	-1.7162	0.0431	**
	1	3	-1.7928	0.0365	**
	1	**2**	-1.7321	0.0416	**

** Statistically significant treatment effect (negative trend) of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),
5 = lowest 5 concentrations,
4 = lowest 4 concentrations,
3 = lowest 3 concentrations,
2 = lowest 2 concentrations.

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L; 5 indicates the LOEC was 5th concentration, 50 µg/L; and 2 indicates the LOEC was the 2nd concentration, 6.3 µg/L.

Table B-2b. Summary of RSCABS Results (p-values) for Kidney Histopathology for F1 Subadult, Male.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Tubules, Cellular Debris/Casts	1	6	1.1119	0.1331	
Tubules, Dilation	1	6	-0.2596	0.3976	
	2	6	-0.3526	0.3622	
	3	6	-0.2875	0.3869	
Tubules, Epithelium, Eosinophilia	1	6	-1.1199	0.1314	
	2	6	-0.8186	0.2065	
	3	6	0.0914	0.4636	
Tubules, Epithelium, Eosinophilic Inclusions	1	6	0.9986	0.159	
	2	6	0.6695	0.2516	
Tubules, Epithelium, Hyperplasia	1	6	0.0914	0.4636	
Tubules, Epithelium, Hypertrophy	1	6	1.4662	0.0713	
	2	6	1.1344	0.1283	
Tubules, Epithelium, Vacuolation	1	6	0.1981	0.4215	
	2	6	0.6695	0.2516	

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

Table B-3b. Summary of RSCABS Results (p-values) for Testis Histopathology for F1 Subadult, Male.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Asynchronous Development/ Maldevelopment	1	6	0.6695	0.2516	
Gonad Phenotype Score	2	6	-1.0816	0.1397	
Histiocytic Cells, Intraluminal	1	**6**	1.8704	0.0307	*
	2	**6**	1.8704	0.0307	*
Hypoplasia/ Atrophy	1	6	4.3392	0	*
	1	**5**	3.45	3.00E-04	*
	1	4	0.9598	0.1686	
	2	6	4.2646	0	*
	2	**5**	3.1516	8.00E-04	*
	2	4	-0.3331	0.3695	
	3	6	4.2929	0	*
	3	**5**	3.1551	8.00E-04	*
	3	4	-0.6353	0.2626	
	4	**6**	2.5058	0.0061	*
	4	5	1.1539	0.1243	
Interstitial Fibrosis	1	6	0.6695	0.2516	
	2	6	0.6695	0.2516	
Testicular Degeneration	1	6	-0.5648	0.2861	
	2	6	0.6695	0.2516	
Testicular Oocytes	1	6	-1.0816	0.1397	
Testis Stage[3]	2	6	1.2722	0.1017	
	3	6	2.5694	0.0051	*
	3	5	1.6771	0.0468	*
	3	4	2.0165	0.0219	*
	3	**3**	2.1647	0.0152	*
	4	6	0.4882	0.3127	

* Statistically significant treatment effect (positive trend) at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
6 = 6 highest concentrations (all concentrations),
5 = lowest 5 concentrations,
4 = lowest 4 concentrations,
3 = lowest 3 concentrations,

Severity grade: Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe.

(1) Severity in the table indicates severity slices: 1 means severity grade 1 or greater vs severity grade 0; 2 means severity grade 2 or greater vs severity grades 0 and 1; 3 means severity grade 3 or greater vs severity grades 0, 1, and 2; and so on. Reporting in table was those severity slices for which there were observed results at that severity grade or greater.

(2) For a given severity slice, treatment levels for which there were no pathological findings were not included in table.

(3) There were no specimens with testis stage 0. Therefore, RSCABS analysis could not be performed for severity slice 1.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 6 indicates the LOEC was the 6th concentration, 100 µg/L; 5 indicates the LOEC was the 5th concentration, 50 µg/L; and 3 indicates the LOEC was the 3nd concentration, 12.5 µg/L.

Appendix H. RANGE-FINDING DATA (range-finding studies were not performed in a GLP-compliant manner per exception noted in Section 1)

FEL

GENERAL WATER CHEMISTRY

FEL

Client/Project-WO No: BATT01-00385 Test Species: 2-EHHB - MEOGRT - O. Latipes

Analysis Date	Tech Initials	Sample ID	Temp (C)	pH (su)	DO (mg/L)
10/19/15	DJF	Control Renewal	25.3	7.7	7.8
10/19/15	DJF	0.001 mg/L Renewal	25.3	7.6	7.7
10/19/15	DJF	0.01 mg/L Renewal	25.4	7.6	7.8
10/19/15	DJF	0.1 mg/L Renewal	25.4	7.5	7.6
10/19/15	DJF	1.0 mg/L Renewal	25.3	7.3	7.9
10/19/15	DJF	5.0 mg/L Renewal	25.2	7.3	7.6
10/20/15	DJF	Control Renewal	25.3	7.6	7.6
10/20/15	DJF	0.001 mg/L Renewal	25.2	7.5	7.5
10/20/15	DJF	0.01 mg/L Renewal	25.3	7.4	7.6
10/20/15	DJF	0.1 mg/L Renewal	25.2	7.3	7.8
10/20/15	DJF	Control Spent	25.1	7.5	6.0
10/20/15	DJF	0.001 mg/L Spent	25.2	7.4	5.9
10/20/15	DJF	0.01 mg/L Spent	25.1	7.4	6.1
10/20/15	DJF	0.1 mg/L Spent	25.2	7.1	6.3
10/21/15	DJF	Control Renewal	25.1	7.6	7.9
10/21/15	DJF	0.001 mg/L Renewal	25.3	7.4	7.8
10/21/15	DJF	0.01 mg/L Renewal	25.2	7.4	7.9
10/21/15	DJF	0.1 mg/L Renewal	25.3	7.5	7.7
10/21/15	DJF	Control Spent	25.2	7.5	6.0
10/21/15	DJF	0.001 mg/L Spent	25.0	7.4	5.8
10/21/15	DJF	0.01 mg/L Spent	25.1	7.3	5.7
10/21/15	DJF	0.1 mg/L Spent	25.2	7.1	6.0
10/22/15	DJF	Control Renewal	25.2	7.4	7.8
10/22/15	DJF	0.001 mg/L Renewal	25.3	7.3	7.9
10/22/15	DJF	0.01 mg/L Renewal	25.2	7.4	7.7
10/22/15	DJF	0.1 mg/L Renewal	25.1	7.2	7.9
10/22/15	DJF	Control Spent	25.2	7.2	5.8
10/22/15	DJF	0.001 mg/L Spent	25.1	7.2	6.1
10/22/15	DJF	0.01 mg/L Spent	25.2	7.3	6.3
10/22/15	DJF	0.1 mg/L Spent	25.3	7.0	6.2
10/23/15	DJF	Control Spent	25.2	7.6	6.0
10/23/15	DJF	0.001 mg/L Spent	25.1	7.5	5.9
10/23/15	DJF	0.01 mg/L Spent	25.2	7.5	5.8
10/23/15	DJF	0.1 mg/L Spent	25.3	7.4	6.1

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FEL

FEL

CULTURE SURVIVAL/STAGE DATA SHEET

Client/Project-WO No: **BATT01-00385** Test Type: **MEOGRT RF**

Sample No. / ID: **2-EHHB** Test No.: **1** Species: ***O. Latipes***

	Replicate-Concentration		Control	0.001 mg/L	0.01 mg/L	0.1 mg/L	1.0 mg/L	5.0 mg/L		
	Initial Culture No.:		10	10	10	10	10	10		
Test Day	Test Date	Tech Init.	No. Survived (Rep A / Rep B)							Observations
0	10/19/15	DJF	5/5	5/5	5/5	5/5	5/5	5/5	Adult	Normal behaving and no abnormalities in Control - 5.0 mg/L
1	10/20/15	DJF	5/5	5/5	5/5	5/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
2	10/21/15	DJF	5/5	5/5	5/5	5/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
3	10/22/15	DJF	5/5	5/5	5/5	5/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
4	10/23/15	DJF	5/5	5/5	5/5	5/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
0	10/19/15	DJF	5/5	5/5	5/5	5/5	5/5	5/5	Sub-Adult	Normal behaving and no abnormalities in Control - 5.0 mg/L
1	10/20/15	DJF	5/5	5/5	5/5	5/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
2	10/21/15	DJF	5/5	5/5	5/5	5/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
3	10/22/15	DJF	5/5	5/5	5/5	5/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
4	10/23/15	DJF	5/5	5/5	5/5	5/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
0	10/19/15	DJF	5/5	5/5	5/5	5/5	5/5	5/5	Larvae	Normal behaving and no abnormalities in Control - 5.0 mg/L
1	10/20/15	DJF	5/5	5/5	5/5	5/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
2	10/21/15	DJF	5/5	5/5	5/5	4/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
3	10/22/15	DJF	5/5	5/5	5/5	4/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L
4	10/23/15	DJF	5/5	5/5	5/5	4/5	0/0	0/0		Normal behaving and no abnormalities in Control - 0.1 mg/L

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Appendix I.
Report Amendments

BATT01-00393
Report Amendment 01

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethylhexyl 4-Hydroxybenzoate

Amendment Number: 01 | **Document ID Number:** BATT01-00393

Submitted By: Douglas J. Fort | **Date:** 9/5/2019

Amendment Relating To: BATT01-00393

[ ] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP

[X] Other (describe): Final Report

Original Specifications:

1. Page 107, Table 25. (continued). Effect of 2-EHHB Exposure on Subadult Male Body Length (mm) for F1 Generation

2. Page 229, Table 75. Part 1: Summary of Study BATT01-00393 Embryo-Larval, Juvenile, and Subadult Endpoint Results

Subadult F1 Generation Vitellogenin (liver mRNA) Male NOEC and LOEC – 100 and 50 µg/L
Subadult F2 Generation Growth (weight/length) Female NOEC and LOEC - 6.25/100 and 15.5/>100 µg/L
Subadult F2 Generation Growth (weight/length) Male NOEC and LOEC - 50/>100 and 100/>100 µg/L

Changed To:

1. Table 25. (continued). Effect of 2-EHHB Exposure on Subadult Male Body Length (mm) for F1 Generation

Add footnote citation #3 to 100 µg/L treatment mean 19.035 mm. Add footnote "Significantly less than control (Jonckheere-Terpstra test, p=0.0355).

2. Table 75. Part 1: Summary of Study BATT01-00393 Embryo-Larval, Juvenile, and Subadult Endpoint Results

Subadult F1 Generation Vitellogenin (liver mRNA) Male NOEC and LOEC – 50 and 100 µg/L
Subadult F2 Generation Growth (weight/length) Female NOEC and LOEC - 6.25/100 and 12.5/>100 µg/L
Subadult F2 Generation Growth (weight/length) Male NOEC and LOEC - 50/100 and 100/>100 µg/L

Reason for Change:

Transposition and typographical errors.

BATT01-00393 FEL
Report Amendment 01

Approval:

Study Director: [signature] Date: 10/2/2019

Sponsor Representative: [signature] Date: 2 OCT 2019