SPONSOR

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

TEST SUBSTANCE

2-Ethylhexyl 4-Hydroxybenzoate

STUDY TITLE

Larval Amphibian Growth and Development Assay (LAGDA)
of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog,
Xenopus laevis

TEST GUIDELINE

U.S. EPA, OCSPP 890.2300 (July 2015)

STUDY DIRECTOR

Douglas J. Fort, Ph.D.

STUDY INITIATION DATE

January 8, 2016

STUDY COMPLETION DATE

June 7, 2018

TEST FACILITY

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REPORT NUMBER

BATT01-00390

Total Pages: 508

1. COMPLIANCE STATEMENT

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

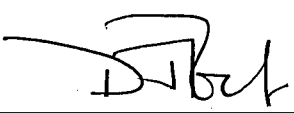
- United States Environmental Protection Agency, (FIFRA), Good Laboratory Practice Standards, Title 40 Code of Federal Regulations Part 160 (effective October 16, 1989) with the following exceptions:
  - Analysis of the laboratory dilution water for organics, pesticides and metals at Red River Laboratory (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, BATT01-00390, 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.

Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

Study: BATT01-00390

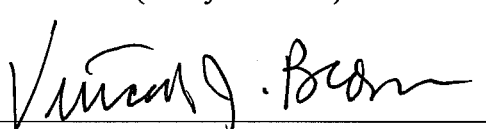
Test Substance: 2-Ethylhexyl 4-Hydroxybenzoate



6/7/2018

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

Date



June 7, 2018

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

Date

2. 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	1/8/2016	1/8/2016	1/8/2016
Technical Systems Audit	3/29/2016	3/29/2016	3/29/2016
Technical Systems Audit	4/28/2016	4/28/2016	4/28/2016
Technical Systems Audit	7/22/2016	7/22/2016	7/22/2016
Audit of Data Quality	3/28/2017	3/28/2017	3/28/2017
Draft Report Audit	7/14/2017	7/14/2017	7/14/2017
Final Report Audit	6/7/2018	6/7/2018	6/7/2018

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). Three 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 — 6/7/2018 Date

3. 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 — 6/7/2018 Date

Performing Laboratory Management:

Deanne Fort, Facility Manager, FEL — 6/7/18 Date

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5. EXECUTIVE SUMMARY

The Larval Amphibian Growth and Development Assay (LAGDA) (OCSPP 890.2300) uses the African clawed frog (*Xenopus laevis*) as a surrogate to identify and characterize the adverse consequences of exposure to substances which might interfere with the normal development and growth of amphibians from embryo-larval development through metamorphosis and early juvenile development. Adverse effects identified by the LAGDA may be caused by endocrine interaction of a chemical in amphibians, especially those active within the hypothalamic-pituitary-thyroid (HPT) and hypothalamic-pituitary-gonadal (HPG) systems. 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. Amphibian larvae at Nieuwkoop–Faber (NF) Stage 8-10 (80/treatment group and 160/control group(s); 20/replicate) were exposed to 2-ethylhexyl 4-hydroxybenzoate (2-EHHB) (98.0% pure) at test chemical nominal concentrations of 0.0 (control), 3.60, 10.9, 33.0, and 100 µg/L, until 10 weeks post median metamorphosis time (MMT) (median time at which 50% of the controls reach NF stage 62). There was one interim sub-sample at MMT. Endpoints evaluated during the exposure included those indicative of generalized toxicity: mortality (survival), growth (length and weight), development (time to metamorphosis at NF stage 62 (TTM)), morphological features (histopathology), overt toxicity, and behavior. Thyroid histopathology of NF stage 62 specimens and gonad, gonadal ducts, liver, and kidney histopathology of study termination specimens were performed. The assay was conducted under flow-through conditions. The test system was maintained at 21.2 to 21.9ºC and a pH of 6.3 to 7.9.

A summary of the results is provided below.

5.1. MEASURED TEST CONCENTRATIONS

- The mean measured concentrations for the 0.0 (control), 3.6, 10.9, 33.0, and 100 µg/L 2-EHHB treatments (nominal) were (<0.208 µg/L [minimum quantitation level, MQL]), 5.33, 10.8, 27.2, and 76.6 µg/L 2-EHHB (see Table 6).

5.2. SURVIVAL

- No significant effects on larval or juvenile survival were observed during the study.

5.3. GROWTH

- Significant increases in body weight and SVL in NF stage 62 larvae exposed to 10.9, 33.0, and 100 µg/L 2-EHHB relative to the control were noted (Jonckheere-Terpstra test, $p<0.05$).

- No changes in weight or SVL were noted in NF stage 66 larvae exposed to 2-EHHB compared to the control (KW ANOVA, $p>0.05$).

- Increased SVL in female and male termination specimens (10 wpm) exposed to 10.9, 33, and 100 µg/L 2-EHHB relative to the control was noted (Jonckheere-Terpstra test, $p<0.05$).

- No effect of 2-EHHB exposure on body weight or LSI was observed in either female or male termination specimens at 10 wpm compared to control (Jonckheere-Terpstra test, $p>0.05$ and KW ANOVA, $p>0.05$ for female LSI).

5.4. DEVELOPMENT

- The MMT in each of the treatments was significantly greater than the control (Cox Proportional Hazard Model, Chi Square, $p<0.0001$) suggestive of developmental delay during metamorphosis.
- Asynchronous development was not noted in the control or treatments during the conduct of the study.

- The 10.9 and 33.0 µg/L 2-EHHB treatments were essentially balanced between phenotype males and females. However, the 100 µg/L 2-EHHB treatment was skewed slightly toward females. Genotype was generally consistent with phenotypic identification. Thus, no marked changes in the ratio of the phenotype to the genotype ratios were observed in 2-EHHB-treated frogs relative to controls, and correspondence between phenotypic and genotypic genders were noted regardless of treatment.

5.5. HISTOPATHOLOGY (ABNORMAL MORPHOLOGICAL FEATURES)

- **THYROID:** There were no treatment-related findings in the thyroid glands of frogs exposed to 2-EHHB (Appendix D). Minimal to mild follicular cell hypertrophy was a common finding, with a high prevalence in all groups (Table 22). RSCABS analyses detected a significant reduction in the occurrence of mild follicular cell hypertrophy ($p=0.0442$) relative to the control; however, the significance of this finding is not apparent. Because anuran metamorphosis is considered to be a thyroid-dependent process, basal levels of follicular cell hypertrophy and hyperplasia are anticipated findings in control frogs at NF Stage 62.

- **LIVER:** There were no treatment-related findings in the livers of female or male terminal sacrifice frogs exposed to 2-EHHB (Appendix D).

- **KIDNEY:** Treatment-related findings in the kidneys of female *X. laevis* included an increase in the prevalence of mononuclear cell infiltrates in the anterior segment of the 100.0 µg/L 2-EHHB treatment (RSCABS, $p=0.0207$), and the middle segment of the 33.0 and 100.0 µg/L 2-EHHB treatments (RSCABS, $p=0.0109$ and 0.0076 [minimal] and 0.0258 [mild]) which was not observed in the posterior segment; an increase in the severity (mild) of mineralization in females in the anterior segment from the 10.9, 33.0 and 100 µg/L 2-EHHB treatments (RSCABS, $p=0.0448$, 0.0012, 0.0011); and an increased prevalence of tubular dilation in all three segments of 100.0 µg/L 2-EHHB-exposed frogs (RSCABS, $p=0.0023$ [anterior, minimal], 0.0258 [middle, minimal], 0.0468 [posterior, mild] (Table 23). No significant effects on the mineralization have been observed in the middle and posterior segments. Based on the experience of the pathologist, mononuclear cell infiltrates and renal tubular dilation in LAGDA studies are frequent sequelae of renal mineralization; however, in this particular instance, the prevalence of tubular dilation was increased in only the 10.9 and 100.0 µg/L dose groups (Appendix D).

Subtle treatment-related findings in the kidneys of male *X. laevis* exposed to 2-EHHB were noted. In the anterior kidney section, an increase in mild interstitial fibrosis, mineralization, and prevalence of mononuclear cell infiltrates were observed compared to controls (RSCABS, p=0.0375, 0.0407, 0.0445, respectively) although no tubule dilation was detected. In the middle kidney section, an increase in mild interstitial fibrosis was observed (RSCABS, p=0.0375). However, no effects on mineralization, tubule dilatation and mononuclear cell infiltration were detected. In the posterior kidney section, an increase in the prevalence of mild mononuclear cell infiltrates was observed relative to controls (RSCABS, p=0.0445) whereas no effects on interstitial fibrosis, mineralization, tubule dilation, tubule vacuolation were observed. It should be noted that according the pathologist, no treatment-related findings in the kidneys of male terminal sacrifice frogs exposed to 2-EHHB were noted indicating that although there were statistically significant findings, there was little or no pathological significance in terms of 2-EHHB exposure (Appendix D).

- **MALE GONADAL DUCTS:** An increase in mean oviduct stage scores in 2-EHHB-treated males was noted compared to controls (Table 25). This finding was noted in each section of the 100.0 µg/L 2-EHHB treatment group (RSCABS, p=0.0019 [anterior], 0.0128 [middle], and 0.0410 [posterior]) at the anterior, middle and posterior levels. The increase in mean oviduct stage score in the anterior section was also observed in specimens exposed to lower concentrations of 2-EHHB compared to controls (RSCABS, p=0.0028 [3.60 µg/L 2-EHHB], p=0.0028 [10.9 µg/L 2-EHHB], 0.0440 [33µg/L 2-EHHB], respectively). A decrease in mean Wolffian duct stage scores in the posterior segment male frogs exposed to 3.60, 10.9, 33.0, and 100 µg/L 2-EHHB relative to controls was also noted (RSCABS, p=0.0003, 0.0016, 0.0040, 0.0042, respectively) (Table 25). These results suggest a potential developmental delay; however, because that decrease occurred predominantly at a single anatomic level, the relationship of this finding to 2-EHHB exposure is not clear.

- **TESTES:** A decrease in testis score in male frogs evident by a shift in testis stage scores from Stage 5 to Stage 4 was observed in anterior and middle sections of the 3.60, 10.9, 33.0 µg/L 2-EHHB relative to controls (RSCABS, p=0.0002, 0.0008, 0.0006, 0.0033, respectively [anterior], and p<0.0001, 0.0002, 0.0007, 0.0006, respectively [middle]) (Table 26). No effects on the testis stage at the posterior segment were observed. Stage 5 testes were characterized by the presence of all spermatogenic phases, including spermatozoa, the latter of which were not evident in Stage 4 testes. However, the difference between these two stages in this study was not profound, as many Stage 5 testes contained relatively few spermatozoa (i.e., they were often early stage 5). In addition, a significant increase in mild germ cell degeneration in male frogs exposed to 33.0 and 100 µg/L 2-EHHB in the anterior segment (RSCABS, p=0.0007 and 0.00247, respectively) and an increase in mononuclear cell infiltrates in frogs exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0356) were observed, compared to the control (Appendix D). A significant reduction in germ cell degeneration in male *X. laevis* exposed to 3.60, 10.9, 33.0 and 100.0 µg/L 2-EHHB in the middle segment was noted relative to control frogs, which was suggestive of developmental delay (RSCABS, p<0.0001, 0.0004, 0.0145, and 0.0025, respectively) (Appendix D).

- **FEMALE GONADAL DUCTS:** There were no marked differences in the gonadal ducts of 2-EHHB-exposed females compared to controls (Appendix D).

- **OVARIES:** A treatment-related decrease in mean ovarian stage scores in each section in the 100 µg/L 2-EHHB treatment compared to the control (RSCABS, p=0.0441 [anterior], 0.0386 [middle], and 0.0010 [posterior]) was observed (Table 24). Further, a reduction in mean ovarian stage score was only observed in the 3.60, 10.9, and 33.0 µg/L 2-EHHB treatment concentrations in the posterior ovary section relative to controls (RSCABS, p=0.0058, 0.0024, 0.0475, and 0.0010, respectively). The decrease was primarily from Stage 4 to Stage 3 ovaries, as Stage 2 ovaries were uncommon. Stage 3 ovaries were characterized by relatively low numbers of perinucleolar stage oocytes in proportion to less mature oogenic phases

5.6. OVERT TOXICITY AND BEHAVIOR

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

5.7. CONCLUSIONS

Survival from NF Stage 8 to NF Stage 62 was 100% for the control and all 2-EHHB treatments. No effects on behavior or signs of overt toxicity were noted. The MMT in each of the treatments was significantly greater than the control (Cox Proportional Hazard Model, Chi Square, p<0.0001) suggestive of developmental delay during metamorphosis. Asynchronous development was not noted in the control or treatments during the conduct of the study Significant increases in body weight and SVL in NF stage 62 larvae exposed to 10.9, 33.0, and 100 µg/L 2-EHHB relative to the control were noted (Jonckheere-Terpstra test, p<0.05 There were no treatment-related findings in the thyroid glands of frogs exposed to 2-EHHB (Appendix D). Minimal to mild follicular cell hypertrophy was a common finding, with a high prevalence in all groups (Table 22). RSCABS analyses detected a significant reduction in the occurrence of mild follicular cell hypertrophy (p=0.0442) relative to the control; however, the significance of this finding is not apparent. Because anuran metamorphosis is considered to be a thyroid-dependent process, basal levels of follicular cell hypertrophy and hyperplasia are anticipated findings in control frogs at NF Stage 62.

Survival from NF Stage 62 to NF Stage 66 and from NF Stage 66 to test termination (10 wpm) was 100% for the control and all 2-EHHB treatments. No changes in weight or SVL were noted in NF stage 66 larvae exposed to 2-EHHB compared to the control (KW ANOVA, p>0.05). Increased SVL in female and male termination specimens (10 wpm) exposed to 10.9, 33, and 100 µg/L 2-EHHB relative to the control was noted (Jonckheere-Terpstra test, p<0.05). No effect of 2-EHHB exposure on body weight or LSI was observed in either female or male termination specimens at 10 wpm compared to control (Jonckheere-Terpstra test, p>0.05 and KW ANOVA, p>0.05 for female LSI. There were no treatment-related findings in the livers of female or male terminal sacrifice frogs exposed to 2-EHHB (Appendix D). Treatment-related findings in the kidneys of female *X. laevis* included an increase in the prevalence of mononuclear cell infiltrates in the anterior segment of the 100.0 µg/L 2-EHHB treatment (RSCABS, p=0.0207), and the middle segment of the 33.0 and 100.0 µg/L 2-EHHB treatments (RSCABS, p=0.0109 and 0.0076 [minimal] and 0.0258 [mild]) which was not observed in the posterior segment; an increase in the severity (mild) of mineralization in females in the anterior segment from the 10.9, 33.0 and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0448, 0.0012, 0.0011); and an increased prevalence of tubular dilation in all three segments of 100.0 µg/L 2-EHHB-exposed frogs (RSCABS, p=0.0023 [anterior, minimal], 0.0258 [middle, minimal], 0.0468

[posterior, mild] (Table 23). No significant effects on the mineralization have been observed in the middle and posterior segments. Based on the experience of the pathologist, mononuclear cell infiltrates and renal tubular dilation in LAGDA studies are frequent sequelae of renal mineralization; however, in this particular instance, the prevalence of tubular dilation was increased in only the 10.9 and 100.0 µg/L dose groups (Appendix D).

Subtle treatment-related findings in the kidneys of male *X. laevis* exposed to 2-EHHB were noted. In the anterior kidney section, an increase in mild interstitial fibrosis, mineralization, and prevalence of mononuclear cell infiltrates were observed compared to controls (RSCABS, p=0.0375, 0.0407, 0.0445, respectively) although no tubule dilation was detected. In the middle kidney section, an increase in mild interstitial fibrosis was observed (RSCABS, p=0.0375). However, no effects on mineralization, tubule dilatation and mononuclear cell infiltration were detected. In the posterior kidney section, an increase in the prevalence of mild mononuclear cell infiltrates was observed relative to controls (RSCABS, p=0.0445) whereas no effects on interstitial fibrosis, mineralization, tubule dilation, tubule vacuolation were observed. It should be noted that according the pathologist, no treatment-related findings in the kidneys of male terminal sacrifice frogs exposed to 2-EHHB were noted indicating that although there were statistically significant findings, there was little or no pathological significance in terms of 2-EHHB exposure (Appendix D). An increase in mean oviduct stage scores in 2-EHHB-treated males was noted compared to controls (Table 25). This finding was noted in each section of the 100.0 µg/L 2-EHHB treatment group (RSCABS, p=0.0019 [anterior], 0.0128 [middle], and 0.0410 [posterior]) at the anterior, middle and posterior levels. The increase in mean oviduct stage score in the anterior section was also observed in specimens exposed to lower concentrations of 2-EHHB compared to controls (RSCABS, p=0.0028 [3.60 µg/L 2-EHHB], p=0.0028 [10.9 µg/L 2-EHHB], 0.0440 [33µg/L 2-EHHB], respectively). A decrease in mean Wolffian duct stage scores in the posterior segment male frogs exposed to 3.60, 10.9, 33.0, and 100 µg/L 2-EHHB relative to controls was also noted (RSCABS, p=0.0003, 0.0016, 0.0040, 0.0042, respectively) (Table 25). These results suggest a potential developmental delay; however, because that decrease occurred predominantly at a single anatomic level, the relationship of this finding to 2-EHHB exposure is not clear. An increase in mean oviduct stage scores in 2-EHHB-treated males was noted compared to controls (Table 25). This finding was noted in each section of the 100.0 µg/L 2-EHHB treatment group (RSCABS, p=0.0019 [anterior], 0.0128 [middle], and 0.0410 [posterior]) at the anterior, middle and posterior levels. The increase in mean oviduct stage score in the anterior section was also observed in specimens exposed to lower concentrations of 2-EHHB compared to controls (RSCABS, p=0.0028 [3.60 µg/L 2-EHHB], p=0.0028 [10.9 µg/L 2-EHHB], 0.0440 [33µg/L 2-EHHB], respectively). A decrease in mean Wolffian duct stage scores in the posterior segment male frogs exposed to 3.60, 10.9, 33.0, and 100 µg/L 2-EHHB relative to controls was also noted (RSCABS, p=0.0003, 0.0016, 0.0040, 0.0042, respectively) (Table 25). These results suggest a potential developmental delay; however, because that decrease occurred predominantly at a single anatomic level the relationship of this finding to 2-EHHB exposure is not clear. There were no marked differences in the gonadal ducts of 2-EHHB-exposed females compared to controls (Appendix D). A treatment-related decrease in mean ovarian stage scores in each section in the 100 µg/L 2-EHHB treatment compared to the control (RSCABS, p=0.0441 [anterior], 0.0386 [middle], and 0.0010 [posterior]) were observed (Table 24). Further, a reduction in mean ovarian stage score was only observed in the 3.60, 10.9, and 33.0 µg/L 2-EHHB treatment concentrations in the posterior ovary section relative to controls (RSCABS,

p=0.0058, 0.0024, 0.0475, and 0.0010, respectively). The decrease was primarily from Stage 4 to Stage 3 ovaries, as Stage 2 ovaries were uncommon. Stage 3 ovaries were characterized by relatively low numbers of perinucleolar stage oocytes in proportion to less mature oogenic phases.

Overall, findings from the present study suggested a minor delay in reproductive tract maturation in 2-EHHB exposed male and female terminal sacrifice frogs relative to controls, and these included increased oviduct stage scores in males, a shift in testis stage scores in males from Stage 5 to Stage 4, and decreased mean ovarian stage scores in high-dose females. In males, oviduct (Müllerian duct) stage scores typically decrease from Stage 2 to Stage 1 with advanced maturity, signifying physiologic atrophy of the ducts. Ancillary clinical data from this study provide mixed support for a delay in maturation. Although there was a slight decrease in median body weight in 100.0 µg/L dose group frogs relative to control frogs, there was an increase in median snout-vent lengths in 2-EHHB-treated frogs as compared to controls (Table 7). However, it has been observed previously that the degree of reproductive development does not appear to be closely linked to somatic growth in *X. laevis* (Ogielska and Kotusz, 2004; Wolf et al., 2010).

Using the decision criteria in the LAGDA test guideline (OCSPP 890.2300) (3), 2-EHHB appeared to delay metamorphosis in a concentration-dependent manner and at each concentration evaluated. Increased SVL in female and male termination specimens (10 wpm) exposed to 10.9, 33, and 100 µg/L 2-EHHB relative to the control was noted. No effect of 2-EHHB exposure on body weight or LSI was observed in either female or male termination specimens at 10 wpm compared to control. Histopathological findings in this study related to 2-EHHB exposure suggested a minor delay in reproductive tract maturation in 2-EHHB exposed male and female terminal sacrifice frogs relative to controls.

6. INTRODUCTION

FEL was contracted by Battelle Memorial Institute to perform the Larval Amphibian Growth and Development Assay 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 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), the Larval Amphibian Growth and Development Assay (LAGDA, OCSPP 890.2300) guidance document (3), under the FEL Quality Assurance Management Plan (QAMP) (4), relevant facility standard operating procedures (SOPs), and the following Study Protocol No. BATT01-5 prepared for Study No. BATT01-00390. 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. The in-life study was initiated on March 21, 2016 and concluded July 14, 2016.

LAGDA was intended to identify and characterize the adverse consequences of exposure to substances which interfere with the normal development and growth of amphibians through larval development and metamorphosis. LAGDA evaluated potential, inciting contributors to amphibian population declines by evaluating the effects, both through endocrine and non-endocrine mechanisms, from exposure to contaminants during the larval stage of development that may adversely affect populations. Thus, the primary objective of the study was to evaluate the potential developmental toxicity of 2-EHHB to *X. laevis* in general accordance with the USEPA guidelines established for the LAGDA (3).

The general experimental design entailed exposing Nieuwkoop and Faber (NF) stage 8-10 *X. laevis* embryos (5) to four different concentrations of a test chemical and a control until 10 weeks post median metamorphosis time (MMT); which for this study was defined as the median time at which 50% of controls reach NF stage 62. There was one interim sub-sample at MMT. There were four replicates in each test concentration with eight replicates for the control. Endpoints evaluated during the exposure included those indicative of generalized toxicity: mortality, abnormal behavior, abnormal morphological features, time to metamorphosis at NF stage 62 (TTM and the median metamorphosis time [MMT]), and growth determinations (length and weight. Thyroid histopathology of NF stage 62 specimens and gonad, gonadal ducts, liver, and kidney histopathology of study termination specimens were performed.

7. STUDY PERSONNEL

- Dr. Vincent Brown, Battelle Memorial Institute – 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 (formerly ABC Laboratories, Inc.) – Principal Investigator (PI), analytical chemistry
- Dr. Jeffrey Wolf, Experimental Pathology Laboratories (EPL), Inc. – 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

8. 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 note of the following:

- The Sponsor signature on the protocol documents for the Study Director the Sponsor's assurance that the study described in the 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 the 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 interfered with study objectives. Upon completion of the test all distressed amphibians were painlessly euthanized in a timely manner.

- Methods of euthanasia used during this study conformed with the above referenced regulation and are consistent with OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3).

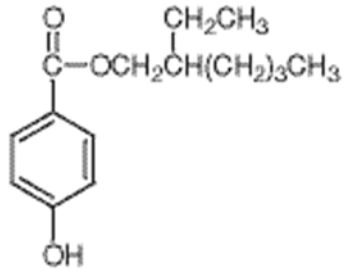
9. MATERIALS AND METHODS

9.1. TEST SUBSTANCE

2-EHHB (TCI America, Portland, OR, lot number 7CZZO, expiration date and re-test date not provided, 99.3% (HPLC) with 98.0% minimum specification (w/w) pure [w/w] 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 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 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.

9.2. LABORATORY WATER

It is well-established that *Xenopus* can develop successfully over a wide range of water quality parameters. Laboratory water was 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 were exposed using a flow-through water renewal system that maintained adequate water quality (temperature, dissolved oxygen, low ammonia, etc.), and ensured a consistent exposure of the test organisms to the parent chemical.

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, SD 45, and at 10 wpm (in-life conclusion). LAGDA test guidelines (3), recommend dilution water I^- concentrations between 0.5 and 10 µg/L be used.

9.3. TEST SYSTEM

The test species was the African Clawed Frog (*X. laevis)*. *Xenopus laevis* is a well-studied laboratory animal that exhibits ease of use in the laboratory, rapid development, and simplicity of observation due to transparency during embryo-larval development (6). In

addition, *Xenopus laevis* is routinely cultured in laboratories worldwide and is easily obtainable through commercial suppliers. Reproduction was easily induced in this species throughout the year using human chorionic gonadotropin (hCG) injections and the resultant larvae were routinely reared to selected developmental stages in large numbers to permit the use of stage-specific test protocols. It was also the test organism required in the OCSPP 890.2300 test guideline (3). The *X. laevis* larvae used for this study were obtained from an in-house culture. The adult breeding stock frogs (originally purchased from *Xenopus* I, Dexter, MI) were selected based on general productivity and health. After spawning of adults, embryos were collected, cysteine treated, and screened for viability per ASTM E1439-98 standards (6). Test organisms from a single spawn were used in the in-life study. Spawns resulting in greater than 70% viability be used for the test. Embryos were randomly distributed into exposure treatment tanks containing 4 L of dilution water until each tank contained 20 embryos. Embryos were carefully handled during this transfer to minimize handling stress and to avoid any injury. Details for adult frog care and breeding, specific to FEL, but consistent with OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3), are found in facility SOPs. Fertilized egg collection was performed as described in ASTM E1439-98 (6) and OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) test guideline (3).

9.3.1. FEEDING

The diet selected for use (Tables 1 and 2) was required to meet the performance recommended by OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3). *X. laevis* embryos were not fed until free-swimming larval stage (NF stage 46) was reached. At NF stage 47, the tadpoles were fed a diet that consists of trout starter (Purina AquaMax Starter, Aquatic Ecosystems, Apopka, FL), *Spirulina* algae discs (Wardley, Secaucus, NJ), and TetraFin® flakes (Tetra Holding (US), Blacksburg, VA) homogenized in culture (or dilution) water (3) (Table 2). This mixture was administered three times daily on weekdays and once daily on weekends. Tadpoles were also fed brine shrimp nauplii (*Artemia* spp.) (Aquatic Ecosystems, Apopka, FL) twice daily on weekdays and once daily on the weekends starting on day 8 post-fertilization (dpf). The larval feeding was consistent in each test vessel and allowed appropriate growth and development of test animals ensuring reproducibility and transferability of the assay results. More specifically, the median time to NF stage 62 in controls should be ≤45 days with a mean weight of 1.0±0.2 g at NF stage 62 in controls.

Once tadpoles reached NF stage 62, the feeding regime consisted of 2 mm (3/32 inch) sinking frog food (Ziegler Brothers, Gardners, PA). Metamorphosed test animals were fed once per day. For post-NF stage 62 larvae and early juveniles, the pellets were briefly crushed with a mortar and pestle to reduce their size. Once juveniles were large enough to consume full pellets, grinding or crushing was no longer necessary. The animals were fed once per day. The juvenile feeding allowed appropriate growth and development of the organisms to reach a mean weight of 11.5±3 g in control juveniles at the termination of the assay. The feeding rate for metamorphosed *X. laevis* is provided in Table 3.

9.4. EXPOSURE SYSTEM

The route of exposure was aqueous, which was the most appropriate method for aquatic organisms and a relatively water-soluble test substance. A flow-through diluter system was used in the performance of the LAGDA exposure. The system had water-contact components of glass

(aquaria), stainless steel (diluter housing and water bath), and Teflon® (tubing responsible for test material delivery). Exposure tanks were glass aquaria (with approximate measurements of 22.5 x 14.0 x 16.5 cm deep) equipped with standpipes that resulted in an actual tank volume of 4.0 L and minimum water depth of 10 to 15 cm. Each dilution cell within the headbox of the diluter was labelled with the color-coded laboratory tape with the test concentration. The replicate splitter cell and aquaria delivery tubing were labeled with the same color tape as the appropriate dilution cell and the replicate for each test concentration. Each aquarium was labelled with identical tape color and specifically denote test concentration and replicate. Test system calibration was checked prior to study start, weekly during the study, and at test termination. The system supported 4 exposure concentrations and a control, with 4 replicates per treatment. The flow rate to each tank was 25 mL/min which provided a complete volume replacement every 2.7 h. Fluorescent lighting was used to provide a photoperiod of 12 h light and 12 h dark at an intensity that ranged from 600 to 2,000 lux (lumens/m^2) at the water surface. Water temperature was maintained at 21º ± 1°C, pH maintained between 6.5 to 8.5, and the dissolved oxygen (DO) concentration > 3.5 mg/L (> 40% of the air saturation) in each test tank. The test organism loading per water renewal rate was within recommended guidelines (3) and maintained acceptable water quality while not utilizing an excessive amount of test material. Tanks were randomly assigned for the LAGDA assay. This design was intended to randomize out the effects associated with the local environment (i.e., light and water) and possible trends associated with the diluter during testing. All test animals were impartially assigned to tanks before exposure. Tanks were equipped with baffles to separate metamorphosed test animals from test larvae. 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 and BATT01-00393 studies; and the entire pre-exposure and exposure periods of the present study (BATT01-00390). The stock solution produced was shared between the present study and the BATT01-00393 study since they were conducted during the same general timeframe. Following completion of the BATT01-00388 study and prior to the initiation of the exposure phase of the BATT01-00393 study (February 29, 2016), the columns were maintained in-line filled with dechlorinated tap water at room temperature, but dechlorinated tap water flow to the columns was terminated. 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.

Temperature was measured daily; and pH, DO, and light intensity (lux) were measured three times per week. Total hardness and alkalinity were measured in the control and one replicate of the highest concentration once per week. The solubility, purity, and stability (volatility and degradation rate) of test article was provided to FEL prior to in-life test initiation by the supplier of the test article (TCI America). After initial diluter calibration, a sample of test

solution from each diluter concentration was sampled for chemical analysis during the diluter equilibration phase. A water sample from each replicate for each treatment concentration was sampled for analysis at in-life test initiation (day 0) and termination. During the remainder of the exposure phase (excluding termination), a sample was 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, and week 4 –D) and repeat every 5th week of the in-life phase. Samples will be collected at test initiation, weekly thereafter, and at test termination. A laboratory blank was also collected with the batch of samples.

Exposure tanks were siphoned daily 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. 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.).

9.5. CHEMICAL ANALYSIS

The analytical measurement method (7) 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 spurious results were obtained 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 Laboratories. 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

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

9.6. STUDY DESIGN AND ADDITIONAL EXPERIMENTAL CONDITIONS

An overview of the test and relevant test specifications are provided in Table 3. This assay was intended for use in determining the developmental toxicity of chemicals on amphibian larval growth and development. The assay was initiated with newly spawned embryos and continued through metamorphosis into juvenile development. A summary of study endpoints is presented in Table 4. Animals were examined daily for mortality and any signs of abnormal behavior. At NF stage 66 (TTM), a sub-sample of five animals/replicate were collected and various endpoints examined. Remaining animals were continuously exposed until each reached NF stage 66 at which time the exposure tanks were culled to 10 organisms/replicate tank. The

remaining 10 organisms/tank were then exposed for the remainder of the exposure period (10 weeks from the MMT of the control or 10 wpm). At test termination, additional endpoints were collected (Table 5).

9.6.1. BIOLOGICAL SAMPLE COLLECTION

Three samplings of test specimens were performed. The first event was unexposed day 0 embryos (20-30) for initial stage verification. The second event was performed as individual organisms reached TTM (NF stage 62). The final specimen sampling was performed at test conclusion (10 wpm).

9.6.2. EXPOSURE SYSTEM PERFORMANCE

Temperatures were measured in all tanks daily. DO and pH were measured two times per week. Total hardness, alkalinity, and conductivity were measured in the control and one replicate of each treatment once per week such that complete analysis for a given treatment or control was provided monthly. Relative humidity inside the diluter system was measured once per month post-metamorphosis and maintained with facility records. Light intensity (lux) was measured once on SD 0.

9.6.3. 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.

9.6.4. 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.

9.6.5. ADDITIONAL DAILY OBSERVATIONS

Observation of abnormal behavior, grossly visible malformations, or lesions were recorded daily by date, treatment, replicate ID. For the purpose of the present study, the terms “treatment” and “exposure” are considered synonymous. Normal behavior for larval animals was characterized by suspension in the water column with tail elevated above the head, regular rhythmic tail fin beating, periodic surfacing, operculating (respiration through gills), and being responsive to stimuli. Abnormal behavior included, for example, floating on the surface, lying on the bottom of the tank, inverted or irregular swimming, lack of surfacing activity, and being non-responsive to stimuli. For post-metamorphic animals, in addition to the above abnormal behaviors, gross differences in food consumption between treatments were recorded. Gross malformations and lesions included morphological abnormalities, such as; limb deformities, hemorrhagic lesions, abdominal edema, and bacterial or fungal infections. These determinations were qualitative and considered clinical signs of disease/stress and made in comparison to control animals.

9.6.6. NF STAGE 62 SPECIMENS (ENDPOINTS/TISSUE SAMPLE PREPARATION)

Larvae that have reached NF stage 62 were physically separated from the remaining tadpoles in the tank with a baffle in accordance with the OCSPP 890.2300 test guideline (3). Tadpoles were checked daily, and the TTM recorded for each individual. One NF stage 62 larvae of every four removed from a given replicate tank was randomly selected for morphological, biological, and histopathological measurements. Those NF stage 62 larvae not sampled were physically separated from the remaining tadpoles for continued exposure. Selection of the sub-sampled test organisms was randomized, using a net. The following endpoints were obtained from the newly metamorphosed larvae sub-sampling:

- Time to NF Stage 62 (TTM)
- Morphometrics (growth – weight and length)
- External abnormality
- Thyroid histopathology.

9.6.7. TIME TO METAMORPHOSIS (TTM)

In this study, the TTM was the number of days required for a test specimen to reach NF stage 62 (from embryonic NF stage 8 to NF stage 62 larvae). TTM determined for each larva and the median time to metamorphosis (MMT) was determined for each replicate of the control. The control or treatment MMT was based on the median of the replicate MMTs (n=8 for control and 4 for the treatments).

9.6.8. GROWTH (WEIGHT AND LENGTH)

The wet weight of each newly metamorphosed specimen was measured immediately after they became non-responsive. Specimens were blotted dry before weighing to remove excess adherent water. Weight was measured on an analytical balance to the nearest mg. Digital photographs of each specimen were taken for SVL measurement. Photos were taken with a ruler to provide scale and electronically digitized for linear length using Sigma Scan Pro (Aspire Software International (Ashburn, VA). Length was measured to the nearest mm. These measurements assessed possible effects of test substances on the growth rate of organisms and were useful in detecting generalized toxicity.

9.6.9. EXTERNAL EVALUATION

After measurements of body size have been made, any gross morphological abnormalities, signs of disease, and / or clinical signs of toxicity were noted and digitally recorded. These include scoliosis, petechiae, hemorrhage, limb, and eye defects. Observations of scoliosis were counted (incidence) and graded with respect to severity.

9.6.10. TISSUE COLLECTION AND FIXATION FOR GENERAL HISTOLOGY

For the sub-sampling, thyroid glands were fixed and preserved for histology. Fixation and preservation required removal of the lower torso below the forelimbs. The lower torso was then discarded. The trimmed carcass was placed into individually labeled vials and fixed in Davidson's solution. The volume of fixative in the container was at least 10 times the approximated volume of the tissue. Appropriate agitation of the fixative was required to

adequately fix the tissue samples. All tissue remained in Davidson's fixative for 72 h, at which time they were rinsed in $DeCl_2$ water and stored in 10% (v/v) NBF until further processed (3,11).

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 LAGDA (3). Following collection, FEL sent 5 NBF preserved larvae per replicate (20 per treatment or control) to EPL via overnight courier for histopathological processing and analyses.

9.6.11. END OF LARVAL EXPOSURE PHASE

The end of larval exposure phase was determined by the MMT, which was the time required for half of the population of test control animals to reach NF stage 62. The larval portion of the exposure did not exceed 70 days. When all the organisms reached NF stage 66, test organisms were culled such that 10 metamorphosed young per treatment were exposed for the remainder of the in-life study (10 weeks post-MMT). Any organisms remaining at the end of this period were euthanized by immersion in 200 mg/L buffered MS-222 (pH 7.0). The tadpoles were weighed, staged (5), and digitally photographed. Snout-vent length (SVL) was measured and any developmental abnormalities noted. Phenotypic sex was noted as female, male, or indeterminate.

9.6.12. IN-LIFE TEST TERMINATION (ENDPOINTS / TISSUE SAMPLE PREPARATION)

After 10 weeks of exposure post-MMT, the remaining animals were anesthetized, and then euthanized and the following endpoints evaluated and recorded:

- Morphometrics (growth – weight and length)
- External evaluation of test organism
- Nuptial pad development (morphological)
- Liver weight (Liver-somatic index)
- Gonad, reproductive ducts, kidney, and liver histopathology
- Phenotypic and genotypic sex ratios.

9.6.13. GROWTH (WEIGHT AND LENGTH)

The wet weight and snout to vent length of each juvenile specimen were made using the same procedure as used for the newly metamorphosed specimens (see Section 8.9.2.2). Specimens were blotted dry before weighing to remove excess adherent water. After measurements of body size had been made, any gross morphological abnormalities and/or clinical signs of toxicity were noted and digitally recorded.

9.6.14. EXTERNAL EVALUATION

As with the newly metamorphosed specimens, any gross morphological abnormalities, diseases, and/or clinical signs of toxicity observed were recorded with digital photographs.

9.6.15. TISSUE COLLECTION AND FIXATION FOR GENERAL HISTOLOGY

Livers were removed, weighed, and prepared for histological analysis during the final sampling. A hind limb was retained for genetic sex determination. The remaining carcass, without the hind limbs, but including the gonads, and gonadal ducts, and kidneys was fixed for future histological analyses. Thus, the gonads were physically removed from the carcass. The collected tissues were placed into labeled histological vials and fixed in Davidson's fixative as described for the sub-sampled NF stage 62 specimens. All tissue remained in Davidson's fixative for at least 48-72 h, but no longer than 96 h, at which time they were rinsed in dechlorinated tap water and stored in 10% (v/v) NBF (3).

EPL, under the direction of the Sponsor, performed the gonad, gonadal duct, kidney, and liver tissue preparation, histology, and histopathological interpretation in accordance with appropriate facility guidance documents (SOPs) and the relevant guidance documents on histopathology for the LAGDA (3,8). Following collection, FEL sent preserved juveniles to EPL via overnight courier for histopathological processing and analyses.

9.6.16. PHENOTYPIC AND GENOTYPIC SEXING

DNA samples from the juvenile frogs were obtained from a hind foot removed during dissection. The hind foot from each juvenile specimen were stored at -20°C ± 5° until DNA isolation. Testing for the presence or absence of a marker were performed by PCR as described in the facility SOP. Information regarding the development of the marker used for genetic sexing of *X. laevis* is described in Yoshimoto et al. (9).

10. DATA ANALYSIS

All data were tabulated in data entry spreadsheet templates (DEST) by FEL. The DESTs were then used by FEL to prepare the final report. The histopathology report (EPL, Sterling, VA), raw data (DEST), and statistical report (Battelle) are provided in Appendices D through F, respectively. In an effort to present the most realistic estimation of exposure concentrations, analytical chemistry analysis results of the duplicate analytical samples were averaged with the original sample result and both the individual results and average were reported in the DESTs unless the original or the duplicate were found to be an outlier and thus, were not used in the average determination. 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. Statistical analyses of the data were performed by Battelle and will be consistent with the TO 14 QAPP (1), OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) test guideline (3), and generally followed procedures described in the document Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application (10). For toxicological endpoint data, 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). Statistical outliers were determined as described above. Analysis of the data from this study report revealed 20 potential outliers occurring in the following biological endpoints: TTM at NF Stage 62 (n=11), Body Weight at NF Stage 66,

Female Body Weight at Termination, and Female LSI at Termination (n=7) (Appendix F). However, in accordance with LAGDA guidance (3), none of the endpoint outliers were excluded from statistical analyses presented in the present report for study BATT01-00390.

Three different types of data sets were collected: 1) quantitative continuous data (mortality, growth, and LSI), 2) time-to-event data (developmental rates such as TTM), and 3) ordinal data (severity scores and developmental stages from histopathological evaluations). For continuous data sets, data expressed as proportions were transformed to the arc sine square root. Monotonicity of the data sets were evaluated using Analysis of Variance (ANOVA) comparing linear and quadratic contrasts or the equivalent. Continuous data sets that were monotonic were evaluated using a step-down Jonckheere-Terpstra trend test or the equivalent using replicate medians. If the data were non-monotonic, parametric assumptions were tested using deviations from normality with the Shapiro-Wilks' test ($\alpha = 0.05$) and homogeneity of variance tested with Levene's test ($\alpha = 0.05$). Parametric data sets were evaluated using ANOVA followed by Dunnett's or Bonferroni t-test as post-hoc tests or the equivalent. Kruskal-Wallis (KW) ANOVA test followed by a step-down pairwise Dunn's test as a post hoc test or the equivalent were used when assumptions of normality and homogeneity of variances are not met. These tests were used to determine NOEC and LOEC numerical endpoints for each of the appropriate measurement endpoints.

The TTM data were treated as time to event data, with mortalities or larvae not reaching stage 62 in 70 d treated as censured data. The replicate MMT represented the median of the individual TTM values. The treatment MMT was the median of the replicate medians. Thus, the MMT was the 50% point in the cumulative metamorphosis curve using a mixed-effects Cox proportional hazard model. Histopathology data were in the form of severity scores or developmental stages. 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. Developmental staging data (gonad and reproductive ducts) was analyzed as reported to detect acceleration in development and then manually inverted prior to a second analysis to detect a delay in development. For all statistical evaluations, the replicate was considered the experimental unit and $\alpha=0.05$.

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) was determined to be 100 µg/L (Appendix G). The test concentration series was 1x, 0.33x, 0.11x, and 0.04x, where x was the MTC value. Therefore, the test concentrations were 100.0, 33.0, 10.9, and 3.6 µg/L.

11.2. WATER QUALITY MEASUREMENTS AND TEST SYSTEM PERFORMANCE

Results of water quality measurements and test system performance are presented in Table 5. All physicochemical water quality parameters in study were within acceptable ranges.

11.3. CONFIRMATION OF TEST CONCENTRATIONS

Nominal 2-EHHB concentrations selected for the LAGDA study were 0.0 (control), 3.60, 10.9, 33.0, and 100 µg/L. Concentrations of 2-EHHB measured in in samples collected from the control and treatments during the study are provided in Table 6. IQRs determined for the 0.0 (control), 3.60, 10.9, 33.0, and 100 µg/L 2-EHHB treatments were -0.23-0.66, -1.31-11.8, 1.41-19.6, 3.00-48.2, 43.0-96.0 µg/L 2-EHHB, respectively. Based on IQR analysis of the control and each treatment group, 0.0 µg/L replicate A original sample from Study Week (SW) 0, 0.0 µg/L replicate B original sample from Study Week (SW) 3, 0.0 µg/L replicate E original sample from Study Week (SW) 5, 0.0 µg/L replicate F original sample from Study Week (SW) 6, 0.0 µg/L replicate G original sample from Study Week (SW) 7, 100 µg/L replicate D original and duplicate samples from Study Week (SW) 12, and 33.0 µg/L replicate A and 100 µg/L replicate A duplicate samples from Study Week (SW) 13 (Appendix D). The corresponding mean measured concentrations in the definitive study were <0.208 (control), 5.33, 10.8, 27.2, and 76.6 µg/L 2-EHHB (Table 7). Lower test substance recovery was noted in the two highest test concentrations, potentially due to the complexity of the environment within each replicate tank regardless of a high-level attention to water quality maintenance and diluter performance. In some cases, variability in analytical measurement was noted with duplicate samples. Since a duplicate sample was a split of the of the original sample, sources of variation most likely lie within the preparation and analysis processes. Because a continuous stock solution was prepared using solid-liquid phase saturator columns, stock concentrations varied somewhat during the course of the study. However, since these concentrations were used to adjust stock pump flow to the diluter master mixing cell, impact on test solution concentrations was minimal. Treatment coefficients of variation (CVs) for the 3.60, 10.9, 33.0, and 100 µg/L treatments were 22%, 14%, 8%, and 12%, respectively. The mean measured concentrations were generally consistent with protocol BATT01-5 (Appendix A) for study BATT01-00390. Thus, the mean measured concentrations were a reasonable estimation of exposure concentration.

11.4. CLINICAL SIGNS OF TOXICITY

No signs of abnormal behavior, grossly visible malformations, or lesions including scoliosis, petechiae, and hemorrhage, limb, and eye defects were observed in any of the specimens in the present study.

11.5. IN-LIFE STUDIES—NF 8 TO NF STAGE 62

11.5.1. SURVIVAL

Survival through NF Stage 62 was 100 percent for the control and all 2-EHHB treatments (Table 8).

11.5.2. TIME TO METAMORPHOSIS (MEDIAN METAMORPHOSIS TIME, MMT)

The median MMT (NF Stage 62) for control *X. laevis* was 45 days (Table 9). The median MMT for larvae exposed to 2-EHHB ranged from 50.8 d in the 3.60 and 100 µg/L treatment to 53.3 d in the 33.0 µg/L treatment. The MMT in each of the treatments was significantly greater than the control (Cox Proportional Hazard Model, Chi Square, $p<0.0001$).

11.5.3. GROWTH

11.5.3.1. BODY WEIGHT

Mean body weight of NF Stage 62 frogs was 0.902 g in the control. The mean body weight ranged from 0.924 to 1.027 g in the 3.60 and 100 µg/L 2-EHHB treatments, respectively (Table 10). Mean body weight in the 10.9, 33.0, and 100 µg/L 2-EHHB treatments were significantly greater than the control (Jonckheere-Terpstra test, p=0.0466, 0.0070, and 0.0004, respectively).

11.5.3.2. SNOUT-TO-VENT LENGTH (SVL)

Mean SVL of NF Stage 62 frogs was 18.8 mm in the control and ranged from 18.7 to 21.4 mm in the 3.60 and 100 µg/L treatments, respectively (Table 11). SVL in the 10.9, 33.0 and 100 µg 2-EHHB/L treatments were significantly greater than the control (Jonckheere-Terpstra test, p=0.0367, 0.0199, and 0.0003, respectively).

11.6. IN-LIFE STUDIES—METAMORPHOSED YOUNG (NF STAGE 66) AND JUVENILES

11.6.1. SURVIVAL

Survival from NF Stage 62 to NF Stage 66 and from NF Stage 66 to test termination (10 wpm) was 100% for the control and all 2-EHHB treatments (Table 8).

11.6.2. GROWTH

11.6.2.1. BODY WEIGHT

Mean body weight of NF Stage 66 frogs was 0.669 g in the control and ranged from 0.490 to 0.630 g in the 10.9 and 100 µg/L 2-EHHB treatments, respectively (Table 12). Mean body weight in the 2-EHHB treatments were not significantly different from the control (KW ANOVA, p>0.05).

Mean body weight of female *X. laevis* at 10 wpm was 11.1 g in the control and ranged from 10.9 to 11.6 g in the 10.9 and 33.0 µg/L 2-EHHB treatments, respectively (Table 13). Mean body weight in female *X. laevis* at termination in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).

Mean body weight of male *X. laevis* at 10 wpm was 11.2 g in the control and ranged from 10.7 to 11.4 g in the 100 and 33.0 µg/L 2-EHHB treatments, respectively (Table 14). Mean body weights in female *X. laevis* at termination in the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).

11.6.2.2. SNOUT-TO-VENT LENGTH

Mean SVL of NF Stage 66 frogs was 19.9 mm in the control and ranged from 17.3 to 19.5 mm in the 10.9 and 100 µg/L 2-EHHB treatments, respectively (Table 15). Mean SVLs at NF stage 66 in the 2-EHHB treatments were not significantly different from the control (KW ANOVA, p>0.05).

Mean SVL of female *X. laevis* 10 wpm was 31.4 mm in the control and ranged from 32.5 to 37.3 mm in the 3.60 and 100 µg/L 2-EHHB treatments, respectively (Table 16). Mean SVLs of female *X. laevis* at termination in the 10.9, 33, and 100 µg/L 2-EHHB treatments were significantly greater than the control (Jonckheere-Terpstra test, p=0.0033, 0.0007, and p<0.0001, respectively).

Mean SVL of male *X. laevis* at 10 wpm was 31.8 mm in the control and ranged from 32.7 to 36.4 mm in the 10.9 and 100 µg/L 2-EHHB treatments, respectively (Table 17). Mean SVLs of male *X. laevis* at termination in the 10.9, 33, and 100 µg/L 2-EHHB treatments were significantly greater than the control (Jonckheere-Terpstra test, p=0.0304, 0.0017, and p<0.0001, respectively).

11.7. LIVER-SOMATIC INDEX (LSI)

Mean LSI of frogs measured in the control at the termination of in-life (10 wpm) were 0.065 for females (Table 18) and 0.064 for males (Table 19). LSI for female *X. laevis* ranged from 0.061 to 0.065 in the 33.0 and 100 µg/L 2-EHHB treatments, respectively (Table 19). Mean LSI in female *X. laevis* for the 2-EHHB treatments were not significantly different from the control (KW ANOVA, p >0.05). LSI for male *X. laevis* ranged from 0.062 to 0.067 in the 10.9 and 100 µg/L treatments (Table 20). Mean LSI in male frogs for the 2-EHHB treatments were not significantly different from the control (Jonckheere-Terpstra test, p>0.05).

11.8. GENDER RATIOS

The phenotypic and genotypic sex ratios at the termination are presented in Table 20. Control *X. laevis* were slightly phenotypically skewed toward males as was the 3.60 µg/L 2-EHHB treatment. The 10.9 and 33.0 µg/L 2-EHHB treatments were essentially balanced between phenotype males and females. However, the 100 µg/L 2-EHHB treatment was skewed slightly toward females. Three genetic females in the control had indeterminant phenotypes. One genetic female in the 3.60 µg/L and two genetic females in the 33.0 µg/L 2-EHHB treatments had indeterminant phenotypes. In addition, 2 genetic males in the 33.0 µg/L and one genetic male in the 100 µg/L had indeterminant phenotypes. Genotype was generally consistent with phenotypic identification. Thus, no marked changes in the ratio of the phenotype to the genotype ratios were observed in 2-EHHB-treated frogs relative to controls, and correspondence between phenotypic and genotypic genders were noted regardless of treatment.

11.9. HISTOPATHOLOGY

Detailed histopathology findings for NF Stage 62 and juveniles (10 wpm) male and female frogs exposed to 2-EHHB are described in the histopathology report (Appendix D).

11.9.1. NF STAGE 62

There were no treatment-related findings in the thyroid glands of frogs exposed to 2-EHHB (Appendix D). Minimal to mild follicular cell hypertrophy was a common finding, with a high prevalence in all groups (Table 21). RSCABS analyses detected a significant reduction in the occurrence of mild follicular cell hypertrophy (p=0.0442) relative to the control; however, the significance of this finding is not apparent. Because anuran metamorphosis is considered to

be a thyroid-dependent process, basal levels of follicular cell hypertrophy and hyperplasia are anticipated findings in control frogs at NF Stage 62.

11.9.2. JUVENILES

Results of histopathological examination of female and male liver, kidney, gonadal ducts, and gonads from 10 wpm *X. laevis* (termination specimens) are enumerated in Tables 22-25.

11.9.2.1. FEMALES

11.9.2.1.1. LIVER

There were no treatment-related findings in the livers of female terminal sacrifice frogs exposed to 2-EHHB (Appendix D).

11.9.2.1.2. KIDNEY

Treatment-related findings in the kidneys of female *X. laevis* included an increase in the prevalence of mononuclear cell infiltrates in the anterior segment of the 100.0 µg/L 2-EHHB treatment (RSCABS, p=0.0207), and the middle segment of the 33.0 and 100.0 µg/L 2-EHHB treatments (RSCABS, p=0.0109 and 0.0076 [minimal] and 0.0258 [mild]) which was not observed in the posterior segment; an increase in the severity (mild) of mineralization in females in the anterior segment from the 10.9, 33.0 and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0448, 0.0012, 0.0011); and an increased prevalence of tubular dilation in all three segments of 100.0 µg/L 2-EHHB-exposed frogs (RSCABS, p=0.0023 [anterior, minimal], 0.0258 [middle, minimal], 0.0468 [posterior, mild] (Table 22). No significant effects on the mineralization have been observed in the middle and posterior segments. Based on the experience of the pathologist, mononuclear cell infiltrates and renal tubular dilation in LAGDA studies are frequent sequelae of renal mineralization; however, in this particular instance, the prevalence of tubular dilation was increased in only the 10.9 and 100.0 µg/L dose groups (Appendix D).

11.9.2.1.3. GONADAL DUCTS

There were no marked differences in the gonadal ducts of 2-EHHB-exposed females compared to controls (Appendix D).

11.9.2.1.4. OVARIES

However, treatment-related decreases in mean ovarian stage scores in each section in the 100 µg/L 2-EHHB treatment compared to the control (RSCABS, p=0.0441 [anterior], 0.0386 [middle], and 0.0010 [posterior]) were observed (Table 23). Further, a reduction in mean ovarian stage score was only observed in the 3.60, 10.9, and 33.0 µg/L 2-EHHB treatment concentrations in the posterior ovary section relative to controls (RSCABS, p=0.0058, 0.0024, 0.0475, and 0.0010, respectively). The decrease was primarily from Stage 4 to Stage 3 ovaries, as Stage 2 ovaries were uncommon. Stage 3 ovaries were characterized by relatively low numbers of perinucleolar stage oocytes in proportion to less mature oogenic phases.

11.9.2.2. MALES

11.9.2.2.1. LIVER

There were no treatment-related findings in the livers of male terminal sacrifice frogs exposed to 2-EHHB (Appendix D).

11.9.2.2.2. KIDNEY

Subtle treatment-related findings in the kidneys of male *X. laevis* exposed to 2-EHHB were noted. In the anterior kidney section, an increase in mild interstitial fibrosis, mineralization, and prevalence of mononuclear cell infiltrates were observed compared to controls (RSCABS, p=0.0375, 0.0407, 0.0445, respectively) although no tubule dilation was detected. In the middle kidney section, an increase in mild interstitial fibrosis was observed (RSCABS, p=0.0375). However, no effects on mineralization, tubule dilatation and mononuclear cell infiltration were detected. In the posterior kidney section, an increase in the prevalence of mild mononuclear cell infiltrates was observed relative to controls (RSCABS, p=0.0445) whereas no effects on interstitial fibrosis, mineralization, tubule dilation, tubule vacuolation were observed. It should be noted that according the pathologist, no treatment-related findings in the kidneys of male terminal sacrifice frogs exposed to 2-EHHB were noted indicating that although there were statistically significant findings, there was little or no pathological significance in terms of 2-EHHB exposure (Appendix D).

11.9.2.2.3. GONADAL DUCTS

An increase in mean oviduct stage scores in 2-EHHB-treated males was noted compared to controls (Table 24). This finding was noted in each section of the 100.0 µg/L 2-EHHB treatment group (RSCABS, p=0.0019 [anterior], 0.0128 [middle], and 0.0410 [posterior]) at the anterior, middle and posterior levels. The increase in mean oviduct stage score in the anterior section was also observed in specimens exposed to lower concentrations of 2-EHHB compared to controls (RSCABS, p=0.0028 [3.60 µg/L 2-EHHB], p=0.0028 [10.9 µg/L 2-EHHB], 0.0440 [33µg/L 2-EHHB], respectively). A decrease in mean Wolffian duct stage scores in the posterior segment male frogs exposed to 3.60, 10.9, 33.0, and 100 µg/L 2-EHHB relative to controls was also noted (RSCABS, p=0.0003, 0.0016, 0.0040, 0.0042, respectively) (Table 25). These results suggest a potential developmental delay; however, because that decrease occurred predominantly at a single anatomic level, the relationship of this finding to 2-EHHB exposure is not clear.

11.9.2.2.4. TESTES

A decrease in testis score in male frogs evident by a shift in testis stage scores from Stage 5 to Stage 4 was observed in anterior and middle sections of the 3.60, 10.9, 33.0 µg/L 2-EHHB relative to controls (RSCABS, p=0.0002, 0.0008, 0.0006, 0.0033, respectively [anterior], and p<0.0001, 0.0002, 0.0007, 0.0006, respectively [middle]) (Table 25). No effects on the testis stage at the posterior segment were observed. Stage 5 testes were characterized by the presence of all spermatogenic phases, including spermatozoa, the latter of which were not evident in Stage 4 testes. However, the difference between these two stages in this study was not profound, as many Stage 5 testes contained relatively few spermatozoa (i.e., they were often early stage 5). In addition, a significant increase in mild germ cell degeneration in male frogs exposed to 33.0 and 100 µg/L 2-EHHB in the anterior segment (RSCABS, p=0.0007 and 0.00247, respectively) and

an increase in mononuclear cell infiltrates in frogs exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0356) were observed, compared to the control (Appendix D). A significant reduction in germ cell degeneration in male *X. laevis* exposed to 3.60, 10.9, 33.0 and 100.0 µg/L 2-EHHB in the middle segment was noted relative to control frogs which was suggestive of developmental delay (RSCABS, p<0.0001, 0.0004, 0.0145, and 0.0025, respectively) (Appendix D).

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 26.

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 protocol BATT01-5 (Appendix A) and study guidance document (3) are provided in Table 27. The coefficients of variation (CV, expressed as %) for the mean measured test concentrations between each replicate of each treatment concentration were <20% with the exception of the 3.6 µg/L 2-EHHB treatment. Although the CV for the 3.6 µg/L 2-EHHB exceeded the established criteria of 20% provided by the test guidance (3) and protocol BATT01-5 for study BATT01-00390 (Appendix A), the mean measured concentrations were a reasonable estimation of exposure concentration and the excursion did not impact the interpretation of the results or conclusions drawn. Control mortality was <10% in each replicate of the control. The median time to NF stage 62 in the controls ≤ 45 d. The mean weights of control organisms at NF stage 62 and at the conclusion of the in-life phase (10 wpm) were 1.0±0.2 g and 11.5±3 g, respectively. The range of pH measured in the control and treatments was between 6.5 and 8.5, the temperature in the study was maintained at 21±1ºC, and the inter-replicate range in temperature was maintained at ≤0.5 ºC. None of the test concentrations demonstrated overt toxicity and none of the test concentrations, including the control, had compromised replicates. Finally, the genotype:phenotype gender concordance in the control was >95%. In summary, the present study met performance criteria established for the OPPTS 890.2300 Larval Amphibian Growth and Development Assay (3) with the exception noted above.

13.2. ASSESSMENT OF THE LAGDA RESULTS

The following results were considered, using the framework outlined in Ankley and Jensen (12), 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), 3.6, 10.9, 33.0, and 100 µg/L 2-EHHB treatments (nominal) were (<0.208 µg/L [minimum quantitation level, MQL]), 5.33, 10.8, 27.2, and 76.6 µg/L 2-EHHB (see Table 6).

13.3.1. SURVIVAL

- No significant effects on larval or juvenile survival were observed during the study.

13.3.2. GROWTH

- Significant increases in body weight and SVL in NF stage 62 larvae exposed to 10.9, 33.0, and 100 µg/L 2-EHHB relative to the control were noted (Jonckheere-Terpstra test, $p<0.05$).

- No changes in weight or SVL were noted in NF stage 66 larvae exposed to 2-EHHB compared to the control (KW ANOVA, $p>0.05$).

- Increased SVL in female and male termination specimens (10 wpm) exposed to 10.9, 33, and 100 µg/L 2-EHHB relative to the control was noted (Jonckheere-Terpstra test, $p<0.05$).

- No effect of 2-EHHB exposure on body weight or LSI was observed in either female or male termination specimens at 10 wpm compared to control (Jonckheere-Terpstra test, $p>0.05$ and KW ANOVA, $p>0.05$ for female LSI).

13.3.3. DEVELOPMENT

- The MMT in each of the treatments was significantly greater than the control (Cox Proportional Hazard Model, Chi Square, $p<0.0001$) suggestive of developmental delay during metamorphosis.

- Asynchronous development was not noted in the control or treatments during the conduct of the study.

- The 10.9 and 33.0 µg/L 2-EHHB treatments were essentially balanced between phenotype males and females. However, the 100 µg/L 2-EHHB treatment was skewed slightly toward females. Genotype was generally consistent with phenotypic identification. Thus, no marked changes in the ratio of the phenotype to the genotype ratios were observed in 2-EHHB-treated frogs relative to controls, and correspondence between phenotypic and genotypic genders were noted regardless of treatment.

13.3.4. HISTOPATHOLOGY (ABNORMAL MORPHOLOGICAL FEATURES)

- **THYROID:** There were no treatment-related findings in the thyroid glands of frogs exposed to 2-EHHB (Appendix D). Minimal to mild follicular cell hypertrophy was a common finding, with a high prevalence in all groups (Table 22). RSCABS analyses detected a significant reduction in the occurrence of mild follicular cell hypertrophy ($p=0.0442$) relative to the control; however, the significance of this finding is not apparent. Because anuran metamorphosis is considered to be a thyroid-dependent process, basal levels of follicular cell hypertrophy and hyperplasia are anticipated findings in control frogs at NF Stage 62.

- **LIVER:** There were no treatment-related findings in the livers of female or male terminal sacrifice frogs exposed to 2-EHHB (Appendix D).

- **KIDNEY:** Treatment-related findings in the kidneys of female *X. laevis* included an increase in the prevalence of mononuclear cell infiltrates in the anterior segment of the

100.0 µg/L 2-EHHB treatment (RSCABS, p=0.0207), and the middle segment of the 33.0 and 100.0 µg/L 2-EHHB treatments (RSCABS, p=0.0109 and 0.0076 [minimal] and 0.0258 [mild]) which was not observed in the posterior segment; an increase in the severity (mild) of mineralization in females in the anterior segment from the 10.9, 33.0 and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0448, 0.0012, 0.0011); and an increased prevalence of tubular dilation in all three segments of 100.0 µg/L 2-EHHB-exposed frogs (RSCABS, p=0.0023 [anterior, minimal], 0.0258 [middle, minimal], 0.0468 [posterior, mild] (Table 23). No significant effects on the mineralization have been observed in the middle and posterior segments. Based on the experience of the pathologist, mononuclear cell infiltrates and renal tubular dilation in LAGDA studies are frequent sequelae of renal mineralization; however, in this particular instance, the prevalence of tubular dilation was increased in only the 10.9 and 100.0 µg/L dose groups (Appendix D).

Subtle treatment-related findings in the kidneys of male *X. laevis* exposed to 2-EHHB were noted. In the anterior kidney section, an increase in mild interstitial fibrosis, mineralization, and prevalence of mononuclear cell infiltrates were observed compared to controls (RSCABS, p=0.0375, 0.0407, 0.0445, respectively) although no tubule dilation was detected. In the middle kidney section, an increase in mild interstitial fibrosis was observed (RSCABS, p=0.0375). However, no effects on mineralization, tubule dilatation and mononuclear cell infiltration were detected. In the posterior kidney section, an increase in the prevalence of mild mononuclear cell infiltrates was observed relative to controls (RSCABS, p=0.0445) whereas no effects on interstitial fibrosis, mineralization, tubule dilation, tubule vacuolation were observed. It should be noted that according the pathologist, no treatment-related findings in the kidneys of male terminal sacrifice frogs exposed to 2-EHHB were noted indicating that although there were statistically significant findings, there was little or no pathological significance in terms of 2-EHHB exposure (Appendix D).

- **MALE GONADAL DUCTS:** An increase in mean oviduct stage scores in 2-EHHB-treated males was noted compared to controls (Table 25). This finding was noted in each section of the 100.0 µg/L 2-EHHB treatment group (RSCABS, p=0.0019 [anterior], 0.0128 [middle], and 0.0410 [posterior]) at the anterior, middle and posterior levels. The increase in mean oviduct stage score in the anterior section was also observed in specimens exposed to lower concentrations of 2-EHHB compared to controls (RSCABS, p=0.0028 [3.60 µg/L 2-EHHB], p=0.0028 [10.9 µg/L 2-EHHB], 0.0440 [33µg/L 2-EHHB], respectively). A decrease in mean Wolffian duct stage scores in the posterior segment male frogs exposed to 3.60, 10.9, 33.0, and 100 µg/L 2-EHHB relative to controls was also noted (RSCABS, p=0.0003, 0.0016, 0.0040, 0.0042, respectively) (Table 25). These results suggest a potential developmental delay; however, because that decrease occurred predominantly at a single anatomic level, the relationship of this finding to 2-EHHB exposure is not clear.

- **TESTES:** A decrease in testis score in male frogs evident by a shift in testis stage scores from Stage 5 to Stage 4 was observed in anterior and middle sections of the 3.60, 10.9, 33.0 µg/L 2-EHHB relative to controls (RSCABS, p=0.0002, 0.0008, 0.0006, 0.0033, respectively [anterior], and p<0.0001, 0.0002, 0.0007, 0.0006, respectively [middle]) (Table 26). No effects on the testis stage at the posterior segment were observed. Stage 5 testes were characterized by the presence of all spermatogenic phases, including spermatozoa, the latter of which were not evident in Stage 4 testes. However, the difference between these two stages in this study was

not profound, as many Stage 5 testes contained relatively few spermatozoa (i.e., they were often early stage 5). In addition, a significant increase in mild germ cell degeneration in male frogs exposed to 33.0 and 100 µg/L 2-EHHB in the anterior segment (RSCABS, p=0.0007 and 0.00247, respectively) and an increase in mononuclear cell infiltrates in frogs exposed to 100 µg/L 2-EHHB (RSCABS, p=0.0356) compared to the control (Appendix D). A significant reduction in germ cell degeneration in male *X. laevis* exposed to 3.60, 10.9, 33.0 and 100.0 µg/L 2-EHHB in the middle segment was noted relative to control frogs which was suggestive of developmental delay (RSCABS, p<0.0001, 0.0004, 0.0145, and 0.0025, respectively) (Appendix D).

- **FEMALE GONADAL DUCTS:** There were no marked differences in the gonadal ducts of 2-EHHB-exposed females compared to controls (Appendix D).

- **OVARIES:** A treatment-related decrease in mean ovarian stage scores in each section in the 100 µg/L 2-EHHB treatment compared to the control (RSCABS, p=0.0441 [anterior], 0.0386 [middle], and 0.0010 [posterior]) were observed (Table 24). Further, a reduction in mean ovarian stage score was only observed in the 3.60, 10.9, and 33.0 µg/L 2-EHHB treatment concentrations in the posterior ovary section relative to controls (RSCABS, p=0.0058, 0.0024, 0.0475, and 0.0010, respectively). The decrease was primarily from Stage 4 to Stage 3 ovaries, as Stage 2 ovaries were uncommon. Stage 3 ovaries were characterized by relatively low numbers of perinucleolar stage oocytes in proportion to less mature oogenic phases.

13.3.5. OVERT TOXICITY AND BEHAVIOR

No significant effects on behavior or signs of overt toxicity were noted.

14. CONCLUSIONS

Survival from NF Stage 8 to NF Stage 62 was 100% for the control and all 2-EHHB treatments. No effects on behavior or signs of overt toxicity were noted. The MMT in each of the treatments was significantly greater than the control (Cox Proportional Hazard Model, Chi Square, p<0.0001) suggestive of developmental delay during metamorphosis. Asynchronous development was not noted in the control or treatments during the conduct of the study Significant increases in body weight and SVL in NF stage 62 larvae exposed to 10.9, 33.0, and 100 µg/L 2-EHHB relative to the control were noted (Jonckheere-Terpstra test, p<0.05 There were no treatment-related findings in the thyroid glands of frogs exposed to 2-EHHB (Appendix D). Minimal to mild follicular cell hypertrophy was a common finding, with a high prevalence in all groups (Table 22). RSCABS analyses detected a significant reduction in the occurrence of mild follicular cell hypertrophy (p=0.0442) relative to the control; however, the significance of this finding is not apparent. Because anuran metamorphosis is considered to be a thyroid-dependent process, basal levels of follicular cell hypertrophy and hyperplasia are anticipated findings in control frogs at NF Stage 62.

Survival from NF Stage 62 to NF Stage 66 and from NF Stage 66 to test termination (10 wpm) was 100% for the control and all 2-EHHB treatments. No changes in weight or SVL were noted in NF stage 66 larvae exposed to 2-EHHB compared to the control (KW ANOVA,

p>0.05). Increased SVL in female and male termination specimens (10 wpm) exposed to 10.9, 33, and 100 µg/L 2-EHHB relative to the control was noted (Jonckheere-Terpstra test, p<0.05). No effect of 2-EHHB exposure on body weight or LSI was observed in either female or male termination specimens at 10 wpm compared to control (Jonckheere-Terpstra test, p>0.05 and KW ANOVA, p>0.05 for female LSI. There were no treatment-related findings in the livers of female or male terminal sacrifice frogs exposed to 2-EHHB (Appendix D). Treatment-related findings in the kidneys of female *X. laevis* included an increase in the prevalence of mononuclear cell infiltrates in the anterior segment of the 100.0 µg/L 2-EHHB treatment (RSCABS, p=0.0207), and the middle segment of the 33.0 and 100.0 µg/L 2-EHHB treatments (RSCABS, p=0.0109 and 0.0076 [minimal] and 0.0258 [mild]) which was not observed in the posterior segment; an increase in the severity (mild) of mineralization in females in the anterior segment from the 10.9, 33.0 and 100 µg/L 2-EHHB treatments (RSCABS, p=0.0448, 0.0012, 0.0011); and an increased prevalence of tubular dilation in all three segments of 100.0 µg/L 2-EHHB-exposed frogs (RSCABS, p=0.0023 [anterior, minimal], 0.0258 [middle, minimal], 0.0468 [posterior, mild] (Table 23). No significant effects on the mineralization have been observed in the middle and posterior segments. Based on the experience of the pathologist, mononuclear cell infiltrates and renal tubular dilation in LAGDA studies are frequent sequelae of renal mineralization; however, in this particular instance, the prevalence of tubular dilation was increased in only the 10.9 and 100.0 µg/L dose groups (Appendix D).

Subtle treatment-related findings in the kidneys of male *X. laevis* exposed to 2-EHHB were noted. In the anterior kidney section, an increase in mild interstitial fibrosis, mineralization, and prevalence of mononuclear cell infiltrates were observed compared to controls (RSCABS, p=0.0375, 0.0407, 0.0445, respectively) although no tubule dilation was detected. In the middle kidney section, an increase in mild interstitial fibrosis was observed (RSCABS, p=0.0375). However, no effects on mineralization, tubule dilatation and mononuclear cell infiltration were detected. In the posterior kidney section, an increase in the prevalence of mild mononuclear cell infiltrates was observed relative to controls (RSCABS, p=0.0445) whereas no effects on interstitial fibrosis, mineralization, tubule dilation, tubule vacuolation were observed. It should be noted that according the pathologist, no treatment-related findings in the kidneys of male terminal sacrifice frogs exposed to 2-EHHB were noted indicating that although there were statistically significant findings, there was little or no pathological significance in terms of 2-EHHB exposure (Appendix D). An increase in mean oviduct stage scores in 2-EHHB-treated males was noted compared to controls (Table 25). This finding was noted in each section of the 100.0 µg/L 2-EHHB treatment group (RSCABS, p=0.0019 [anterior], 0.0128 [middle], and 0.0410 [posterior]) at the anterior, middle and posterior levels. The increase in mean oviduct stage score in the anterior section was also observed in specimens exposed to lower concentrations of 2-EHHB compared to controls (RSCABS, p=0.0028 [3.60 µg/L 2-EHHB], p=0.0028 [10.9 µg/L 2-EHHB], 0.0440 [33µg/L 2-EHHB], respectively). A decrease in mean Wolffian duct stage scores in the posterior segment male frogs exposed to 3.60, 10.9, 33.0, and 100 µg/L 2-EHHB relative to controls was also noted (RSCABS, p=0.0003, 0.0016, 0.0040, 0.0042, respectively) (Table 25). These results suggest a potential developmental delay; however, because that decrease occurred predominantly at a single anatomic level, the relationship of this finding to 2-EHHB exposure is not clear. An increase in mean oviduct stage scores in 2-EHHB-treated males was noted compared to controls (Table 25). This finding was noted in each section of the 100.0 µg/L 2-EHHB treatment group (RSCABS, p=0.0019 [anterior], 0.0128 [middle], and 0.0410 [posterior]) at the anterior, middle

and posterior levels. The increase in mean oviduct stage score in the anterior section was also observed in specimens exposed to lower concentrations of 2-EHHB compared to controls (RSCABS, p=0.0028 [3.60 µg/L 2-EHHB], p=0.0028 [10.9 µg/L 2-EHHB], 0.0440 [33µg/L 2-EHHB], respectively). A decrease in mean Wolffian duct stage scores in the posterior segment male frogs exposed to 3.60, 10.9, 33.0, and 100 µg/L 2-EHHB relative to controls was also noted (RSCABS, p=0.0003, 0.0016, 0.0040, 0.0042, respectively) (Table 25). These results suggest a potential developmental delay; however, because that decrease occurred predominantly at a single anatomic level, the relationship of this finding to 2-EHHB exposure is not clear. There were no marked differences in the gonadal ducts of 2-EHHB-exposed females compared to controls (Appendix D). A treatment-related decrease in mean ovarian stage scores in each section in the 100 µg/L 2-EHHB treatment compared to the control (RSCABS, p=0.0441 [anterior], 0.0386 [middle], and 0.0010 [posterior]) were observed (Table 24). Further, a reduction in mean ovarian stage score was only observed in the 3.60, 10.9, and 33.0 µg/L 2-EHHB treatment concentrations in the posterior ovary section relative to controls (RSCABS, p=0.0058, 0.0024, 0.0475, and 0.0010, respectively). The decrease was primarily from Stage 4 to Stage 3 ovaries, as Stage 2 ovaries were uncommon. Stage 3 ovaries were characterized by relatively low numbers of perinucleolar stage oocytes in proportion to less mature oogenic phases.

Overall, findings from the present study suggested a minor delay in reproductive tract maturation in 2-EHHB exposed male and female terminal sacrifice frogs relative to controls, and these included increased oviduct stage scores in males, a shift in testis stage scores in males from Stage 5 to Stage 4, and decreased mean ovarian stage scores in high-dose females. In males, oviduct (Müllerian duct) stage scores typically decrease from Stage 2 to Stage 1 with advanced maturity, signifying physiologic atrophy of the ducts. Ancillary clinical data from this study provide mixed support for a delay in maturation. Although there was a slight decrease in median body weight in 100.0 µg/L dose group frogs relative to control frogs, there was an increase in median snout-vent lengths in 2-EHHB-treated frogs as compared to controls (Table 7). However, it has been observed previously that the degree of reproductive development does not appear to be closely linked to somatic growth in *X. laevis* (11,12).

Using the decision criteria in the LAGDA test guideline (OCSPP 890.2300) (3), 2-EHHB appeared to delay metamorphosis in a concentration-dependent manner and at each concentration evaluated. Increased SVL in female and male termination specimens (10 wpm) exposed to 10.9, 33, and 100 µg/L 2-EHHB relative to the control was noted. No effect of 2-EHHB exposure on body weight or LSI was observed in either female or male termination specimens at 10 wpm compared to control. Histopathological findings in this study related to 2-EHHB exposure suggested a minor delay in reproductive tract maturation in 2-EHHB exposed male and female terminal sacrifice frogs relative to controls.

15. SAMPLE HANDLING AND CUSTODY

All samples received, generated during the course of testing, and submitted to EAG Laboratories 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 Laboratories were shipped to EAG Laboratories 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 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 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 Laboratories 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 were 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. BATT01-5 (Appendix A). There were ten amendments to and three deviations from the Study Protocol (Appendix A). The following protocol deviations were noted:

- Section 9.9.2.5. Thyroid Histopathology – EPL Test Site - Following collection, FEL will send 5 NBF preserved larvae per replicate (20 per treatment or control) to EPL via overnight courier for histopathological processing and analyses. Following collection, FEL sent 5 NBF preserved larvae per replicate (40 per control and 20 per treatment) to EPL via overnight courier for histopathological processing and analyses. Typographical error, the correct number of control specimens were collected and shipped based on correct citation of the proper number of control NF stage 62 sub-sampled specimens to be collected within other sections of protocol 1-6 and LAGDA guidance document OCSPP 890.2300, Larval Amphibian Growth and Development Assay (LAGDA), EPA publication number 740-C-15-001, July 2015. Therefore, no negative impact is anticipated from this deviation.
- Section 9.9.3. End of Larval Exposure Phase - When all of the organisms reach NF stage 66 (or exposure d 70, whichever occurs first), test organisms will be culled such that 10 metamorphosed young per treatment are exposed for the remainder of the in-life study (10 weeks post-MMT). As was originally intended, 10 metamorphosed young per replicate for each treatment and control were used for the remainder of the in-life study. The word “treatment” was mistakenly used instead of “replicate”. The number of young used in the study was correct, therefore, no negative impact is anticipated from this deviation.
- Section 9.10. Data Analysis - Kruskal-Wallis (KW) ANOVA test followed by a step-down pairwise Dunn’s test as a post hoc test or the equivalent will be used when assumptions of normality and homogeneity of variances are not met. A step-down process was not performed with Dunn’s test. For LAGDA (OCSPP. 890.2300), 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.

20. 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. USEPA, Federal Insecticide, Fungicide, Rodenticide Act (FIFRA). Good Laboratory Practice Standards, Title 40 Code of Federal Regulations Part 160 (effective October 16, 1989).

3. OCSPP 890:2300 Larval Amphibian Growth and Development Assay (LAGDA). U.S. Environmental Protection Agency (USEPA), EPA Pub No. 740-C-15-001, July 2015.

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

5. Nieuwkoop, P.D. and Faber, J. Normal Tables of *Xenopus laevis* (Daudin). Garland Publishing, London, 1994.

6. American Society for Testing and Materials (ASTM). ASTM E1439-98: Standard Guide for Conducting the Frog Embryo Teratogenesis Assay – *Xenopus* (FETAX). ASTM International, West Conshohocken, PA, Reapproved 2004.

7. EAG Laboratories (formerly ABC 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.

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

9. Yoshimoto, S., Okada, E., Umemoto, H., Tamura, K., Uno, Y., Nishida-Umehara, C., Matsuda, Y., Takamatsu, N., Shiba, T., and Ito, M. A W-linked DM-domain gene, DM-W, participates in primary ovary development in *Xenopus laevis*. Proc. Natl. Acad. Sci., US. 105(7): 2469-2474, 2008.

10. 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.

11. Ogielska M, Kotusz A (2004) Pattern and rate of ovary differentiation with reference to somatic development in anuran amphibians. J Morphol, 259:41–54.

12. Wolf JC, Lutz I, Kloas W, Springer TA, Holden LR, Krueger HO, Hosmer AJ (2010) Effects of 17 β-estradiol exposure on *Xenopus laevis* gonadal histopathology. Environ Toxicol Chem, 29(5):1091-1105.

TABLES

Table 1. Feeding Regime for *X. laevis* Larvae in Flow-Through Conditions

Time (weeks)	SD	Trout Starter/Algae/TetraFin®[1]		Brine Shrimp[2]	
		Weekday (mL)	Weekend (mL)	Weekday (mL)	Weekend (mL)
0-1[3]	0-14	0.33	1.2	0.5	0.5
2	15-21	0.67	2.4	1.0	1.0
3	22-28	1.3	4.0	1.0	1.0
4	29-35	1.5	4.0	1.0	1.0
5	36-42	1.6	4.4	1.0	1.0
6	43-49	1.6	4.6	1.0	1.0
7	50-56	1.7	4.6	1.0	1.0
8	57-63	1.7	4.6	1.0	1.0
9	64-70	1.7	4.6	1.0	1.0
10	71-77	1.7	4.6	1.0	1.0

Table 2. Frog food (2 mm) Feeding Rate for Metamorphosed Frogs

Post-Metamorphosis Age (weeks post-median NF 62)	Crushed Pellet Weight (mg/organism)	Amount of Food per Frog (mg/organism)
NF Stage 62[4]	25	0
0-1 weeks	25	28
2-3 weeks	0	110
4-5 weeks	0	165
6-9 weeks	0	220

[1] Feed the volume of food listed at a frequency of three times per weekday. Feed the volume of food listed once per day on weekends. Preparation based on OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3)
[2] Feed volume twice per day and once during weekend.
[3] SD 4-14 (feeding initiated on SD 4) for blended food and SD 8-15 for brine shrimp.
[4] Organisms that have not reached NF stage 62 should not be fed metamorphosed organism diet.

Table 3. Experimental Specifications for LAGDA Study

Parameter	Conditions and Frequency Tested
Test Article	2-ethylhexyl 4-hydroxybenzoate
Test species	African clawed frog (*Xenopus laevis*) embryos (blastulae stage)
Exposure phase duration	Median time to NF stage 62 (MMT) plus 10 weeks post-MMT
Diluent; Negative control	Dechlorinated ($DeCl_2$) tap water (carbon filtered)
Test chamber size	10 L glass aquarium (tank)
Test media volume	4 L at 10 cm minimum water depth
Media flow rate	27 mL / min (minimum 3x/week)
Rate of media exchange	10 tank volumes / d
Test concentrations (µg/L)	0 (control), 3.6, 10.9, 33.0, and 100.0
Replicates / treatment Replicates / control	4 replicates / treatment 8 replicates / control
Animals / replicate chamber Animals / control Animals / treatment Animals / test Culling	20 160 80 480 At NF stage 66 – 10 organisms / replicate
Feeding regime	Tadpoles – See Table 2, and Juveniles – See Table 3
Photo period	12 h light : 12 h dark
Media temperature	Daily, 21°C ± 1°C; inter-replicate and inter-treatment differentials (within one day) should not exceed 1.0°C
Light intensity	Once at SD 0, 600 – 2000 lux
DO	2x/week, ≥ 3.5 mg/L (≥ 40% air saturation)
pH	2x/week, 6.5 – 8.5; inter-replicate and inter-treatment differentials should not exceed 0.5
Hardness, alkalinity, conductivity	1x monthly there after using replicate rotation
Relative humidity	>30%, 1x/month post-metamorphosis phase in diluter system
Iodide	Measured at SD 0, 45, and 10 wpm (in-life termination) and reported with study results
Aeration	Only if needed
Apical endpoints	Survival, disease/abnormality, TTM, thyroid histology, growth, phenotypic sex ratio, nuptial pad development, and gonad, gonadal ducts, kidney, and liver histology
Sample frequency for water and specimens	Water – One water sample from each of the 4 replicates per treatment (and control) will be collected on in-life day 0 (initiation) and termination. Subsequently, a water sample from one replicate for each treatment will be collect weekly. A laboratory blank will also be collected. Sub-sampled specimens – 5 newly metamorphosed / replicate tank (NF stage 62) Juvenile specimens – All surviving frogs at test termination

Table 4. Summary of Study Endpoints

Endpoints[1]	Daily	NF Stage 62 Sub-Sampling	Test Termination
Mortality	X		
Abnormal appearances: Clinical signs of disease and/or general toxicities	X		
TTM[2]		X	
Thyroid histopathology		X	
Morphometrics (growth in weight and length)		X	X
Liver-somatic index (LSI)			X
Genetic/phenotypic sex ratios			X
Gonad, reproductive ducts, liver, and kidney histopathology			X

[1] Statistical evaluation will be considered for each of the endpoints.
[2] Median time-to metamorphosis (NF stage 62).

Table 5. Summary of Water Quality Parameters

Parameter	Minimum	Maximum	Measurement Interval
Temperature (ºC)	21.2	21.9	Daily
pH	6.3	7.9	3x Weekly
Dissolved oxygen (mg/L)	3.8	9.0	3x Weekly
Light Intensity (Lux)	600	1764	3x Weekly
Conductivity (µS/cm)	339	759	Monthly
Hardness (mg/L as CaCO3)	92	140	Monthly
Alkalinity (mg/L as CaCO3)	24	52	Monthly
Ammonia (mg/L)[1]	<0.06	<0.06	Monthly
Residual oxidants (mg/L)[2]	<0.05	<0.05	Monthly
Iodide (µg/L)[3]	7.5	8.0	SD 0, 45, and 10 wpm

[1] Minimum detection limit (MDL) is 0.06 mg/L; 0.5x detection limit used for calculation purposes.
[2] Minimum detectio n limit (MDL) is 0.05 mg/L; 0.5x detection limit used for calculation purposes.
[3] Measured on SD 0, 45, and 10 wpm (in-life termination).

Table 6. Summary of Treatment Concentrations in LAGDA with 2-EHHB

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)	CV[2] (%)
0	0.00	A	0.104	-
		B	0.293[3]	
		C	0.279[3]	
		D	0.278[3]	
		E	0.428[3]	
		F	0.104	
		G	0.104	
		H	0.104	
	3.60	A	3.47[3]	12.2
		B	4.52[3]	
		C	3.59[3]	
		D	3.82[3]	
	10.9	A	8.00[3]	5.10
		B	8.46[3]	
		C	7.53[3]	
		D	7.72[3]	
	33.0	A	18.7[3]	4.59
		B	20.2[3]	
		C	19.3[3]	
		D	18.1[3]	
	100	A	61.2[3]	2.58
		B	60.4[3]	
		C	58.3[3]	
		D	58.1[3]	
7	0.00	A	0.425[3]	-
	3.60	A	4.15	-
	10.9	A	10.3	-
	33.0	A	34.9	-
	100	A	83.5	-
14	0.00	B	0.104	-
	3.60	B	5.12	-
	10.9	B	11.9	-
	33.0	B	29.9	-
	100	B	75.4	-

[1] Minimum Quantitation Level (MQL) = 0.208 µg/L.
[2] Coefficient of variation = (Standard deviation / mean)100. Represents inter-replicate CV at each sampling point based on mean and standard deviation of each replicate (A-D) for each test concentration at each time points measured. Only determined on SD 0 and SD 115 (exposure termination) since only single replicates in rotation were analyzed on designated SD in between.
[3] Average of original and duplicate sample.

Table 7. ***(continued)*** **Summary of Treatment Concentrations in LAGDA with 2-EHHB**

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)	CV[2] (%)
21	0.00	C	0.104	-
	3.60	C	5.24	-
	10.9	C	11.1	-
	33.0	C	25.8	-
	100	C	70.5	-
28	0.00	D	0.104	-
	3.60	D	4.48	-
	10.9	D	12.3	-
	33.0	D	31.7	-
	100	D	102	-
35	0.00	E	0.227[3]	-
	3.60	A	8.63[3]	-
	10.9	A	14.0	-
	33.0	A	26.9	-
	100	A	66.3[3]	-
42	0.00	F	0.104[3]	-
	3.60	B	6.27	-
	10.9	B	10.5	-
	33.0	B	26.9	-
	100	B	67.9	-
49	0.00	G	0.104[3]	-
	3.60	C	3.86	-
	10.9	C	8.24	-
	33.0	C	30.4	-
	100	C	76.6	-
56	0.00	H	0.104	-
	3.60	D	3.49	-
	10.9	D	8.47	-
	33.0	D	26.4	-
	100	D	69.5	-

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

[2] Coefficient of variation = (Standard deviation / mean)100. Represents inter-replicate CV at each sampling point based on mean and standard deviation of each replicate (A-D) for each test concentration at each time points measured. Only determined on SD 0 and SD 1125 (exposure termination) since only single replicates in rotation were analyzed on designated SD in between.

[3] Average of original and duplicate sample.

Table 7. ***(continued)*** **Summary of Treatment Concentrations in LAGDA with 2-EHHB**

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)	CV[2] (%)
63	0.00	A	0.104	-
	3.60	A	3.23	-
	10.9	A	7.93	-
	33.0	A	22.9	-
	100	A	73.6	-
72	0.00	B	0.104	-
	3.60	B	7.51[3]	-
	10.9	B	18.0	-
	33.0	B	33.3	-
	100	B	64.4[3]	-
77	0.00	C	0.218	-
	3.60	C	5.34	-
	10.9	C	10.1	-
	33.0	C	30.4	-
	100	C	86.7	-
84	0.00	D	0.104	-
	3.60	D	2.72	-
	10.9	D	7.26	-
	33.0	D	19.7	-
	100	D	149[3]	-
91	0.00	E	0.104	-
	3.60	A	3.61	-
	10.9	A	8.60	-
	33.0	A	18.7[3]	-
	100	A	48.1[3]	-
98	0.00	F	0.104	-
	3.60	B	11.3	-
	10.9	B	16.2	-
	33.0	B	38.0	-
	100	B	99.5	-

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

[2] Coefficient of variation = (Standard deviation / mean)100. Represents inter-replicate CV at each sampling point based on mean and standard deviation of each replicate (A-D) for each test concentration at each time points measured. Only determined on SD 0 and SD 115 (exposure termination) since only single replicates in rotation were analyzed on designated SD in between.

[3] Average of original and duplicate sample.

Table 7. ***(continued)*** **Summary of Treatment Concentrations in LAGDA with 2-EHHB**

Test Day	Nominal Concentration (µg/L)	Replicate	Measured Concentration[1] (µg/L)	CV[2] (%)
106	0.00	A	0.104	-
	3.60	A	4.24	-
	10.9	A	8.46	-
	33.0	A	23.8	-
	100	A	111	-
115	0.00	A	0.104	-
		B	0.104	
		C	0.104	
		D	0.104	
		E	0.104	
		F	0.104	
		G	0.104	
		H	0.104	
	3.60	A	7.52	8.83
		B	6.96	
		C	6.49	
		D	7.95	
	10.9	A	13.4	4.17
		B	13.3	
		C	14.5	
		D	13.4	
	33.0	A	30.9	5.27
		B	33.3	
		C	31.1	
		D	34.4	
	100	A	67.2	1.62
		B	68.0	
		C	67.8	
		D	65.6	

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

[2] Coefficient of variation = (Standard deviation / mean)100. Represents inter-replicate CV at each sampling point based on mean and standard deviation of each replicate (A-D) for each test concentration at each time points measured. Only determined on SD 0 and SD 115 (exposure termination) since only single replicates in rotation were analyzed on designated SD in between.

Table 7. Summary of Treatment Concentrations in the Larval Amphibian Growth and Development Assay (LAGDA) with 2-EHHB

Nominal Concentration (µg/L)	Measured Treatment Concentration		
	Mean (µg/L)	CV (%)[1]	% of Nominal
0.00	<MQL[2]	---	---
3.60	5.33	20.7	148
10.9	10.8	14.0	99.2
33.0	27.2	7.9	82.3
100	76.6	12.4	76.6

[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=8) and treatment replicates (n=4) 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. Coefficient of variation = ((Standard deviation / mean)*100). CV is based on the standard deviation of mean measured concentration of each replicate and mean measured treatment concentration per facility SOP.

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

Table 8. Effect of 2-EHHB on Survival in *X. laevis* (LAGDA)[1]

		NF Stage 62 (%)[2]					Termination (%)				
Treatment [Mean Measured Conc.] (µg/L)	**Replicate**	**N**	**Replicate Percent**	**Mean**	**Std Dev**	**CV (%)**	**N**	**Replicate Percent**	**Mean**	**Std Dev**	**CV (%)**
0.0 [<0.208]	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			
	E	20	100				10	100			
	F	20	100				10	100			
	G	20	100				10	100			
	H	20	100				10	100			
3.60 [5.33]	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			
10.9 [10.8]	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			
33.0 [27.2]	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			
100 [76.6]	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			

[1] Std Dev = Standard deviation. CV(%) = Coefficient of variation = (standard deviation / mean) × 100.
[2] Survival at NF stage 66 prior to cull from N=15 to N=10 was 100% in each replicate of the control and each treatment. Since the survival at NF stage 66 was not analyzed statistically, it was not enumerated in table.

Table 9. Effect of 2-EHHB on Time to Metamorphosis (TTM) in *X. laevis* (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate MMT			Treatment MMT	Treatment Standard Deviation	Treatment CV (%)
	ID	N	MMT(d)	Median MMTs (d)		
0.0 [<0.208]	A	20	46.0	45.00	2.33	5.24
	B	20	45.0			
	C	20	46.0			
	D	20	46.0			
	E	20	45.0			
	F	20	44.0			
	G	20	39.0			
	H	20	44.0			
3.60 [5.23]	A	20	52.0	51.50[2]	3.49	6.91
	B	20	51.0			
	C	20	53.5			
	D	20	45.5			
10.9 [10.8]	A	20	49.5	50.75[2]	4.61	8.80
	B	20	59.0			
	C	20	49.0			
	D	20	52.0			
33.0 [27.2]	A	20	55.5	53.25[2]	3.28	6.22
	B	20	55.0			
	C	20	48.5			
	D	20	51.5			
100 [76.6]	A	20	55.5	50.75[2]	2.97	5.77
	B	20	52.0			
	C	20	49.0			
	D	20	49.5			

[1] TTM defined as the time required to reach NF stage 62. The median TTM (or MMT) for each replicate of the control and each treatment was determined. The treatment MMT represents the median of the replicate median TTM. Coefficient of variation = (standard deviation / mean) × 100%. Median, Standard deviation, and coefficient of variation calculated from the replicate medians for each treatment (i.e., N=8 for control and N=4 for other treatment groups). d = days.

[2] Significantly greater than control (Cox Proportional Hazard Model, Chi Square, p<0.0001).

Table 10. Effect of 2-EHHB Exposure on Body Weight in NF Stage 62 X. laevis Larvae (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean (g)	Std Dev	SEM	CV (%)
	ID	N	Mean (g)	Std Dev				
0.0 [<0.208]	A	5	0.915	0.082	0.902	0.036	0.013	4.028
	B	5	0.896	0.117				
	C	5	0.924	0.071				
	D	5	0.936	0.164				
	E	5	0.845	0.053				
	F	5	0.878	0.098				
	G	5	0.952	0.134				
	H	5	0.870	0.084				
3.60 [5.23]	A	5	0.908	0.103	0.924	0.039	0.020	4.227
	B	5	0.923	0.113				
	C	5	0.978	0.130				
	D	5	0.887	0.078				
10.9 [10.8]	A	5	0.947	0.155	0.936[2]	0.027	0.013	2.857
	B	5	0.923	0.130				
	C	5	0.968	0.160				
	D	5	0.908	0.116				
33.0 [27.2]	A	5	0.906	0.111	0.990[3]	0.074	0.037	7.482
	B	5	1.051	0.182				
	C	5	1.053	0.158				
	D	5	0.949	0.115				
100 [76.6]	A	5	0.974	0.156	1.027[4]	0.066	0.033	6.423
	B	5	0.967	0.091				
	C	5	1.068	0.143				
	D	5	1.097	0.080				

[1] Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).
[2]Significantly greater than control (Jonckheere-Terpstra test, p=0.0466).
[3]Significantly greater than control (Jonckheere-Terpstra test, p=0.0070).
[4] Significantly greater than control (Jonckheere-Terpstra test, p=0.0004).

Table 11. Effect of 2-EHHB Exposure on Snout-to-Vent Length (SVL) in NF Stage 62 X. laevis Larvae (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean (mm)	Std Dev	SEM	CV (%)
	ID	N	Mean (mm)	Std Dev				
0.0 [<0.208]	A	5	18.780	1.771	18.790	0.910	0.322	4.845
	B	5	19.060	1.379				
	C	5	19.140	0.844				
	D	5	20.240	1.689				
	E	5	17.040	1.069				
	F	5	18.640	1.019				
	G	5	19.160	2.567				
	H	5	18.260	1.011				
3.60 [5.23]	A	5	17.980	1.567	18.700	0.923	0.462	4.936
	B	5	19.060	1.471				
	C	5	19.840	1.508				
	D	5	17.920	1.134				
10.9 [10.8]	A	5	20.600	1.875	20.410[2]	0.377	0.188	1.846
	B	5	20.020	1.006				
	C	5	20.840	1.521				
	D	5	20.180	1.045				
33.0 [27.2]	A	5	19.640	2.654	20.545[3]	0.791	0.396	3.851
	B	5	20.680	1.608				
	C	5	21.540	1.350				
	D	5	20.320	1.230				
100 [76.6]	A	5	21.400	1.786	21.245[4]	0.684	0.342	3.220
	B	5	20.440	1.385				
	C	5	21.060	0.750				
	D	5	22.080	1.215				

[1]Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).
[2]Significantly greater than control (Jonckheere-Terpstra test, p=0.0367).
[3] Significantly greater than control (Jonckheere-Terpstra test, p=0.0199).
[4] Significantly greater than control (Jonckheere-Terpstra test, p=0.0003).

Table 12. Effect of 2-EHHB Exposure on Body Weight in NF Stage 66 X. laevis (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean (g)	Std Dev	SEM	CV (%)
	ID	N	Mean (g)	Std Dev				
0.0 [<0.208]	A	5	0.693	0.066	0.669	0.094	0.033	14.065
	B	5	0.734	0.081				
	C	5	0.635	0.141				
	D	5	0.590	0.106				
	E	5	0.624	0.130				
	F	5	0.654	0.173				
	G	5	0.858	0.139				
	H	5	0.560	0.105				
3.60 [5.23]	A	5	0.528	0.133	0.598	0.123	0.061	20.492
	B	5	0.682	0.150				
	C	5	0.462	0.056				
	D	5	0.720	0.149				
10.9 [10.8]	A	5	0.414	0.063	0.490	0.084	0.042	17.165
	B	5	0.524	0.097				
	C	5	0.594	0.076				
	D	5	0.430	0.101				
33.0 [27.2]	A	5	0.312	0.047	0.515	0.188	0.094	36.419
	B	5	0.419	0.088				
	C	5	0.735	0.042				
	D	5	0.596	0.166				
100 [76.6]	A	5	0.605	0.052	0.630	0.037	0.018	5.869
	B	5	0.682	0.038				
	C	5	0.602	0.092				
	D	5	0.629	0.101				

[1] Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups). Not significantly different from control (Jonckheere-Terpstra test, p>0.05).

Table 13. Effect of 2-EHHB Exposure on Body Weight in Juvenile Female X. laevis at Study Termination (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean (g)	Std Dev	SEM	CV (%)
	ID	N	Mean (g)	Std Dev				
0.0 [<0.208]	A	4	11.786	1.161	11.005	0.610	0.216	5.541
	B	5	11.321	0.468				
	C	2	10.523	0.251				
	D	5	10.305	0.172				
	E	5	11.585	0.132				
	F	8	11.004	0.580				
	G	2	10.161	0.038				
	H	4	11.352	0.542				
3.60 [5.23]	A	2	10.569	1.151	11.308	0.913	0.456	8.073
	B	4	11.416	0.297				
	C	4	10.690	0.984				
	D	2	12.557	1.042				
10.9 [10.8]	A	5	10.429	1.049	10.891	0.351	0.175	3.220
	B	3	10.878	0.863				
	C	7	10.984	1.019				
	D	6	11.274	0.747				
33.0 [27.2]	A	7	10.888	1.066	11.663	0.801	0.401	6.869
	B	4	12.138	0.772				
	C	4	12.538	1.006				
	D	4	11.086	0.332				
100 [76.6]	A	7	10.424	0.900	10.983	0.886	0.443	8.070
	B	5	10.048	0.859				
	C	6	11.569	1.651				
	D	7	11.892	0.955				

[1] Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups). Not significantly different from control (Jonckheere-Terpstra test, p>0.05).

Table 14. Effect of 2-EHHB Exposure on Body Weight in Juvenile Male *X. laevis* at Study Termination (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean (g)	Std Dev	SEM	CV (%)
	ID	N	Mean (g)	Std Dev				
0.0 [<0.208]	A	6	11.199	0.737	11.240	0.344	0.122	3.062
	B	5	10.986	0.553				
	C	8	11.344	0.783				
	D	5	11.277	0.686				
	E	5	11.719	0.365				
	F	2	11.145	1.059				
	G	8	10.631	0.360				
	H	6	11.616	0.937				
3.60 [5.23]	A	8	10.902	0.791	11.327	0.367	0.183	3.239
	B	6	11.242	1.004				
	C	6	11.372	0.836				
	D	8	11.790	0.775				
10.9 [10.8]	A	5	11.446	1.258	11.171	0.433	0.216	3.875
	B	7	11.194	0.915				
	C	3	10.552	1.385				
	D	4	11.491	0.938				
33.0 [27.2]	A	3	11.157	0.576	11.400	0.600	0.300	5.262
	B	6	10.664	1.127				
	C	6	11.873	0.836				
	D	6	11.906	0.903				
100 [76.6]	A	3	10.601	1.261	10.734	0.350	0.175	3.262
	B	5	10.501	0.717				
	C	4	11.256	0.504				
	D	3	10.579	1.169				

[1] Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups). Not significantly different from control (Jonckheere-Terpstra test, p>0.05).

Table 15. Effect of 2-EHHB Exposure on Snout-to-Vent Length (SVL) in NF Stage 66 X. laevis (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean (mm)	Std Dev	SEM	CV (%)
	ID	N	Mean (mm)	Std Dev				
0.0 [<0.208]	A	5	20.120	0.377	19.925	0.516	0.182	2.587
	B	5	20.960	0.832				
	C	5	19.740	1.664				
	D	5	19.540	1.214				
	E	5	19.620	1.511				
	F	5	20.340	1.842				
	G	5	19.600	2.420				
	H	5	19.480	0.672				
3.60 [5.23]	A	5	18.540	1.682	19.165	1.023	0.512	5.340
	B	5	20.160	1.504				
	C	5	18.060	0.918				
	D	5	19.900	2.215				
10.9 [10.8]	A	5	16.740	0.709	17.260	0.984	0.492	5.703
	B	5	16.440	1.214				
	C	5	18.660	0.451				
	D	5	17.200	1.463				
33.0 [27.2]	A	5	15.140	0.750	18.145	2.556	1.278	14.085
	B	5	17.140	1.195				
	C	5	21.020	0.295				
	D	5	19.280	1.089				
100 [76.6]	A	5	18.880	0.968	19.470	0.460	0.230	2.361
	B	5	19.900	0.570				
	C	5	19.760	0.904				
	D	5	19.340	1.067				

[1] Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups). Not significantly different from control (Jonckheere-Terpstra test, p>0.05).

Table 16. Effect of 2-EHHB Exposure on Snout-to-Vent Length (SVL) in Juvenile Female *X. laevis* at Study Termination (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean (mm)	Std Dev	SEM	CV (%)
	ID	N	Mean (mm)	Std Dev				
0.0 [<0.208]	A	4	34.425	1.780	31.383	1.867	0.660	5.949
	B	5	33.580	0.814				
	C	2	31.200	1.697				
	D	5	29.900	0.765				
	E	5	31.480	1.496				
	F	8	30.450	1.806				
	G	2	28.700	1.414				
	H	4	31.325	2.060				
3.60 [5.23]	A	2	31.350	2.758	32.513	1.383	0.691	4.253
	B	4	33.000	0.529				
	C	4	31.450	2.690				
	D	2	34.250	2.333				
10.9 [10.8]	A	5	33.620	3.361	34.206[2]	0.544	0.272	1.590
	B	3	33.867	1.976				
	C	7	34.671	2.165				
	D	6	34.667	1.417				
33.0 [27.2]	A	7	33.229	2.891	35.170[3]	1.861	0.930	5.291
	B	4	37.450	2.040				
	C	4	35.825	2.368				
	D	4	34.175	1.389				
100 [76.6]	A	7	38.157	2.287	37.304[4]	2.023	1.012	5.424
	B	5	34.400	2.060				
	C	6	37.617	3.200				
	D	7	39.043	1.920				

[1] Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).
[2]Significantly greater than control (Jonckheere-Terpstra test, p=0.0033).
[3] Significantly greater than control (Jonckheere-Terpstra test, p=0.0007).
[4] Significantly greater than control (Jonckheere-Terpstra test, p<0.0001).

Table 17. Effect of 2-EHHB Exposure on Snout-to-Vent Length (SVL) in Juvenile Male *X. laevis* at Study Termination (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean (mm)	Std Dev	SEM	CV (%)
	ID	N	Mean (mm)	Std Dev				
0.0 [<0.208]	A	6	32.800	2.341	31.805	1.365	0.482	4.290
	B	5	33.160	1.746				
	C	8	32.888	1.438				
	D	5	32.600	2.131				
	E	5	30.620	1.031				
	F	2	29.400	1.980				
	G	8	30.775	1.291				
	H	6	32.200	2.421				
3.60 [5.23]	A	8	32.213	2.239	32.704	0.373	0.187	1.141
	B	6	32.650	2.608				
	C	6	32.867	1.643				
	D	8	33.088	1.873				
10.9 [10.8]	A	5	35.920	3.477	34.842[2]	1.262	0.631	3.623
	B	7	34.857	1.510				
	C	3	33.067	4.210				
	D	4	35.525	1.793				
33.0 [27.2]	A	3	33.833	1.079	34.825[3]	1.123	0.562	3.225
	B	6	34.100	2.720				
	C	6	35.050	1.529				
	D	6	36.317	2.406				
100 [76.6]	A	3	36.333	2.219	36.440[4]	0.100	0.050	0.275
	B	5	36.420	1.998				
	C	4	36.575	1.348				
	D	3	36.433	1.644				

[1] Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).
[2] Significantly greater than control (Jonckheere-Terpstra test, p=0.0304).
[3] Significantly greater than control (Jonckheere-Terpstra test, p=0.0017).
[4] Significantly greater than control (Jonckheere-Terpstra test, p<0.0001).

Table 18. Effect of 2-EHHB Exposure on Liver-Somatic Indices (LSI) in Juvenile Female *X. laevis* at Study Termination (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean	Std Dev	SEM	CV (%)
	ID	N	Mean	Std Dev				
0.0 [<0.208]	A	4	0.064	0.003	0.065	0.002	0.001	2.634
	B	5	0.067	0.007				
	C	2	0.068	0.004				
	D	5	0.063	0.003				
	E	5	0.064	0.003				
	F	8	0.065	0.003				
	G	2	0.065	0.002				
	H	4	0.065	0.001				
3.60 [5.23]	A	2	0.065	0.003	0.063	0.002	0.001	3.765
	B	4	0.063	0.002				
	C	4	0.064	0.004				
	D	2	0.060	0.005				
10.9 [10.8]	A	5	0.065	0.005	0.064	0.001	0.001	1.943
	B	3	0.062	0.005				
	C	7	0.064	0.004				
	D	6	0.064	0.002				
33.0 [27.2]	A	7	0.065	0.005	0.061	0.003	0.001	4.692
	B	4	0.059	0.006				
	C	4	0.060	0.003				
	D	4	0.061	0.001				
100 [76.6]	A	7	0.063	0.006	0.065	0.002	0.001	2.529
	B	5	0.067	0.002				
	C	6	0.067	0.004				
	D	7	0.064	0.004				

[1] Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups). Not significantly different from control (Jonckheere-Terpstra test, p>0.05).

Table 19. Effect of 2-EHHB Exposure on Liver-Somatic Indices (LSI) in Juvenile Male *X. laevis* at Study Termination (LAGDA)[1]

Treatment [Mean Measured Conc.] (µg/L)	Replicate				Mean	Std Dev	SEM	CV (%)
	ID	N	Mean	Std Dev				
0.0 [<0.208]	A	6	0.064	0.006	0.064	0.002	0.001	3.064
	B	5	0.067	0.003				
	C	8	0.064	0.002				
	D	5	0.062	0.004				
	E	5	0.061	0.006				
	F	2	0.064	0.004				
	G	8	0.067	0.003				
	H	6	0.065	0.005				
3.60 [5.23]	A	8	0.062	0.004	0.063	0.002	0.001	3.923
	B	6	0.065	0.004				
	C	6	0.064	0.004				
	D	8	0.059	0.002				
10.9 [10.8]	A	5	0.063	0.004	0.062	0.001	0.001	2.307
	B	7	0.062	0.004				
	C	3	0.063	0.003				
	D	4	0.060	0.004				
33.0 [27.2]	A	3	0.069	0.005	0.064	0.005	0.002	7.667
	B	6	0.068	0.005				
	C	6	0.061	0.005				
	D	6	0.060	0.003				
100 [76.6]	A	3	0.065	0.006	0.067	0.003	0.001	3.859
	B	5	0.070	0.003				
	C	4	0.064	0.001				
	D	3	0.068	0.002				

[1] Std Dev = standard deviation, SEM = standard error of the mean, and CV(%) = coefficient of variation (standard deviation / mean) × 100. Mean, Std Dev, SEM, CV (%) were calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups). Not significantly different from control (Jonckheere-Terpstra test, p>0.05).

Table 20. Effect of 2-EHHB Exposure on Phenotypic and Genotypic Sex Ratios in Juvenile *X. laevis* at Study Termination (LAGDA)

Treatment [Mean Measured Conc.] (µg/L)	Phenotypic Sex[1]				Genotypic Sex			
	Female (n,%)	Male (n,%)	Indeterminate (n,%)	Ratio[2]	Female (n,%)	Male (n,%)	Ratio	Phenotype:Genotype Ratio (%)
0.0 [<0.208]	32 (77,41.6)	45 (80,56.3)	3 (80,3.8)	0.74	35 (80,43.8)	45 (80,56.3)	0.78	95
3.60 [5.23]	11 (39,28.2)	28 (40,70.0)	1 (40,5.0)	0.40	12 (40,30.0)	28 (40,70.0)	0.43	93
10.9 [10.8]	21 (40,52.5)	19 (40,47.5)	0 (40,0.0)	1.11	21 (40,52.5)	19 (40,47.5)	1.11	100
33.0 [27.2]	17 (38,44.8)	19 (38,50.0)	4 (40,10.0)	0.89	19 (40,47.5)	21 (40,52.5)	0.91	98
100 [76.6]	25 (40,62.5)	14 (39,35.9)	1 (0.0)	1.74	25 (80,62.5)	15 (80,37.5)	1.67	104

[1] N= 80 for control and 40 for each treatment.
[2] Female to male ratio. Does not include indeterminants in phenotype ratio.

Table 21. Summary of the Effect of 2-EHHB Exposure on Thyroid Histopathology Findings in NF Stage 62 Larvae

Pathological Finding[1]	Treatment [Mean Measured Conc.] (µg/L)				
	0.0 [<0.208]	**3.60 [5.23]**	**10.9 [10.8]**	**33.0 [27.2]**	**100 [76.6]**
n	40	20	20	20	20
Follicular Cell Hypertrophy	31	15	15	13	15
minimal	27	14	13	13	15
mild	4	1	2	-	-[2]
n	40	20	20	20	20
Follicular Cell Hyperplasia	1	0	3	1	0
Minimal	1	-	3	1	-

[1] Histopathologic findings were scored for severity according to the following grading system: X = not remarkable, Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe, in accordance with previously reported criteria (3,8).

[2] Significantly less than control (RSCABS, p=0.0442). Results support a reduction in the presence of mild follicular hypertrophy in 2-EHHB exposed NF stage 62 larvae relative to control.

Table 22. Summary of the Effect of 2-EHHB Exposure on Prevalence and Severity of Selected Findings in the Kidneys in Female *X. laevis*

Pathological Finding[1]	Treatment [Mean Measured Conc.] (µg/L) 0.0 [<0.208]	3.60 [5.23]	10.9 [10.8]	33.0 [27.2]	100.0 [76.6]
n	31	11	21	17	25
Anterior Kidney: Cellular Infiltrate, Mononuclear Cell	9	7	5	10	14
minimal	9	7	5	10	14[2]
n	31	11	21	17	25
Middle Kidney: Cellular Infiltrate, Mononuclear Cell	7	3	7	10	11
minimal	7	3	7	10[3]	9[4]
mild	-	-	-	-	2[5]
n	32	11	21	17	25
Posterior Kidney: Cellular Infiltrate, Mononuclear Cell	6	3	3	4	6
minimal	6	3	3	4	6
n	31	11	21	17	25
Anterior Kidney: Mineralization	31	11	21	17	25
minimal	9	2	2	-	2
mild	21	8	18[6]	17[7]	23[8]
moderate	1	1	1	-	-
n	31	11	21	17	25
Middle Kidney: Mineralization	31	11	21	17	25
minimal	5	1	1	-	4
mild	25	8	20	16	21
moderate	1	2	-	1	-
n	32	11	21	17	25
Posterior Kidney: Mineralization	32	11	21	17	25
minimal	7	-	3	-	1
mild	23	11	18	16	24
moderate	2	-	-	1	-
n	31	11	21	17	25
Anterior Kidney: Tubules, Dilation	2	0	2	2	9
minimal	2	-	2	2	7[9]
mild	-	-	-	-	2
n	31	11	21	17	25
Middle Kidney: Tubules, Dilation	1	0	2	1	9
minimal	1	-	2	1	7[10]
mild	-	-	-	-	2
n	32	11	21	17	25
Posterior Kidney: Tubules, Dilation	2	0	3	0	5
minimal	2	-	3	-	3
mild	-	-	-	-	2[11]

[1] Histopathologic findings were scored for severity according to the following grading system: X = not remarkable, Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe, in accordance with previously reported criteria (3,8).
[2] Significantly greater than control (RSCABS, p=0.0207).
[3] Significantly greater than control (RSCABS, p=0.0109).
[4] Significantly greater than control (RSCABS, p=0.0076).
[5] Significantly greater than control (RSCABS, p=0.0258).
[6] Significantly greater than control (RSCABS, p=0.0448).
[7] Significantly greater than control (RSCABS, p=0.0012).
[8] Significantly greater than control (RSCABS, p=0.0011).
[9] Significantly greater than control (RSCABS, p=0.0023).
[10] Significantly greater than control (RSCABS, p=0.0258).
[11] Significantly greater than control (RSCABS, p=0.0486).

Table 23. Summary of the Effect of 2-EHHB Exposure on Ovary Stage Scores in Female *X. laevis*

Pathological Finding[1]	Treatment [Mean Measured Conc.] (µg/L) 0.0 [<0.208]	3.60 [5.23]	10.9 [10.8]	33.0 [27.2]	100.0 [76.6]
n	31	11	20	17	23
Anterior Ovary[2]: Stage Scores					
Stage 2	1	-	1	-	-
Stage 3	8	6	12	4	17
Stage 4	22	5	7	13	6[3]
Mean Score	3.7	3.5	3.3	3.8	3.3
n	32	11	21	17	23
Middle Ovary: Stage Scores					
Stage 2	2	-	-	-	-
Stage 3	7	7	11	3	16[4]
Stage 4	23	4	10	14	7[5]
Mean Score	3.7	3.4	3.5	3.8	3.3
n	31	10	21	16	23
Posterior Ovary[6]: Stage Scores					
Stage 2	1	-	-	-	-
Stage 3	11	9	16	8	20
Stage 4	19	1[7]	5[8]	7[9]	3[10]
Mean Score	3.6	3.1	3.2	3.5	3.1
Unable to Stage	-	-	-	1	-

[1] Histopathologic findings were scored for severity according to the following grading system: X = not remarkable, Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe, in accordance with previously reported criteria (3,8). Gonad phenotype scores were recorded as follows: Grade 0 = gonad phenotype matches genotype; Grade 1 = phenotype primarily matches genotype; Grade 2 = equal parts testis and ovary; Grade 3 = phenotype primarily matches opposite genotype; and Grade 4 = sex-reversed, phenotype completely opposite genotype.
[2] Significant decrease in minimal germ cell degeneration in the 100 µg/L treatments (RSCABS, p=0.0158). Results suggest significant development delay.
[3]Significantly less than control (RSCABS, p=0.0071). Results suggest significant development delay.
[4] Significantly greater than control (RSCABS, p=0.0441).
[5]Significantly less than control (RSCABS, p=0.0386). Results suggest significant development delay.
[6]Significant decrease in Wolffian duct stage 2 in the 33.0 and 100 µg/L treatments (RSCABS, p=0.0459 and 0.0406, respectively) indicative of developmental delay.
[7] Significantly less than control (RSCABS, p=0.0058). Results suggest significant development delay.
[8] Significantly less than control (RSCABS, p=0.0024). Results suggest significant development delay.
[9] Significantly less than control (RSCABS, p=0.0475). Results suggest significant development delay.
[10] Significantly less than control (RSCABS, p=0.0010). Results suggest significant development delay.

Table 24. Summary of the Effect of 2-EHHB Exposure on Gonadal Duct Stage Scores in Male *X. laevis*

Pathological Finding[1]	Treatment [Mean Measured Conc.] (µg/L)				
	0.0 [<0.208]	3.60 [5.23]	10.9 [10.8]	33.0 [27.2]	100.0 [76.6]
n	45	28	19	19	14
Anterior Oviduct: Stage Scores					
Stage 1	36	15	11	11	5
Stage 2	9	13[2]	8[3]	8[4]	9[5]
Mean Score	1.2	1.5	1.4	1.4	1.6
n	45	28	19	19	14
Middle Oviduct: Stage Scores					
Stage 1	36	15	10	11	6
Stage 2	9	13	9	8	8[6]
Mean Score	1.2	1.5	1.5	1.4	1.6
n	45	27	19	19	14
Posterior Oviduct: Stage Scores					
Stage 1	34	13	12	12	7
Stage 2	11	14	7	7	7[7]
Mean Score	1.2	1.5	1.4	1.4	1.5
n	45	28	19	19	14
Anterior Wolffian Duct: Stage Scores					
Stage 1	8	20	3	5	6
Stage 2	36	8	10	14	7
Stage 3	1	-	6	-	1
Mean Score	1.8	1.3	2.2	1.7	1.6
n	45	28	19	19	14
Middle Wolffian Duct: Stage Scores					
Stage 1	3	14	5	5	4
Stage 2	42	14	9	14	9
Stage 3	-	-	5	-	1
Mean Score	1.9	1.5	2.0	1.7	1.8
n	45	27	19	19	14
Posterior Wolffian Duct: Stage Scores					
Stage 1	8	18	10	10	8
Stage 2	35	9	7	9	5
Stage 3	2	-[8]	2[9]	-[10]	1[11]
Mean Score	1.9	1.3	1.6	1.5	1.5

[1] Histopathologic findings were scored for severity according to the following grading system: X = not remarkable, Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe, in accordance with previously reported criteria (3,8). Gonad phenotype scores were recorded as follows: Grade 0 = gonad phenotype matches genotype; Grade 1 = phenotype primarily matches genotype; Grade 2 = equal parts testis and ovary; Grade 3 = phenotype primarily matches opposite genotype; and Grade 4 = sex-reversed, phenotype completely opposite genotype.
[2] Significantly greater than control (RSCABS, p=0.0028).
[3] Significantly greater than control (RSCABS, p=0.0028).
[4] Significantly greater than control (RSCABS, p=0.0440).
[5] Significantly greater than control (RSCABS, p=0.0019).
[6] Significantly greater than control (RSCABS, p=0.0128).
[7] Significantly greater than control (RSCABS, p=0.0410).
[8] Significantly less than control (RSCABS, p=0.0003). Results suggest significant development delay.
[9] Significantly less than control (RSCABS, p=0.0016). Results suggest significant development delay.
[10] Significantly less than control (RSCABS, p=0.0040). Results suggest significant development delay.
[11] Significantly less than control (RSCABS, p=0.0042). Results suggest significant development delay.

Table 25. Summary of the Effect of 2-EHHB Exposure on Testis Stage Scores in Male *X. laevis*

	Treatment [Mean Measured Conc.] (µg/L)				
Pathological Finding[1]	**0.0 [<0.208]**	**3.60 [5.23]**	**10.9 [10.8]**	**33.0 [27.2]**	**100.0 [76.6]**
n	35	24	14	16	12
Anterior Testis[2]: Stage Scores					
Stage 1	-	1	1	-	-
Stage 3	1	1	3	1	-
Stage 4	14	21	6	13	9
Stage 5	18	1[3]	2[4]	2[5]	3[6]
Mean Score	4.5	3.9	3.7	4.1	4.3
Unable to Stage	2	-	2	-	-
n	40	24	17	16	12
Middle Testis[7]: Stage Scores					
Stage 1	-	1	1	-	-
Stage 3	2	-	1	1	-
Stage 4	18	23	13	13	11
Stage 5	19	-[8]	2[9]	2[10]	1[11]
Mean Score	4.4	3.9	3.9	4.1	4.1
Unable to Stage	1	-	-	-	-
n	33	13	13	10	11
Posterior Testis[12]: Stage Scores					
Stage 1	-	1	-	-	-
Stage 2	-	-	1	-	-
Stage 3	3	1	2	-	-
Stage 4	17	10	7	8	8
Stage 5	10	-	2	2	1
Mean Score	4.2	3.7	3.8	4.2	4.1
Unable to Stage	3	1	1	-	2

[1] Histopathologic findings were scored for severity according to the following grading system: X = not remarkable, Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe, in accordance with previously reported criteria (3,8). Gonad phenotype scores were recorded as follows: Grade 0 = gonad phenotype matches genotype; Grade 1 = phenotype primarily matches genotype; Grade 2 = equal parts testis and ovary; Grade 3 = phenotype primarily matches opposite genotype; and Grade 4 = sex-reversed, phenotype completely opposite genotype.

[2] Significant increase in mild germ cell degeneration in the 33.0 and 100 µg/L treatments (RSCABS, p=0.0007 and 0.00247, respectively) and increase in mononuclear cell infiltrates in the 100 µg/L treatment (RSCABS, p=0.0356 relative to control.

[3] Significantly less than control (RSCABS, p=0.0002). Results suggest significant development delay.

[4] Significantly less than control (RSCABS, p=0.0008). Results suggest significant development delay.

[5] Significantly less than control (RSCABS, p=0.0006). Results suggest significant development delay.

[6] Significantly less than control (RSCABS, p=0.0033). Results suggest significant development delay.

[7] Significant reduction in germ cell degeneration in each treatment relative to control (RSCABS, p<0.0001, 0.0004, 0.0145, and 0.0025, respectively). Results suggest significant development delay.

[8] Significantly less than control (RSCABS, p<0.0001). Results suggest significant development delay.

[9] Significantly less than control (RSCABS, p=0.0002). Results suggest significant development delay.

[10] Significantly less than control (RSCABS, p=0.0007). Results suggest significant development delay.

[11] Significantly less than control (RSCABS, p=0.0006). Results suggest significant development delay.

[12] Significant increase in exfoliated germ cells in the 100 µg/L treatments (RSCABS, p=0.0125).

Table 26. Summary of Study BATT01-00390 Endpoint Results[1]

Endpoint	NOEC (µg 2-EHHB/L)	LOEC (µg 2-EHHB/L)
Survival	100	>100
Clinical signs of disease and/or general toxicities	100	>100
MMT[2]	<3.60	3.60
NF stage 62 body weight	3.6	10.9
NF Stage 62 SVL	3.6	10.9
Thyroid follicle hypertrophy	100	>100
Thyroid follicle hyperplasia	33.0	100
NF stage 66 body weight	100	>100
NF stage 66 SVL	100	>100
Juvenile female body weight (termination)	100	>100
Juvenile male body weight (termination)	100	>100
Juvenile female SVL (termination)	3.60	10.9
Juvenile male SVL (termination)	3.60	10.9
Genetic/phenotypic sex ratios	100	>100
Juvenile female liver histopathology	100	>100
Juvenile female kidney histopathology	3.6	10.9
Juvenile female gonadal ducts	10.9	33.0
Juvenile female gonad	0.0	3.6
Juvenile male liver histopathology	100	>100
Juvenile male kidney histopathology	33.0	100
Juvenile male gonadal ducts	0.0	3.6
Juvenile male gonad	0.0	3.6

[1] Due to variability in measured test concentrations, caution in definitive interpretation of numerical concentration endpoints is advised.
[2] Median metamorphosis time determined from the time to metamorphosis from each individual in a given replicate (replicate MMT). The treatment and control MMTs were on the median of the replicate MMT values.

Table 27. General Test Performance Criteria

Parameter	Conditions	Criteria Achieved (√)
Test Concentrations	Maintain concentrations within the mean measured (or time-weighted average) value over course of in-life period	√[1]
Viability of spawn	≥70% viability in clutch used to initiate study	√
Median time to NF stage 62 in controls	≤45 d	√
Mean weight of the test organisms in controls	1.0±0.2 g at NF stage 62 and 11.5 ±3 g at in-life phase conclusions	√
Dissolved oxygen	≥40% of saturation	√
pH	6.5-8.5, inter-replicate and inter-treatment differential ≤0.5	√
Water temperature	21 ± 1°C with inter-replicate and inter-treatment differential ≤1°C	√
Test concentrations without overt toxicity	≥3. Excessive mortality is defined as >20% in 2 or more replicates that cannot be explained by technical error	√
Replicate performance	≤1 compromised replicate/treatment	√
Idiopathic scoliosis in larvae	<10% moderate and severe	√
Genotype/Phenotype gender concordance	>95%	√

[1] The mean measured concentrations were consistent with protocol BATT01-5 for study BATT01-00390 with the exception of the 3.6 µg/L treatment in which the coefficient of variation was 22%. Coefficient of variation = (Standard deviation / mean)*100. CV is based on the standard deviation of mean measured concentration of each replicate and mean measured treatment concentration per FEL SOP 6.2. Overall, the mean measured concentrations were a reasonable estimation of exposure concentration and the CV exceeding the acceptable limit (20%) did not impact the interpretation of the results or conclusions drawn.

Appendix A.
Protocol, Protocol Amendments, and Protocol Deviation

FEL Protocol No.:	**BATT01-5**
GLP Study Title:	**Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis***
Test Guideline:	**U.S. EPA, OCSPP 890.2300 (July 2015)**
FEL Study No.:	**BATT01-00390**
Test System:	***Xenopus laevis***
Test Substance:	**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)	**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.		1/8/2016
SPONSOR REPRESENTATIVE: Vincent J. Brown, Ph.D.	Vincent J. Brown	1/8/2016

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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, BATT01-00390, 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 Larval Amphibian Growth and Development Assay (LAGDA, OCSPP 890.2300) (3) 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. 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. BATT01-5 prepared for Study No. BATT01-00390.

4. OBJECTIVE

LAGDA is intended to identify and characterize the adverse consequences of exposure to substances which interfere with the normal development and growth of amphibians through larval development and metamorphosis. It is an important assay to address potential, inciting contributors to amphibian population declines by evaluating the effects, both through endocrine and non-endocrine mechanisms, from exposure to contaminants during the larval stage of development that may adversely affect populations. Thus, the primary objective of the study will be to evaluate the potential developmental toxicity of 2-EHHB to *X. laevis* in general accordance with the USEPA guidelines established for the LAGDA (3).

The general experimental design entails exposing Nieuwkoop and Faber (NF) stage 8 *X. laevis* embryos (5) to four different concentrations of a test chemical and a control until 10 weeks post median metamorphosis time (MMT); which for this study is defined as the median time at which 50% of controls reach NF stage 62. There will be one interim sub-sample at MMT. There will be four replicates in each test concentration with eight replicates for the control. Endpoints evaluated during the course of the exposure include those indicative of generalized toxicity: mortality, abnormal behavior, abnormal morphological features, time to metamorphosis at NF stage 62 (TTM), and growth determinations (length and weight. Thyroid histopathology of NF stage 62 specimens and gonad, gonadal ducts, liver, and kidney histopathology of study termination specimens will be performed.

5. TESTING FACILITY

The in-life portion of the study, to include the pre-exposure and exposure phases of the LAGDA, 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 573.777.6050 or leakt@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.

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 amphibians 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 OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3).

8. STUDY SCHEDULE

The study is proposed to start in May 2016, after Sponsor approval of the Final Study Protocol. The actual in-life test duration will be 10 weeks post-median metamorphosis (MMT). A draft Final Report will then be submitted to the Sponsor.

9. EXPERIMENTAL DESIGN

9.1. Equipment

The following equipment will be needed:

- Mini-diluter system;
- Glass aquaria (10 L) with baffles;
- Aquarium heaters (adjustable to 21°C ± 1°);
- Thermometer;
- Binocular dissection microscope;
- Digital camera with at least 4 megapixel 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 pipetters (10 to 5,000 µL) or assorted pipettes of equivalent sizes;
- Well plates;
- PCR thermocycler;

- Agarose gel electrophoresis/power supply;
- Agarose gel scanner;
- Tissue homogenizer; and
- Water bath.
- Laboratory rotator / agitator

9.2. Control and Dilution Water

It is well-established that *Xenopus* can develop successfully over a wide range of water quality parameters. Laboratory water (Section 9.2.1.) 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 (temperature, dissolved oxygen, low ammonia, etc.), and ensures a consistent exposure of the test organisms to the parent chemical.

9.2.1. 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 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 ft3 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 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 and all water quality measurements cited above met the U.S. EPA criteria for aquatic toxicity test culture/dilution water and Table 1 of OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3). 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 BATT01-00390. Any departures from recommended values will be promptly brought to the attention of the Study Sponsor/Monitor.

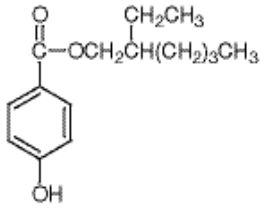
Sufficient iodine (I-) needs to be available to the larvae through a combination of aqueous and dietary sources for the thyroid gland to synthesize thyroid hormones to support normal metamorphosis. If the I- concentration in the culture water is relatively consistent (coefficient of variance [CV] $\leq$ 20%), measurement of aqueous I- concentrations from the culture water can be measured at least once per year and reported with the study data. Based on previous work (3), the LAGDA has been demonstrated to work well when test water I- concentrations ranged between 0.5 and 10 µg/L. The culture water at FEL was analyzed most recently on September 17, 2015 and contained 8.8 (±0.2) µg/L I-, which falls within the acceptable range, thus no supplementation will be necessary unless the I- level falls below 0.5 µg/L.

9.3. Test Substance

2-EHHB (TCI America, Portland, OR, lot number H0506, expiration date and re-test date not provided, 98.0% (w/w) 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

Due to limited water solubility, a solid phase saturator column will be used to maximize 2-EHHB concentrations in water and will be used to prepare a master stock solution that will ultimately be used to prepare each test concentration. The solid phase saturator columns will be prepared by FEL. 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 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 (6). 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, 0.33x, 0.11x, and 0.04x, where x is the MTC value. Therefore, the test concentrations will be 100.0, 33.0, 10.9, and 3.6 µg/L. If results from Amphibian Metamorphosis Assay study with 2-EHHB (FEL Study No. BATT01-00388) conducted prior to the present LAGDA study suggest a need to a change in test concentrations, protocol BATT01-5 for FEL study BATT01-00390 will be amended accordingly.

9.4. Test System

The test species will be the South African Clawed Frog (*X. laevis)*. *Xenopus laevis* is a well-studied laboratory animal that exhibits ease of use in the laboratory, rapid development, and simplicity of observation due to transparency during embryo-larval development (7). In addition, *Xenopus laevis* is routinely cultured in laboratories worldwide and is easily obtainable through commercial suppliers. Reproduction can be easily induced in this species throughout the year using human chorionic gonadotropin (hCG) injections and the resultant larvae can be routinely reared to selected developmental stages in large numbers to permit the use of stage-specific test protocols. It is also the test organism required in the OCSPP 890.2300 test guideline (3). The *X. laevis* larvae used for this study will be obtained from an in-house culture. The adult breeding stock frogs (originally purchased from *Xenopus* I, Dexter, MI) will be selected based on general productivity and health. After spawning of adults, embryos will be collected, cysteine treated, and screened for viability according to ASTM E1439-98 standards (7). Test organisms from a single spawn will be used in the in-life study. It is preferred that spawns resulting in greater than 70% viability be used for the test. Embryos will be randomly distributed into exposure treatment tanks containing 4 L of dilution water until each tank contains 20 embryos. Embryos will be carefully handled during this transfer to minimize handling stress and to avoid any injury. Details for adult frog care and breeding, specific to FEL, but consistent with OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3), are found in SOPs 8.2 (8) and 8.3 (9), respectively. Fertilized egg collection will be performed as described in ASTM E1439-98 (7) and OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) test guideline (3).

9.5. Feeding

The diet selected for use (Tables 1 and 2) will be required to meet the performance identified in Table 5 and is consistent with that recommended by OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3). *X. laevis* embryos will not be fed until free-swimming larval stage (NF stage 46) is reached. At NF stage 47, the tadpoles will be fed a diet that consists of trout starter, *Spirulina* algae discs, and TetraFin® flakes homogenized in culture (or dilution) water (3). This mixture is administered three times daily on weekdays and once daily on weekends. Tadpoles are also fed brine shrimp nauplii (*Artemia* spp.) twice daily on weekdays and once daily on the weekends starting on day 8 post-fertilization. The larval feeding, which should be consistent in each test vessel, should allow appropriate growth and development of test animals in order to ensure reproducibility and transferability of the assay results: (1) the median time to NF stage 62 in controls should be $\leq$45 days and (2) a mean weight of 1.0$\pm$0.2 g at NF stage 62 in controls.

Once tadpoles have reached NF stage 62, the feeding regime consists of 2 mm (3/32 inch) sinking frog food (Ziegler Brothers, Gardners, PA). Metamorphosed test animals will be fed once per day. For larvae post-NF stage 62 and early juveniles, the pellets are briefly run in a coffee grinder, blender or crushed with a mortar and pestle in order to reduce their size. Once juveniles are large enough to consume full pellets, grinding or crushing is no longer necessary. The animals should be fed once per day. The juvenile feeding should allow appropriate growth

and development of the organisms to reach a mean weight of 11.5±3 g in control juveniles at the termination of the assay. The feeding rate for metamorphosed *X. laevis* is provided in Table 2.

Table 1. Feeding Regime for *X. laevis* Larvae in Flow-Through Conditions

Time (weeks)	Trout Starter/Algae/TetraFin®[1]		Brine Shrimp[1]	
	Weekday (mL)	Weekend (mL)	Weekday (mL)	Weekend (mL)
0-1[2]	0.33	1.2	0.5	0.5
2	0.67	2.4	1.0	1.0
3	1.3	4.0	1.0	1.0
4	1.5	4.0	1.0	1.0
5	1.6	4.4	1.0	1.0
6	1.6	4.6	1.0	1.0
7	1.7	4.6	1.0	1.0
8-10	1.7	4.6	1.0	1.0

Table 2. Frog food (2 mm) Feeding Rate for Metamorphosed Frogs

Post-Metamorphosis Age (weeks post-median NF 62)	Crushed Pellet Weight (mg/organism)	Amount of Food per Frog (mg/organism)
NF Stage 62[3]	25	0
0-1 weeks	25	28
2-3 weeks	0	110
4-5 weeks	0	165
6-9 weeks	0	220

[1] Feed the volume of food listed at a frequency of three times per weekday. Feed the volume of food listed once per day on weekends. Preparation based on OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3)
[2] SD 4-14 for blended food and SD 8-15 for brine shrimp.
[3] Organisms that have not reached NF stage 62 should not be fed metamorphosed organism diet.

9.6. 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 flow-through diluter system will be used in the performance of the LAGDA exposure. The system will have water-contact components of glass (aquaria), stainless steel (diluter housing and water bath), and Teflon® (tubing responsible for test material delivery). Exposure tanks will be glass aquaria (with approximate measurements of 22.5 x 14.0 x 16.5 cm deep) equipped with standpipes that result in an actual tank volume of 4.0 L and minimum water depth of 10 to 15 cm. Each dilution cell within the headbox of the diluter will be labelled with the color-coded laboratory tape with the test concentration. The replicate splitter cell and aquaria delivery tubing will be labeled with the same color tape as the appropriate dilution cell and the replicate for each test concentration. Each aquarium will be labelled with identical tape color and specifically denote test concentration and replicate. Test system calibration will be checked prior to study start, weekly during the study, and at test termination. The system will be capable of supporting up to 5 exposure concentrations and a control, with up to 4 replicates per treatment. The flow rate to each tank will be 25 mL/min which provides a complete volume replacement every 2.7 h. Fluorescent lighting will be used to provide a photoperiod of 12 hr light and 12 hr dark at an intensity that ranges from 600 to 2,000 lux (lumens/m^2) at the water surface. Water temperature will be maintained at 22° ± 1°C, pH maintained between 6.5 to 8.5, and the dissolved oxygen (DO) concentration > 3.5 mg/L (> 40% of the air saturation) in each test tank. The test organism loading per water renewal rate will be within recommended guidelines (3) and, in studies conducted according to this method, has maintained acceptable water quality while not utilizing an excessive amount of test material. Tanks will be randomly assigned for the LAGDA assay. This design is intended to randomize out the 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 impartially assigned to tanks before exposure. Tanks will be equipped with baffles to separate metamorphosed test animals from test larvae.

Temperature will be measured daily; and pH, DO, and light intensity (lux) will be measured three times per week. Total hardness and alkalinity will be measured in the control and one replicate of the highest concentration once per week. The solubility, purity, and stability (volatility and degradation rate) of test article will be provided to FEL prior to in-life test initiation by the supplier of the test article (TCI America). Based on this information, FEL will determine the frequency at which fresh stock solutions will be prepared. Based on this information, FEL will determine the frequency at which fresh stock solutions will be prepared. 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 Test article analytical results. This could result in additional diluter sample events for chemical analysis. A water sample from each replicate for each treatment concentration will be sampled for analysis at in-life test initiation (day 0) and termination. During the remainder of the exposure phase (excluding termination), a sample 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, and week 4 –D) and repeat

every 5th 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. In the case of chemicals which 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 nominal concentrations.

9.6.1. Exposure System Maintenance

Exposure tanks will be siphoned on a daily basis to remove uneaten food and waste products. Care will be used to minimize stress and trauma to the animals, especially during movement, cleaning of aquaria, and manipulation. 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.).

9.7. Test Substance Analyses - ABC Laboratories Test Site

Test substance analysis of the diluter test solutions and stock solutions will be performed by ABC Laboratories (Columbia, MO). The analytical measurement method for test substance determined by the chemical laboratory in conjunction with the Study Director and Study Monitor will be performed in accordance with procedures and SOPs in place at ABC Laboratories and in accordance with method validation performed at ABC Laboratories. Following completion of the analytical method validation study (10), 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.

9.8. Test Method

An overview of the test and relevant test specifications are provided in Table 3.

9.8.1. Overview

This assay is intended for use in determining the developmental toxicity of chemicals on amphibian larval growth and development. The assay will be initiated with newly spawned embryos and will continue through metamorphosis into juvenile development. A summary of study endpoints are presented in Table 4. Animals will be examined daily for mortality and any signs of abnormal behavior. At MMT, a sub-sample of five animals/replicate will be collected and various endpoints examined. Remaining animals will be continuously exposed until each reaches NF stage 66 or after 70 d of exposure (whichever occurs first), at which time the exposure tanks will be culled to 10 organisms/replicate tank. The remaining 10 organisms/tank will then be exposed for the remainder of the exposure period (10 weeks from the MMT). At test termination, additional endpoints will be collected (Table 4).

Table 3. Experimental Specifications for LAGDA Study

Parameter	Conditions and Frequency Tested
Test Article	2-ethyhexyl 4-hydroxybenzoate
Test species	African clawed frog (*Xenopus laevis*) embryos (blastulae stage)
Exposure phase duration	Median time to NF stage 62 (MMT) plus 10 weeks post-MMT
Diluent; Negative control	Dechlorinated ($DeCl_2$) tap water (carbon filtered)
Test chamber size	10 L glass aquarium (tank)
Test media volume	4 L at 10 cm minimum water depth
Media flow rate	27 mL / min (minimum 3x/week)
Rate of media exchange	10 tank volumes / d
Test concentrations (µg/L)	0 (control), 3.6, 10.9, 33.0, and 100.0
Replicates / treatment Replicates / control	4 replicates / treatment 8 replicates / control
Animals / replicate chamber Animals / control Animals / treatment Animals / test Culling	20 160 80 480 At NF stage 66 – 10 organisms / replicate
Feeding regime	Tadpoles – See Table 1, and Juveniles – See Table 2
Photo period	12 h light : 12 h dark
Media temperature	Daily, 21°C ± 1°C; inter-replicate and inter-treatment differentials (within one day) should not exceed 1.0°C
Light intensity	Once at SD 0, 600 – 2000 lux
DO	2x/week, ≥ 3.5 mg/L (≥ 40% air saturation)
pH	2x/week, 6.5 – 8.5; inter-replicate and inter-treatment differentials should not exceed 0.5
Hardness, alkalinity, conductivity	1x monthly there after using replicate rotation
Relative humidity	>30%, 1x/month post-metamorphosis phase in diluter system
Iodide	Measured 1x per year and reported with study results
Aeration	Only if needed
Apical endpoints	Survival, disease/abnormality, TTM, thyroid histology, growth, phenotypic sex ratio, nuptial pad development, and gonad, gonadal ducts, kidney, and liver histology
Sample frequency for water and specimens	Water – One water sample from each of the 4 replicates per treatment (and control) will be collected on in-life day 0 (initiation) and termination. Subsequently, a water sample from one replicate for each treatment will be collect weekly. A laboratory blank will also be collected. Sub-sampled specimens – 5 newly metamorphosed / replicate tank (NF stage 62) Juvenile specimens – All surviving frogs at test termination

Table 4. Summary of Study Endpoints

Endpoints[4]	Daily	NF Stage 62 Sub-Sampling	Test Termination
Mortality	X		
Abnormal appearances: Clinical signs of disease and/or general toxicities	X		
TTM[5]		X	
Thyroid histopathology		X	
Morphometrics (growth in weight and length)		X	X
Liver-somatic index (LSI)			X
Genetic/phenotypic sex ratios			X
Gonad, reproductive ducts, liver, and kidney histopathology			X

9.8.2. Chemical Exposure Phase

The test animals will be exposed to TCS using a flow-through mini-diluter system (6) in order to generate four nominal exposure concentrations to be determined following range finding and a laboratory control. There will be four replicates of each test concentration and eight replicates of the laboratory control. Each tank will be fitted with a baffle that allows separation of metamorphosed test animals from the developing larvae. Ten-L exposure tanks will be equipped with standpipes, which will provide an actual tank volume of 4.0 L. The flow rate to each tank will be 27 ± 1 mL/min, providing a 4 L volume renewal of aqueous solution approximately every 1.6 h. At developmental stage 8 (blastulae), twenty embryos will be added to each aquarium (24 aquaria, including 8 control replicates). Fluorescent lighting will be used to provide a photoperiod of 12 h light and 12 h dark at an intensity that will range from 600 to 2,000 lux (lumens/m^2) at the water surface. Water temperature in the test aquaria will be maintained at 21°C ± 1°. DO will be maintained at a concentration of ≥ 3.5 mg/L (≥ 40% of the air saturation) and pH maintained at 6.5-8.5 in each test aquarium.

All dead larvae not eaten or decomposed will be preserved in 10% (v/v) NBF, labeled, and archived for future reference, if needed. Cleaning will involve daily removal of solid matter, including organism feces and excess food, from the bottom of each aquarium. Disinfection of all wetted components will be evaluated approximately every 3 weeks.

[4] Statistical evaluation will be considered for each of the endpoints.
[5] Median time-to metamorphosis (NF stage 62).

9.8.3. Analytical Sample Collection

9.8.3.1. Test Substance Solution Samples

Chemical stock solutions of 2-EHHB will be sampled for analysis each time a fresh stock solution is prepared. Also, each replicate test concentration will be sampled on day 0 and at test termination for 2-EHHB analysis. Samples will be collected in one replicate of each treatment and the control during each sampling event in rotation so that each replicate is sampled in succession. Immediately following collection, the 2-EHHB stock and diluter samples will be stored at 4°C. Samples will be shipped on ice or blue ice to ABC Laboratories once per week. Due to the biodegradability of 2-EHHB in aqueous conditions, analyses will be performed as soon as possible following collection.

9.8.4. Biological Sample Collection

9.8.4.1. Test Specimen Samples

Three samplings of test specimens will be performed. The first event will be unexposed day 0 embryos (20-30) for initial stage verification. The second event will be performed as individual organisms reach MMT (NF stage 62). The final specimen sampling will be performed at test conclusion (10 weeks after 50% of the control organisms reach MMT).

9.8.5. Exposure System Performance

Temperature will be measured in all tanks daily. DO and pH will be measured two times per week. Total hardness and alkalinity, and conductivity will be measured in the control and one replicate of each treatment once per week such that complete analysis for a given treatment or control is provided monthly. Relative humidity inside the diluter system will be measured once per month post-metamorphosis. Light intensity (lux) will be measured once on SD 0.

9.9. Biological Endpoints / Observations

Endpoints will be assessed over the course of and at conclusion of the assay. For those endpoints measured at test termination, growth (length and weight) measurements will be taken immediately after anesthetization of an individual frog. Collection of fresh tissues (e.g., blood) will also be performed while animals are anesthetized.

9.9.1. Daily Observations

9.9.1.1. Survival

All test tanks will be checked daily for dead animals and the number of survivors recorded for each tank, along with the date, concentration, and replicate ID. Dead animals will be removed from the test tank as soon as observed. The developmental stage of dead animals will be categorized as either pre-NF 58 (pre-forelimb emergence), NF 58-66 (between forelimb emergence and complete tail absorption), or post-NF 66 (metamorphosed). Mortality rates exceeding 20% may indicate inappropriate test conditions or overtly toxic effects of the test chemical. During the first few days of development after the spawning event and again during

metamorphic climax, the animals tend to be most sensitive to non-chemical induced mortality events.

9.9.1.2. Additional Observations

Observation of abnormal behavior, grossly visible malformations, or lesions will be recorded daily by date, treatment, replicate ID. Normal behavior for larval animals is characterized by suspension in the water column with tail elevated above the head, regular rhythmic tail fin beating, periodic surfacing, operculating, and being responsive to stimuli. Abnormal behavior would include, for example, floating on the surface, lying on the bottom of the tank, inverted or irregular swimming, lack of surfacing activity, and being non-responsive to stimuli. For post-metamorphic animals, in addition to the above abnormal behaviors, gross differences in food consumption between treatments will be recorded. Gross malformations and lesions could include morphological abnormalities, such as; limb deformities, hemorrhagic lesions, abdominal edema, and bacterial or fungal infections. These determinations are qualitative and should be considered akin to clinical signs of disease/stress and made in comparison to control animals. If the rate of occurrence is greater in treatment tanks than in the controls, then these will be considered evidence for overt toxicity.

9.9.2. NF Stage 62 Specimens (Endpoints / Tissue Sample Preparation)

Larvae that have reached NF stage 62 will be physically separated from the remaining tadpoles in the tank with a baffle in accordance with the OCSPP 890.2300 test guideline (3). Tadpoles will be checked daily, and the TTM recorded for each individual. One NF stage 62 larvae of every four removed from a given replicate tank will be randomly selected for morphological, biological, and histological measurements. Those NF stage 62 larvae not sampled will be physically separated from the remaining tadpoles for continued exposure. Selection of the sub-sampled test organisms will be randomized, using a net. The following endpoints will be obtained from the newly metamorphosed larvae sub-sampling:

- Time to NF Stage 62 (TTM)
- Morphometrics (growth – weight and length)
- External abnormality
- Thyroid histopathology

9.9.2.1. Time to Metamorphosis (TTM)

In this study, the TTM will be the number of days required for a test specimen to reach NF stage 62 (from embryonic NF stage 8 to NF stage 62 larvae). TTM will be recorded for each larva.

9.9.2.2. Growth (Weight and Length)

The wet weight of each newly metamorphosed specimen will be measured immediately after they become non-responsive. Specimens will be blotted dry before weighing to remove excess adherent water. Weight will be measured on an analytical balance to the nearest mg. Digital photographs of each specimen will be taken for snout to vent length measurement.

Photos will be taken with a ruler to provide scale and electronically digitized for linear length using Sigma Scan Pro (Aspire Software International (Ashburn, VA). Length will be measured to the nearest mm. These measurements assess possible effects of test substances on the growth rate of organisms and are useful in detecting generalized toxicity.

9.9.2.3. External Evaluation

After measurements of body size have been made, any gross morphological abnormalities, signs of disease, and / or clinical signs of toxicity will be noted and digitally recorded. These include scoliosis, petechiae, hemorrhage, limb, and eye defects. Observations of scoliosis will be counted (incidence) and graded with respect to severity.

9.9.2.4. Tissue Collection and Fixation for General Histology

For the sub-sampling, thyroid glands will be fixed and preserved for histology. Fixation and preservation require removal of the lower torso below the forelimbs. The lower torso will then be discarded. The trimmed carcass will be placed into individually labeled vials and fixed in Davidson's solution. The volume of fixative in the container will be at least 10 times the approximated volume of the tissue. Appropriate agitation and / or circulation of the fixative will be required to adequately fix the tissue samples. All tissue will remain in Davidson's fixative for at least 48-72 h, but no longer than 96 h, at which time they will be rinsed in $DeCl_2$ water and stored in 10% (v/v) NBF until further processed (3,11).

9.9.2.5. Thyroid Histopathology – EPL Test Site

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 LAGDA (3). Following collection, FEL will send 5 NBF preserved larvae per replicate (20 per treatment or control) to EPL via overnight courier for histopathological processing and analyses.

9.9.2.6. Outline of NF Stage 62 Larvae Sub-Sampling

An outline of procedures for newly metamorphosed specimen sub-sampling is provided below:

- Anesthetize newly metamorphosed specimens by immersion in MS-222 solution (200 mg/L) buffered to pH 7.0 with sodium bicarbonate (3).
- Rinse and blot dry.
- Weigh (g) the newly metamorphosed specimens and digitally photograph whole body for snout to vent length (cm) measurement.
- Note any gross morphologic abnormalities, diseases, and / or clinical signs of toxicity.
- Euthanize by immersion in MS-222 solution (200 mg/L) buffered to pH 7.0 with sodium bicarbonate (3). Remove the lower torso below the forelimbs. The lower torso can be discarded. Fix the upper torso for 48-72 h in Davidson's solution with agitation. Rinse with $DeCl_2$ water and store tissues in 10% (v/v) NBF.

9.9.3. End of Larval Exposure Phase

The end of larval exposure phase will be determined by the MMT, which is the time required for half of the population of test control animals to reach NF stage 62. Given the initial number of tadpoles, it is expected that there will likely be a small percentage of individuals that will not develop normally and will not complete metamorphosis in a reasonable time. The larval portion of the exposure should not exceed 70 days. When all of the organisms reach NF stage 66 (or exposure d 70, whichever occurs first), test organisms will be culled such that 10 metamorphosed young per treatment are exposed for the remainder of the in-life study (10 weeks post-MMT). Any organisms remaining at the end of this period will be euthanized by immersion in 200 mg/L buffered MS-222 (pH 7.0). The tadpoles will then be weighed, staged (4), and digitally photographed. Snout-vent length (SVL) will be measured and any developmental abnormalities noted. Phenotypic sex is noted as female, male, or indeterminate.

9.9.4. In-Life Test Termination (Endpoints / Tissue Sample Preparation)

After 10 weeks of exposure post-MMT, the remaining animals will be anesthetized and then euthanized and the following endpoints evaluated and recorded:

- Morphometrics (growth – weight and length)
- External evaluation of test organism
- Nuptial pad development (morphological)
- Liver weight (Liver-somatic index)
- Gonad, reproductive ducts, kidney, and liver histopathology
- Phenotypic and genotypic sex ratios

9.9.4.1. Growth (Weight and Length)

The wet weight and snout to vent length of each juvenile specimen will be made using the same procedure as used for the newly metamorphosed specimens (see Section 8.9.2.2). Specimens will be blotted dry before weighing to remove excess adherent water. After measurements of body size have been made, any gross morphological abnormalities and/or clinical signs of toxicity will be noted and digitally recorded.

9.9.4.2. External Evaluation

As with the newly metamorphosed specimens, any gross morphological abnormalities, diseases, and/or clinical signs of toxicity observed will be recorded with digital photographs.

9.9.4.3. Tissue Collection and Fixation for General Histology

Livers will be removed, weighed, and prepared for histological analysis during the final sampling. A hind limb will be retained for genetic sex determination. The remaining carcass, without the hind limbs, but including the gonads, and gonadal ducts, and kidneys will then be fixed for future histological analyses. Thus, the gonads will not be physically removed from the carcass. The collected tissues will be placed into labeled histological vials and fixed in Davidson's fixative as described for the sub-sampled NF stage 62 specimens. All tissue will

remain in Davidson's fixative for at least 48-72 h, but no longer than 96 h, at which time they will be rinsed in dechlorinated tap water and stored in 10% (v/v) NBF (3).

9.9.4.4. Gonad, Gonadal Ducts, Kidney, Liver, Histopathology – EPL Test Site

EPL, under the direction of the Sponsor, will perform the gonad, gonadal duct, kidney, and liver tissue preparation, histology, and histopathological interpretation in accordance with appropriate facility guidance documents (SOPs) and the relevant guidance documents on histopathology for the LAGDA (3,11). Following collection, FEL will send preserved juveniles to EPL via overnight courier for histopathological processing and analyses.

9.9.4.5. Phenotypic and Genotypic Sexing

DNA samples from the juvenile frogs will be obtained from a hind foot removed during dissection. The hind foot from each juvenile specimen will be stored at -20°C ± 5° until DNA isolation. Testing for the presence or absence of a marker will be done by PCR as described in FEL SOP 3.13 (12). Information regarding the development of the marker used for genetic sexing of *X. laevis* is described in Yoshimoto et al. (13).

9.9.4.6. Outline of In-Life Test Termination

An outline of the methods involved in the juvenile specimen sampling step is provided below:

- Anesthetize juvenile specimens by injecting either 100 µL (male) or 200 µL (female) of 100 g/L MS-222 solution buffered to pH 7.0 with sodium bicarbonate (3).
- Rinse and blot dry.
- Weigh the juveniles (g) and digitally photograph whole body for snout to vent length (cm) measurement.
- Note any gross morphologic abnormalities, diseases, and / or clinical signs of toxicity.
- Finish euthanizing juvenile specimens with buffered MS-222.
- Remove, weigh, and fix liver from each juvenile specimen.
- Remove one hind foot from each juvenile specimen and freeze.
- Fix remaining carcass (minus hind limbs) which includes the gonads in Davidson's solution as described in Section 9.9.4.3.

The final biological sampling and data collection will be completed within 5 d following the termination of the in-life phase.

9.10. 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 the TO 14 QAPP (1), OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA)

test guideline (3), and generally follow procedures described in the document Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application (14). 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. However, replicates and treatments will be evaluated to determine whether either should be removed from the analyses because of overt toxicity (lethality) as defined and described in the LAGDA interlaboratory guideline provided by EPA. Individual endpoints will be treated as described in the LAGDA guideline (3).

Three different types of data sets will be collected: 1) quantitative continuous data (mortality, growth, and LSI), 2) Time-to-event data (developmental rates such as TTM), and 3) ordinal data (severity scores and developmental stages from histopathological evaluations). For continuous data sets, data expressed as proportions will be transformed to the arc sine square root. Monotonicity of the data sets will be evaluated using Analysis of Variance (ANOVA) comparing linear and quadratic contrasts or the equivalent. Continuous data sets that are monotonic will be evaluated using a step-down Jonckheere-Terpstra trend test or the equivalent using replicate medians. If the data are non-monotonic, parametric assumptions will be tested using deviations from normality with the Shapiro-Wilks' test ($\alpha = 0.05$) and homogeneity of variance will be tested with Levene's test ($\alpha = 0.05$). Parametric data sets will be evaluated using ANOVA followed by Dunnett's or Bonferroni t-test as post-hoc tests or the equivalent. Kruskal-Wallis (KW) ANOVA test followed by a step-down pairwise Dunn's test as a post hoc test or the equivalent will be used when assumptions of normality and homogeneity of variances are not met. These tests will be used to determine NOEC and LOEC numerical endpoints for each of the appropriate measurement endpoints.

The TTM data will be treated as time to event data, with mortalities or larvae not reaching stage 62 in 70 d treated as censured data. The median time to completion of metamorphosis is the 50% point in the cumulative metamorphosis curve using a mixed-effects Cox proportional hazard model or the equivalent. Histopathology data are in the form of severity scores or developmental stages. RSCABS (Rao-Scott Cochran-Armitage by Slices) or the equivalent using step-down trend analysis on each level of severity in a histopathology response will be performed. Developmental staging data (gonad and reproductive ducts) will be analyzed as reported to detect acceleration in development and then manually inverted prior to a second analysis to detect a delay in development. For all statistical evaluations, the replicate will be considered the experimental unit and α=0.05.

10. TEST PERFORMANCE CRITERIA

General test performance criteria associated with the performance of the LAGDA are provided in Table 5.

Table 5. General Test Performance Criteria

Parameter	Conditions
Test Concentrations	Maintain concentrations within the mean measured (or time-weighted average) value over course of in-life period
Viability of spawn	≥70% viability in clutch used to initiate study
Median time to NF stage 62 in controls	≤45 d
Mean weight of the test organisms in controls	1.0±0.2 g at NF stage 62 and 11.5 ±3 g at in-life phase conclusions
Dissolved oxygen	≥40% of saturation
pH	6.5-8.5, inter-replicate and inter-treatment differential ≤0.5
Water temperature	21 ± 1°C with inter-replicate and inter-treatment differential ≤1°C
Test concentrations without overt toxicity	≥3. Excessive mortality is defined as >20% in 2 or more replicates that cannot be explained by technical error
Replicate performance	≤1 compromised replicate/treatment
Idiopathic scoliosis in larvae	<10% moderate and severe
Genotype/Phenotype gender concordance	>95%

For a test to be considered valid, the following criteria will be met:

- 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.
- At least three treatment levels without obvious overt toxicity are available for analysis. 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, lack of surfacing activity, and being nonresponsive to stimuli, morphological abnormalities (*e.g.*, limb deformities), hemorrhagic lesions, and abdominal edema.
- A NOEC and LOEC should be determined.

11. SAMPLE HANDLING AND CUSTODY

All samples received, generated during the course of testing, and submitted to ABC Laboratories (10) and EPL (11) in this study will be accompanied with an appropriately signed chain of custody and handled in accordance with facility SOPs (15,16). 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 9.7 and preserved as described by ABC Laboratories (10) will be shipped to ABC Laboratories by commercial carrier. Tissue samples collected at NF stage 62 and 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.

12. 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 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, 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, malformations, lesions, etc. Observations and data collected at predetermined intervals include: developmental stage, hind limb length, SVL, and wet weight.
  - 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, histology reports etc. 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.

13. 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 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 the Final Report of the study.

14. RECORD MAINTENANCE AND ARCHIVAL

Test facility-related records (personnel training, equipment calibration and maintenance, storage temperature records, etc.) (17) 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 (17) 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 (17,18). 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

15. SPECIMENS ARCHIVAL

The preserved test specimens will be labeled and stored at FEL until study finalization in accordance with facility SOPs (19). Following study finalization, specimens remaining at FEL will be shipped to a location designated by the Sponsor or representative, in consultation with the U.S. EPA 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 U.S. EPA.

16. 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 (20). 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.

17. 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. USEPA, Federal Insecticide, Fungicide, Rodenticide Act (FIFRA). Good Laboratory Practice Standards, Title 40 Code of Federal Regulations Part 160 (effective October 16, 1989).

3. OCSPP 890:2300 Larval Amphibian Growth and Development Assay (LAGDA). U.S. Environmental Protection Agency (USEPA), EPA Pub No. 740-C-15-001, July 2015.

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

5. Nieuwkoop, P.D. and Faber, J. Normal Tables of *Xenopus laevis* (Daudin). Garland Publishing, London, 1994.

6. SOP 8.14. Test Dose/Concentration Determination and Range-Finding, Fort Environmental Laboratories, 2015.

7. American Society for Testing and Materials (ASTM). ASTM E1439-98: Standard Guide for Conducting the Frog Embryo Teratogenesis Assay – *Xenopus* (FETAX). ASTM International, West Conshohocken, PA, Reapproved 2004.

8. SOP 8.2, Adult frog care and maintenance, Fort Environmental Laboratories, 2000.

9. SOP 8.3, *Xenopus* breeding, Fort Environmental Laboratories, 2001.

10. ABC Laboratories. (In Preparation). Validated Analytical Chemistry Test Method for 2-Ethyhexyl 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.

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

12. Fort Environmental Laboratories, Inc. (FEL). Standard Operating Procedure (SOP) 3.13., PCR Thermocycler (MTC-100 and Alpha Block 384). FEL, 2010.

13. Yoshimoto, S., Okada, E., Umemoto, H., Tamura, K., Uno, Y., Nishida-Umehara, C., Matsuda, Y., Takamatsu, N., Shiba, T., and Ito, M. A W-linked DM-domain gene, DM-W, participates in primary ovary development in *Xenopus laevis*. Proc. Natl. Acad. Sci., US. 105(7): 2469-2474, 2008.

14. 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.

15. SOP 6.1.2, Sample Tracking and Handling, Fort Environmental Laboratories, 2010.

16. SOP 6.4, Receipt, Storage, and Distribution of Test Substances, Fort Environmental Laboratories, 2010.

17. SOP 4.10, Study File Document Collection and Organization, Fort Environmental Laboratories, 2001.

18. SOP 4.11, Maintenance of Study Archives, Fort Environmental Laboratories, 2001.

19. SOP 12.1, Archiving of Test Specimens, Fort Environmental Laboratories, 2003.

20. SOP 6.2, Waste Collection, Storage, and Disposal, Fort Environmental Laboratories, 2001.

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DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*	
Amendment Number: 01	**Document ID Number:** BATT01-5 (00390)
Submitted By: Douglas J. Fort	**Date:** 3/2/2016

Amendment Relating To: BATT01-00390

[X] Protocol **[ ] Study Plan** **[ ] QAPP** **[ ] QAMP** **[ ] SOP**

[ ] Other (describe):

Original Specifications:

Page 9: Section 9.3. Test Substance: "Therefore, the test concentrations will be 100.0, 33.0, 10.9, and 3.6 µg/L. If results from Amphibian Metamorphosis Assay study with 2-EHHB (FEL Study No. BATT01-00388) conducted prior to the present LAGDA study suggest a need to a change in test concentrations, protocol BATT01-5 for FEL study BATT01-00390 will be amended accordingly."

Page 22, Table 5. Row 1 Conditions: Maintain concentrations within the mean measured (or time-weighted average) value over course of in-life period

Changed To:

Page 9: Section 9.3. Test Substance: "Therefore, the test concentrations will be 100.0, 33.0, 10.9, and 3.6 µg/L. Based on results from Amphibian Metamorphosis Assay study with 2-EHHB (FEL Study No. BATT01-00388) no change in test concentrations are warranted for FEL study BATT01-00390."

Page 22, Table 5. Row 1 Conditions: Maintain concentrations within the mean measured (or time-weighted average) value over course of in-life period. The coefficient of variation (CV) of the measured test concentrations over the entire test period within a treatment will be maintained at 20% or less in each concentration. When the measured concentrations do not remain within 80-120% of the nominal concentration (for example, when testing highly biodegradable or adsorptive chemicals), the effect concentrations should be determined and expressed relative to the arithmetic mean concentration for flow-through tests (3).

Reason for Change: No mortality or morbidity was observed in the high test concentration, but an increase in the median treatment stage was observed in the 33.0 and 100.0 µg/L treatments was noted. Therefore, these concentrations will be appropriate for LAGDA testing. Specific information regarding the criteria for measured test concentrations was not included in the protocol. The current information is consistent with LAGDA guidance document OCSPP 890.2300, Larval Amphibian Growth and Development Assay (LAGDA), EPA publication number 740-C-15-001, July 2015 (3).

Approval:

Study Director: _____ Date: 3/9/2016

Sponsor Representative: Vincent J. Brown Date: 3/3/2016

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DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*	
Amendment Number: 02	**Document ID Number**: BATT01-5 (00390)
Submitted By: Douglas J. Fort	**Date**: 3/17/2016
Amendment Relating To: BATT01-00390 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP** **[ ] Other (describe):**	
Original Specifications: Page 11, Section 9.5, Tables 1 and 2.	
Changed To: Page 11, Section 9.5, Tables 1 and 2. See attached.	
Reason for Change: Corrects tables to indicate that brine shrimp is being fed twice per day.	

Approval:

Study Director: _____ Date: 4/4/2016

Sponsor Representative: _____ Date: 4/4/2016

FEL

Table 1. Feeding Regime for *X. laevis* Larvae in Flow-Through Conditions

Time (weeks)	SD	Trout Starter/Algae/TetraFin®[1]		Brine Shrimp[2]	
		Weekday (mL)	Weekend (mL)	Weekday (mL)	Weekend (mL)
0-1[3]	0-14/15	0.33	1.2	0.5	0.5
2	15-21	0.67	2.4	1.0	1.0
3	22-28	1.3	4.0	1.0	1.0
4	29-35	1.5	4.0	1.0	1.0
5	36-42	1.6	4.4	1.0	1.0
6	43-49	1.6	4.6	1.0	1.0
7	50-56	1.7	4.6	1.0	1.0
8	57-63	1.7	4.6	1.0	1.0
9	64-70	1.7	4.6	1.0	1.0
10	71-77	1.7	4.6	1.0	1.0

Table 2. Frog food (2 mm) Feeding Rate for Metamorphosed Frogs

Post-Metamorphosis Age (weeks post-median NF 62)	Crushed Pellet Weight (mg/organism)	Amount of Food per Frog (mg/organism)
NF Stage 62[4]	25	0
0-1 weeks	25	28
2-3 weeks	0	110
4-5 weeks	0	165
6-9 weeks	0	220

[1] Feed the volume of food listed at a frequency of three times per weekday. Feed the volume of food listed once per day on weekends. Preparation based on OCSPP 890.2300 Larval Amphibian Growth and Development Assay (LAGDA) (3)
[2] Feed volume twice per day and once during weekend.
[3] SD 4-14 for blended food and SD 8-15 for brine shrimp.
[4] Organisms that have not reached NF stage 62 should not be fed metamorphosed organism diet.

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DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*	
Amendment Number: 03	**Document ID Number**: BATT01-5 (00390)
Submitted By: Douglas J. Fort	**Date**: 3/18/2016

Amendment Relating To: BATT01-00390

[X] Protocol **[ ] Study Plan** **[ ] QAPP** **[ ] QAMP** **[ ] SOP**

[ ] Other (describe):

Original Specifications:

Page 13, Test Substance Analyses - ABC Laboratories Test Site

"Following completion of the analytical method validation study (10), 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.

FEL

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DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

Amendment Number: 04 | **Document ID Number:** BATT01-5 (00390)

Submitted By: Douglas J. Fort | **Date:** 4/29/2016

Amendment Relating To: BATT01-00390

[X] Protocol **[ ] Study Plan** **[ ] QAPP** **[ ] QAMP** **[ ] SOP**

[ ] Other (describe):

Original Specifications: Page 8, Section 9.2.1 Laboratory Water Preparation

"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 BATT01-00390. Any departures from recommended values will be promptly brought to the attention of the Study Sponsor/Monitor.

Sufficient iodine (I-) needs to be available to the larvae through a combination of aqueous and dietary sources for the thyroid gland to synthesize thyroid hormones to support normal metamorphosis. If the I- concentration in the culture water is relatively consistent (coefficient of variance [CV] ≤ 20%), measurement of aqueous I- concentrations from the culture water can be measured at least once per year and reported with the study data. Based on previous work (3), the LAGDA has been demonstrated to work well when test water I- concentrations ranged between 0.5 and 10 µg/L. The culture water at FEL was analyzed most recently on September 17, 2015 and contained 8.8 (±0.2) µg/L I-, which falls within the acceptable range, thus no supplementation will be necessary unless the I- level falls below 0.5 µg/L."

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, SD 45, and at 10 wpm (in-life conclusion).

Reason for Change: Provide results of annual facility water quality analysis. Provide addition I- data during the conduct of study 00390.

Approval:

Study Director: _____ Date: 5/11/2016

Sponsor Representative: Vincent J. Brown Date: 5/11/2016

Page 1 of 2

FEL

FEL

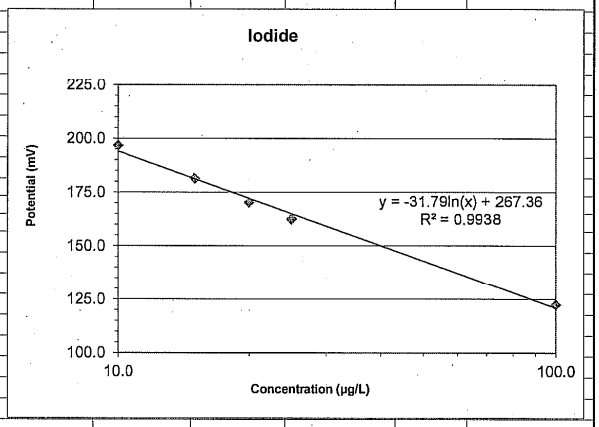
Attachment: Results of Dilution / Laboratory Control Water Analyses

FEL

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FEL01-00000							
Iodide							
Test Article/Protocol:	**ISE**						
Kit:	**ISE Probe**						
Date:	**2/4/2016**						
Standard:	**100 µg/L**						
Sample Type:	**Water**						

Concentration (µg/L)	Standards 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

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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
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

Susie Southwell

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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	Time	Analyzed 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.

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

FEL

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DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*	
Amendment Number: 05	**Document ID Number:** BATT01-5 (00390)
Submitted By: Douglas J. Fort	**Date:** 6/6/2016
Amendment Relating To: BATT01-00390 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP** **[X] Other (describe): Protocol Amendments 1-4**	
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

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

Amendment Number: 06 | **Document ID Number**: BATT01-5 (00390)

Submitted By: Douglas J. Fort | **Date**: 1/11/2017

Amendment Relating To: BATT01-00390

[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP

[ ] Other (describe):

Original Specifications:

1. Page 5, Section 2, Good Laboratory Practice

2. Page 25, Section 15, 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 U.S. EPA."

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 BATT01-00390 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: _____ Date: 11 JAN 2017

FEL

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*	
Amendment Number: 07	**Document ID Number:** BATT01-5 (00390)
Submitted By: Douglas J. Fort	**Date:** 1/26/2017

Amendment Relating To: BATT01-00390 Protocol Amendment 5

[X] Protocol **[ ] Study Plan** **[ ] QAPP** **[ ] QAMP** **[ ] SOP**

[ ] Other (describe):

Original Specifications:

BATT01-00390 Protocol Amendment 5 Original Specifications section, "Document or Study Title: Medaka Extended One-Generation Reproduction Test (MEOGRT) of 2-Ethyhexyl 4-Hydroxybenzoate"

Changed To:

"Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*"

Reason for Change:

Incorrect Document or Study Title was cited in BATT01-00390 Protocol Amendment 5.

Approval:

Study Director: _____ Date: 2/1/2017

Sponsor Representative: _____ Date: 1 FEB 2017

Page 1 of 1

BATT01-00390 FEL
Protocol Amendment 08

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

Amendment Number: 08 | **Document ID Number**: BATT01-5 (00390)

Submitted By: Douglas J. Fort | **Date**: 8/9/2017

Amendment Relating To: BATT01-00390

[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 EAG 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 ABC Laboratories and may be reached at 573.777.6050 or tleak@eag.com.

BATT01-00390 FEL
Protocol Amendment 08

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

BATT01-00390
Protocol Amendment 09

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

Amendment Number: 09 | **Document ID Number**: BATT01-5 (00390)

Submitted By: Douglas J. Fort | **Date**: 9/1/2017

Amendment Relating To: BATT01-00390

[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 8 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 8 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.

BATT01-00390 FEL
Protocol Amendment 09

Reason for Change:

Correct typographical errors in sponsor zip code and in EAG company name.

Approval:

Study Director: _____ Date: 11/27/2017

Sponsor Representative: Vincent J. Brown Date: Oct 10, 2017

BATT01-00390
Protocol Amendment 10

FEL

DOCUMENT AMENDMENT FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*	
Amendment Number: 10	**Document ID Number:** BATT01-5 (00390)
Submitted By: Douglas J. Fort	**Date:** 2/12/2018

Amendment Relating To: BATT01-00390

[X] Protocol [ ] Study Plan [ ] QAPP [ ] QAMP [ ] SOP

[ ] Other (describe):

Original Specifications:

1. Page 9, Section 9.3 Test Substance

2-EHHB (TCI America, Portland, OR, lot number H0506, expiration date and re-test date not provided, 98.0% (w/w) pure [w/w] per Certificate of Analysis produced by TCI America) was received from TCI America.

Changed To:

1. Page 9, Section 9.3 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: Vincent J. Brown Date: 13 FEB 2018

Page 1 of 1

FEL

DOCUMENT DEVIATION FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*	
Deviation Number: 01	**Document ID Number**: BATT01-5
Submitted By: Douglas J. Fort	**Date**: 7/1/2016
Deviation Relating To: BATT01-00390 [X] Protocol [ ] Study Plan [ ] QAPP [ ] QMP [ ] SOP [ ] Other (describe):	
Original Specifications: 9.9.2.5. Thyroid Histopathology – EPL Test Site Following collection, FEL will send 5 NBF preserved larvae per replicate (20 per treatment or control) to EPL via overnight courier for histopathological processing and analyses.	
Deviation: 9.9.2.5. Thyroid Histopathology – EPL Test Site Following collection, FEL will send 5 NBF preserved larvae per replicate (40 per control and 20 per treatment) to EPL via overnight courier for histopathological processing and analyses.	
Reason/Impact: Typographical error error. The correct number of control specimens were collected and shipped based on correct citation of the proper number of control NF stage 62 sub-sampled specimens to be collected within other sections of protocol 1-6 and LAGDA guidance document OCSPP 890.2300, Larval Amphibian Growth and Development Assay (LAGDA), EPA publication number 740-C-15-001, July 2015. Therefore, no negative impact is anticipated from this deviation.	
Schedule for Completion of Corrective Action: Immediate.	

Approval:

Study Director: _____ Date: 7/6/2016

Sponsor: _____ Date: 6 JUL 2016

FEL

FEL

DOCUMENT DEVIATION FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*	
Deviation Number: 02	**Document ID Number:** BATT01-5
Submitted By: Douglas J. Fort	**Date:** 11/17/2016
Deviation Relating To: BATT01-00390 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QMP [ ] SOP** **[ ] Other (describe):**	
Original Specifications: 9.9.3. End of Larval Exposure Phase, page 19 When all of the organisms reach NF stage 66 (or exposure d 70, whichever occurs first), test organisms will be culled such that 10 metamorphosed young per treatment are exposed for the remainder of the in-life study (10 weeks post-MMT).	
Deviation: As was originally intended, 10 metamorphosed young per replicate for each treatment and control were used for the remainder of the in-life study.	
Reason/Impact: The word "treatment" was mistakenly used instead of "replicate". The number of young used in the study was correct, therefore, no negative impact is anticipated from this deviation.	
Schedule for Completion of Corrective Action: Immediate.	

Approval:

Study Director: _____ Date: 12/6/2016

Sponsor: _____ Date: 12/6/2016

FEL

DOCUMENT DEVIATION FORM
Fort Environmental Laboratories

Document or Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*	
Deviation Number: 03	**Document ID Number**: BATT01-5
Submitted By: Douglas J. Fort	**Date**: 8/9/2017
Deviation Relating To: BATT01-00390 **[X] Protocol [ ] Study Plan [ ] QAPP [ ] QMP [ ] SOP** **[ ] Other (describe):**	
Original Specifications: 9.10. Data Analysis, page 21 Kruskal-Wallis (KW) ANOVA test followed by a step-down pairwise Dunn's test as a post hoc test or the equivalent will be used when assumptions of normality and homogeneity of variances are not met.	
Deviation: A step-down process was not performed with Dunn's test.	
Reason/Impact: For LAGDA (OCSPP. 890.2300), 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.	
Schedule for Completion of Corrective Action: Immediate.	

Approval:

Study Director: _____ Date: 8/14/2017

Sponsor: _____ Date: 10 AUG 2017

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

Study Title

Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

EAG Study Number: 83147
FEL Protocol Number: BATT01-5
FEL Study Number: BATT01-00390

Regulations

USEPA, FIFRA
Good Laboratory Practice (GLP) Standards, Final Rule (40 CFR Part 160, 1989)
and USEPA OCSPP 890.2300, Larval Amphibian Growth and Development Assay

In-Life Testing Facility

Fort Environmental Laboratories, Inc.
515 South Duncan Street
Stillwater, Oklahoma 74074

Analytical Testing Facility



Analytical Bio-Chemistry 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: BATT01-5 FEL Study Number: BATT01-00390

STATEMENT OF GLP COMPLIANCE

Compound: 2-Ethylhexyl 4-Hydroxybenzoate

Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

The study described in this report, with the following exception, 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 original raw data and the study plan 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.

Tom Leak, Ph.D. Date
Principal Investigator
Analytical Bio-Chemistry Laboratories, Inc.

John Aufderheide Date
Senior Director; Aquatic, Plant and Invertebrate Toxicology
Analytical Bio-Chemistry Laboratories, Inc.

QUALITY ASSURANCE STATEMENT

EAG's Quality Assurance Unit (QAU) reviewed Study No. 83147 entitled, "Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*", 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 / 16 May 2018	04 May 2016 / 16 May 2018
20 September 2016	Raw Data and Draft Report	22 September 2016 / 16 May 2018	13 October 2016 / 16 May 2018
07, 11 May 2018	Final Analytical Phase Report	14 May 2018 / 16 May 2018	15 May 2018 / 16 May 2018

These audits indicate that the report is an accurate reflection of the study as it was conducted by EAG.

Jeri Hofen — 16May2018

Jeri Hofen
Manager, Quality Assurance
Analytical Bio-Chemistry Laboratories, Inc.

Date

APPROVAL

The following is to be signed by appropriate personnel:

Principal Investigator:

Name (signed): _____ Date: 16May18
Name (typed): Tom Leak, Ph.D.
Principal Scientist
Analytical Bio-Chemistry Laboratories, Inc.

Management:

Name (signed): _____ Date: 16May 18
Name (typed): John Aufderheide
Senior Director; Aquatic, Plant and
Invertebrate Toxicology
Analytical Bio-Chemistry Laboratories, Inc.

STUDY PERSONNEL

Tom Leak, Ph.D.	Principal Scientist/ Principal Investigator
Lindsey Anderson	Assistant Scientist I
Jeff Brendler	Senior Scientist
Wesley Fain	Staff Scientist
Scott Ledford	Expert Technician
Danah O'Connor	Expert Technician
Ashley Seifert	Associate Scientist I

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1.0 INTRODUCTION

All larval amphibian growth and development assay (LAGDA) diluter and stock solution samples obtained from Fort Environmental Labs, Stillwater, Oklahoma (FEL) during this study (FEL Protocol No. BATT01-5, study number BATT01-00390) were analyzed for concentrations of 2-ethylhexyl 4-hydroxybenzoate (2-EHHB) at EAG. Samples were analyzed using a validated LC-MS/MS method covering the concentration range of 0.104 to 26.0 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 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 (2-EHHB), 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
Product Number:	H0506
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

EAG received a total of 191 study samples from Fort Environmental Labs from 22 March 2016 to 15 July 2016. Samples were prepared for analysis from 22 March 2016 to 15 July 2016. The samples were stored refrigerated. 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 larval amphibian growth and development assay water samples:

Mass Spectrometer:	ABSciex API-6500 Q-Trap
Liquid Chromatograph:	Shimadzu LC30AD system
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:	5.0 µL
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 of 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):

$$\frac{\begin{pmatrix}\text{ng/mL from}\\ \text{standard curve}\end{pmatrix}\begin{pmatrix}\text{analysis volume}\\ \text{in mL}\end{pmatrix}}{\text{sample volume in mL}} = \text{ng/mL}$$

Example calculation for low spike at study initiation (EAG ID 83147-1):

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 = 185,206.4x + 2,569.39
Sample Peak Area: = 189,621

Substituting the Sample CPS in the following equation and solving for x gave the concentration of 2-ethylhexyl 4-hydroxybenzoate:

x = (189,621 – 2,569.39) / (185,206.4)
x = 1.00996 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 2.02 ng/mL, equivalent to 2.02 µg/L.

Recovery of low spike sample at initiation:

$$\frac{2.02\,\mu g/L}{2.00\,\mu g/L} \times 100 = 101\%$$

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:

$$MQL = \frac{(0.104\ ng/mL) \times (10\ mL)}{5\ mL} = 0.208\ ng/mL$$

3.0 RESULTS AND DISCUSSIONS

Analytical sets were typically run with five 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 injections (provided along with larval amphibian growth and development assay 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 10 March and 13 June 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 #83231.

3.3 Accuracy and Precision

Quality control fortifications (spikes) were prepared as follows: Low spikes were fortified with 0.250 mL of a 40.0 ng/mL solution for a nominal concentration of 2.00 ng/mL. High spikes were fortified with 0.250 mL of a 2.00 mg/mL solution for a nominal concentration of 100 ng/mL. QC fortifications were processed and analyzed following the methods described in Section 2.2 and 2.3.2.

The results from the analysis of the QC fortifications are presented in Table 2.

3.4 Amphibian Reproduction Study Water Sample Concentrations

The calculated concentrations of 2-ethylhexyl 4-hydroxybenzoate in larval amphibian growth and development assay water samples are provided in Table 3.

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 93 to 117%, respectively.

These results indicate the method is acceptable for the recovery of 2-ethylhexyl 4-hydroxybenzoate in larval amphibian growth and development assay 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 Larval Amphibian Growth and Development Assay 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 83147 03222016B	0.0 µg/L A (001)	21 March 2016	22 March 2016	22 March 2016	NA	Accepted
	0.0 µg/L B (002)					
	0.0 µg/L C (003)					
	0.0 µg/L D (004)					
	0.0 µg/L E (005)					
	0.0 µg/L F (006)					
	0.0 µg/L G (007)					
	0.0 µg/L H (008)					
	3.6 µg/L A (009)					
	3.6 µg/L B (010)					
	3.6 µg/L C (011)					
	3.6 µg/L D (012)					
	10.9 µg/L A (013)					
	10.9 µg/L B (014)					
	10.9 µg/L C (015)					
	10.9 µg/L D (016)					
	33 µg/L A (017)					
	33 µg/L B (018)					
	33 µg/L C (019)					
	33 µg/L D (020)					
	100 µg/L A (021)					
	100 µg/L B (022)					
	100 µg/L C (023)					
	100 µg/L D (024)					
	Blank (027)					
	Stock (028)					

Table 1. Data Summary of Larval Amphibian Growth and Development Assay 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 83147 03282016A	0.0 µg/L A DUPLICATE (001)	21 March 2016	25 March 2016	28 March 2016	NA	Accepted
	0.0 µg/L B DUPLICATE (002)					
	0.0 µg/L C DUPLICATE (003)					
	0.0 µg/L D DUPLICATE (004)					
	0.0 µg/L E DUPLICATE (005)					
	3.6 µg/L A DUPLICATE (009)					
	3.6 µg/L B DUPLICATE (010)					
	3.6 µg/L C DUPLICATE (011)					
	3.6 µg/L D DUPLICATE (012)					
	10.9 µg/L A DUPLICATE (013)					
	10.9 µg/L B DUPLICATE (014)					
	10.9 µg/L C DUPLICATE (015)					
	10.9 µg/L D DUPLICATE (016)					
	33 µg/L A DUPLICATE (017)					
	33 µg/L B DUPLICATE (018)					
	33 µg/L C DUPLICATE (019)					
	33 µg/L D DUPLICATE (020)					
	100 µg/L A DUPLICATE (021)					
	100 µg/L B DUPLICATE (022)					
	100 µg/L C DUPLICATE (023)					
	100 µg/L D DUPLICATE (024)					

Table 1. Data Summary of Larval Amphibian Growth and Development Assay 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 83147 03302016B	0.0 µg/L A (029)	28 March 2016	29 March 2016	30 March 2016	NA	Accepted
	3.6 µg/L A (030)					
	10.9 µg/L A (031)					
	33 µg/L A (032)					
	100 µg/L A (033)					
	Stock (034)					
	Blank (035)					
CI5038 83147 04052016A	0.0 µg/L Rep A DUPLICATE (029)	28 March 2016	05 April 2016	05 April 2016	NA	Accepted
	Blank (038)	04 April 2016				
	Stock (039)					
	0.0 µg/L B (040)					
	3.6 µg/L B (041)					
	10.9 µg/L B (042)					
	33 µg/L B (043)					
	100 µg/L B (044)					
CI5038 83147 04152016B	0.0 µg/L Rep B DUPLICATE (040)	04 April 2016	13 April 2016	15 April 2016	NA	Accepted
	Stock (047)	11 April 2016				
	Blank (048)					
	0.0 µg/L C (049)					
	3.6 µg/L C (050)					
	10.9 µg/L C (051)					
	33 µg/L C (052)					
	100 µg/L C (053)					

Table 1. Data Summary of Larval Amphibian Growth and Development Assay 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 83147 04202016B	Stock (056) Blank (057) 0.0 µg/L D (058) 3.6 µg/L D (059) 10.9 µg/L D (060) 33 µg/L D (061) 100 µg/L D (062)	18 April 2016	19 April 2016	20 April 2016	NA	Accepted
X 83147 04262016A	Blank (065) 0.0 µg/L E (066) 3.6 µg/L A (067) 10.9 µg/L A (068) 33 µg/L A (069) 100 µg/L A (070) Stock (073)	25 April 2016	26 April 2016	26 April 2016	NA	Accepted
X 83147 04282016Drev1	0.0 µg/L Rep E DUPLICATE (066) 3.6 µg/L Rep A DUPLICATE (067) 100 µg/L Rep A DUPLICATE (070)	25 April 2016	28 April 2016	28 April 2016	NA	Accepted

Table 1. Data Summary of Larval Amphibian Growth and Development Assay 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 83147 05042016B and X 83147 05062016D	Blank (085) 0.0 µg/L F (086) 3.6 µg/L B (087) 10.9 µg/L B (088) 33 µg/L B (089) 100 µg/L B (090) Stock (093)	02 May 2016	03 May 2016	04 and 06 May 2016	NA	Accepted
X 83147 05132016B	Blank (117) 0.0 µg/L G (118) 3.6 µg/L C (119) 10.9 µg/L C (120) 33 µg/L C (121) 100 µg/L C (122) Stock (123)	09 May 2016	10 May 2016	13 May 2016	NA	Accepted
X 83147 05222016B	0.0 µg/L Rep F DUPLICATE (086) 0.0 µg/L Rep G DUPLICATE (118) Blank (175) 0.0 µg/L H (176) 3.6 µg/L D (177) 10.9 µg/L D (178) 33 µg/L D (179) 100 µg/L D (180) Stock (181)	02 May 2016 09 May 2016 16 May 2016	17 May 2016	22 May 2016	NA	Accepted

Table 1. Data Summary of Larval Amphibian Growth and Development Assay 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 83147 05242016B	Blank (205) 0.0 µg/L A (206) 3.6 µg/L A (207) 10.9 µg/L A (208) 33 µg/L A (209) 100 µg/L A (210) Stock (211)	23 May 2016	24 May 2016	24 May 2016	NA	Accepted
X 83147 06062016A	Blank (344) 0.0 µg/L B (345) 3.6 µg/L B (346) 10.9 µg/L B (347) 33 µg/L B (348) 100 µg/L B (349) Stock (350)	01 June 2016	05 June 2016	06 June 2016	NA	Accepted
X 83147 06082016A	Blank (358) 0.0 µg/L C (359) 3.6 µg/L C (360) 10.9 µg/L C (361) 33 µg/L C (362) 100 µg/L C (363) Stock (364)	06 June 2016	08 June 2016	08 June 2016	NA	Accepted
X 83147 06132016A	3.6 µg/L Rep B DUPLICATE (346) 100 µg/L Rep B DUPLICATE (349)	01 June 2016	13 June 2016	13 June 2016	NA	Accepted

Table 1. Data Summary of Larval Amphibian Growth and Development Assay 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 83147 06162016B	Blank (367)	13 June 2016	14 June 2016	16 June 2016	NA	Accepted
	0.0 µg/L D (368)					
	3.6 µg/L D (369)					
	10.9 µg/L D (370)					
	33 µg/L D (371)					
	100 µg/L D (372)					
	Stock (373)					
X 83147 06222016A	Blank (376)	20 June 2016	21 June 2016	22 June 2016	NA	Accepted
	0.0 µg/L E (377)					
	3.6 µg/L A (378)					
	10.9 µg/L A (379)					
	33 µg/L A (380)					
	100 µg/L A (381)					
	Stock (382)					
X 83147 06292016B	100 µg/L Rep D DUPLICATE (372)	13 June 2016	28 June 2016	29 June 2016	NA	Accepted
	33 µg/L Rep A DUPLICATE (380)	20 June 2016				
	100 µg/L Rep A DUPLICATE (381)					
	Blank (385)	27 June 2016				
	0.0 µg/L F (386)					
	3.6 µg/L B (387)					
	10.9 µg/L B (388)					
	33 µg/L B (389)					
	100 µg/L B (390)					
	Stock (391)					

Table 1. Data Summary of Larval Amphibian Growth and Development Assay 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 83147 07112016A	Blank (634)	05 July 2016	08 July 2016	11 July 2016	NA	Accepted
	0.0 µg/L G (635)					
	3.6 µg/L C (636)					
	10.9 µg/L C (637)					
	33 µg/L C (638)					
	100 µg/L C (638)					
	Stock (640)					

Table 1. Data Summary of Larval Amphibian Growth and Development Assay 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 83147 07172016A	Blank (1123) 0.0 µg/L A (1124) 0.0 µg/L B (1125) 0.0 µg/L C (1126) 0.0 µg/L D (1127) 0.0 µg/L E (1128) 0.0 µg/L F (1129) 0.0 µg/L G (1130) 0.0 µg/L H (1131) 3.6 µg/L A (1132) 3.6 µg/L B (1133) 3.6 µg/L C (1134) 3.6 µg/L D (1135) 10.9 µg/L A (1136) 10.9 µg/L B (1137) 10.9 µg/L C (1138) 10.9 µg/L D (1139) 33 µg/L A (1140) 33 µg/L B (1141) 33 µg/L C (1142) 33 µg/L D (1143) 100 µg/L A (1144) 100 µg/L B (1145) 100 µg/L C (1146) 100 µg/L D (1147) Stock (1148)	14 July 2016	15 July 2016	17 July 2016	NA	Accepted

Table 2. QC Data of 2-EHHB Measured Concentrations in Larval Amphibian Growth and Development Assay Water Samples

	Nominal Concentration			
	Low Spike		High Spike	
	2.00 ng/mL		100 ng/mL	
LC-MS Filename:	Measured Concentration (ng/mL)	% Nominal	Measured Concentration (ng/mL)	% Nominal
CI5038 83147 03222016B Initiation	2.02	101	99.4	99
CI5038 83147 03282016A Initiation Duplicate	1.99	100	99.7	100
CI5038 83147 03302016B Week 1	1.97	99	97.6	98
Ci5038 83147 04052016A Week 2	2.03	102	93.3	93
CI5038 83147 04152016B Week 3	1.93	97	94.9	95
X 83147 04202016B Week 4	2.09	105	99.8	100
X 83147 04262016A Week 5	2.13	107	103	103
X 83147 04282016Drev1 Week 5 Duplicate	2.09	105	101	101
X 83147 05042016B and 05062016D Week 6	2.05	103	95.6	96
X 83147 05132016B Week 7	2.03	102	100	100
X 83147 05222016B Week 8	2.01	101	101	101
X 83147 05242016B Week 9	2.10	105	97.1	97

Table 2. QC Data of 2-EHHB Measured Concentrations in Larval Amphibian Growth and Development Assay Water Samples (continued)

	Nominal Concentration			
	Low Spike		High Spike	
	2.00 ng/mL		100 ng/mL	
LC-MS Filename:	Measured Concentration (ng/mL) [a]	% Nominal	Measured Concentration (ng/mL)	% Nominal
X 83147 06062016A Week 10	2.04	102	98.2	98
X 83147 06132016A Week 10 Duplicate	2.28	114	111	111
X 83147 06082016A Week 11	1.95	98	96.7	97
X 83147 06162016B Week 12	2.27	114	109	109
X 83147 06222016A Week 13	2.25	113	112	112
X 83147 06292016B Week 14	2.30	115	108	108
CI5038 83147 07112016A Week 15	2.17	109	112	112
X 83147 07172016A Termination	2.33	117	104	104

Table 3. Measured Concentrations of 2-EHHB in Larval Amphibian Growth and Development Assay Exposure Samples

Sample Number	Sample ID	Nominal Concentration (µg/L)	Measured Concentration. (µg/L) [a]
Study Day 0 (Initiation)			
001	0.0 µg/L Rep A	0.00	3.49
002	0.0 µg/L Rep B	0.00	0.347
003	0.0 µg/L Rep C	0.00	0.453
004	0.0 µg/L Rep D	0.00	0.452
005	0.0 µg/L Rep E	0.00	0.633
006	0.0 µg/L Rep F	0.00	< MQL [b]
007	0.0 µg/L Rep G	0.00	< MQL [b]
008	0.0 µg/L Rep H	0.00	< MQL [b]
009	3.6 µg/L Rep A	3.60	0.759
010	3.6 µg/L Rep B	3.60	0.841
011	3.6 µg/L Rep C	3.60	0.791
012	3.6 µg/L Rep D	3.60	0.758
013	10.9 µg/L Rep A	10.9	6.87
014	10.9 µg/L Rep B	10.9	6.98
015	10.9 µg/L Rep C	10.9	6.81
016	10.9 µg/L Rep D	10.9	6.53
017	33 µg/L Rep A	33.0	17.6
018	33 µg/L Rep B	33.0	17.1
019	33 µg/L Rep C	33.0	16.4
020	33 µg/L Rep D	33.0	16.2
021	100 µg/L Rep A	100	53.4
022	100 µg/L Rep B	100	48.9
023	100 µg/L Rep C	100	49.6
024	100 µg/L Rep D	100	45.3
027	Blank	0.00	< MQL [b]
028	Stock	20,000	5,160

[a] Measured Concentration (µg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L.

NA = Not applicable

Table 3. Measured Concentrations of 2-EHHB in Larval Amphibian Growth and Development Assay Exposure Samples (continued)

Sample Number	Sample ID	Nominal Concentration (µg/L)	Measured Concentration. (µg/L) [a]
Study Day 0 (Initiation) (Duplicate)			
001	0.0 µg/L Rep A DUPLICATE	0.00	< MQL [b]
002	0.0 µg/L Rep B DUPLICATE	0.00	0.239
003	0.0 µg/L Rep C DUPLICATE	0.00	< MQL [b]
004	0.0 µg/L Rep D DUPLICATE	0.00	< MQL [b]
005	0.0 µg/L Rep E DUPLICATE	0.00	0.222
009	3.6 µg/L Rep A DUPLICATE	3.60	6.18
010	3.6 µg/L Rep B DUPLICATE	3.60	8.19
011	3.6 µg/L Rep C DUPLICATE	3.60	6.38
012	3.6 µg/L Rep D DUPLICATE	3.60	6.89
013	10.9 µg/L Rep A DUPLICATE	10.9	9.13
014	10.9 µg/L Rep B DUPLICATE	10.9	9.94
015	10.9 µg/L Rep C DUPLICATE	10.9	8.25
016	10.9 µg/L Rep D DUPLICATE	10.9	8.91
017	33 µg/L Rep A DUPLICATE	33.0	19.8
018	33 µg/L Rep B DUPLICATE	33.0	23.2
019	33 µg/L Rep C DUPLICATE	33.0	22.2
020	33 µg/L Rep D DUPLICATE	33.0	20.0
021	100 µg/L Rep A DUPLICATE	100	68.9
022	100 µg/L Rep B DUPLICATE	100	71.9
023	100 µg/L Rep C DUPLICATE	100	67.0
024	100 µg/L Rep D DUPLICATE	100	70.8

[a] Measured Concentration (µg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L.

NA = Not applicable

Table 3. Measured Concentrations of 2-EHHB in Larval Amphibian Growth and Development Assay Exposure Samples (continued)

Sample Number	Sample ID	Nominal Concentration (µg/L)	Measured Concentration. (µg/L) [a]
Study Day 7			
029	0.0 µg/L Rep A	0.00	0.521
030	3.6 µg/L Rep A	3.60	4.15
031	10.9 µg/L Rep A	10.9	10.3
032	33 µg/L Rep A	33.0	34.9
033	100 µg/L Rep A	100	83.5
034	Stock	20,000	4,390
035	Blank	0.00	< MQL [b]
Study Day 7 (Duplicate)			
029	0.0 µg/L Rep A DUPLICATE	0.00	0.328
Study Day 14			
038	Blank	0.00	< MQL [b]
039	Stock	20,000	5,620
040	0.0 µg/L Rep B	0.00	0.855
041	3.6 µg/L Rep B	3.60	5.12
042	10.9 µg/L Rep B	10.9	11.9
043	33 µg/L Rep B	33.0	29.9
044	100 µg/L Rep B	100	75.4
Study Day 14 (Duplicate)			
040	0.0 µg/L Rep B DUPLICATE	0.00	< MQL [b]
Study Day 21			
047	Stock	20,000	7,580
048	Blank	0.00	< MQL [b]
049	0.0 µg/L Rep C	0.00	< MQL [b]
050	3.6 µg/L Rep C	3.60	5.24
051	10.9 µg/L Rep C	10.9	11.1
052	33 µg/L Rep C	33.0	25.8
053	100 µg/L Rep C	100	70.5

[a] Measured Concentration (µg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L.

NA = Not applicable

Table 3. Measured Concentrations of 2-EHHB in Larval Amphibian Growth and Development Assay Exposure Samples (continued)

Sample Number	Sample ID	Nominal Concentration (µg/L)	Measured Concentration. (µg/L) [a]
Study Day 28			
056	Stock	20,000	7490
057	Blank	0.00	< MQL [b]
058	0.0 µg/L Rep D	0.00	< MQL [b]
059	3.6 µg/L Rep D	3.60	4.48
060	10.9 µg/L Rep D	10.9	12.3
061	33 µg/L Rep D	33.0	31.7
062	100 µg/L Rep D	100	102
Study Day 35			
065	Blank	0.00	< MQL [b]
066	0.0 µg/L Rep E	0.00	288
067	3.6 µg/L Rep A	3.60	11.0
068	10.9 µg/L Rep A	10.9	14.0
069	33 µg/L Rep A	33.0	26.9
070	100 µg/L Rep A	100	60.4
073	Stock	6,000	7800
Study Day 35 (Duplicates)			
066	0.0 µg/L Rep E DUPLICATE	0.00	0.227
067	3.6 µg/L Rep A DUPLICATE	3.60	6.25
070	100 µg/L Rep A DUPLICATE	100	72.1

[a] Measured Concentration (µg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L.

NA = Not applicable

Table 3. Measured Concentrations of 2-EHHB in Larval Amphibian Growth and Development Assay Exposure Samples (continued)

Sample Number	Sample ID	Nominal Concentration (µg/L)	Measured Concentration. (µg/L) [a]
Study Day 42			
085	Blank	0.00	< MQL [b]
086	0.0 µg/L Rep F	0.00	1.16 [c]
087	3.6 µg/L Rep B	3.60	6.27
088	10.9 µg/L Rep B	10.9	10.5
089	33 µg/L Rep B	33.0	26.9
090	100 µg/L Rep B	100	67.9
093	Stock	6,000	5,600
Study Day 42 (Duplicate)			
086	0.0 µg/L Rep F DUPLICATE	0.00	< MQL [b]
Study Day 49			
117	Blank	0.00	< MQL [b]
118	0.0 µg/L Rep G	0.00	1.20
119	3.6 µg/L Rep C	3.60	3.86
120	10.9 µg/L Rep C	10.9	8.24
121	33 µg/L Rep C	33.0	30.4
122	100 µg/L Rep C	100	76.6
123	Stock	6,000	4,300
Study Day 49 (Duplicate)			
118	0.0 µg/L Rep G DUPLICATE	0.00	< MQL [b]
Study Day 56			
175	Blank	0.00	< MQL [b]
176	0.0 µg/L Rep H	0.00	< MQL [b]
177	3.6 µg/L Rep D	3.60	3.49
178	10.9 µg/L Rep D	10.9	8.47
179	33 µg/L Rep D	33.0	26.4
180	100 µg/L Rep D	100	69.5
181	Stock	6,000	4,390

[a] Measured Concentration (µg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L.

[c] Sample was re-vialed in duplicate and analyzed in X 83147 05062016D. Average of the original and duplicate re-analysis was reported.

NA = Not applicable

Table 3. Measured Concentrations of 2-EHHB in Larval Amphibian Growth and Development Assay Exposure Samples (continued)

Sample Number	Sample ID	Nominal Concentration (µg/L)	Measured Concentration. (µg/L) [a]
Study Day 63			
205	Blank	0.00	< MQL [b]
206	0.0 µg/L Rep A	0.00	< MQL [b]
207	3.6 µg/L Rep A	3.60	3.23
208	10.9 µg/L Rep A	10.9	7.93
209	33 µg/L Rep A	33.0	22.9
210	100 µg/L Rep A	100	73.6
211	Stock	6,000	6,160
Study Day 72			
344	Blank	0.00	< MQL [b]
345	0.0 µg/L Rep B	0.00	< MQL [b]
346	3.6 µg/L Rep B	3.60	9.33
347	10.9 µg/L Rep B	10.9	18.0
348	33 µg/L Rep B	33.0	33.3
349	100 µg/L Rep B	100	52.6
350	Stock	6,000	5,250
Study Day 72 (Duplicates)			
346	3.6 µg/L Rep B DUPLICATE	3.60	5.69
349	100 µg/L Rep B DUPLICATE	100	76.1
Study Day 77			
358	Blank	0.00	< MQL [b]
359	0.0 µg/L Rep C	0.00	0.218
360	3.6 µg/L Rep C	3.60	5.34
361	10.9 µg/L Rep C	10.9	10.1
362	33 µg/L Rep C	33.0	30.4
363	100 µg/L Rep C	100	86.7
364	Stock	6,000	4,960

[a] Measured Concentration (µg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L.

NA = Not applicable

Table 3. Measured Concentrations of 2-EHHB in Larval Amphibian Growth and Development Assay Exposure Samples (continued)

Sample Number	Sample ID	Nominal Concentration (µg/L)	Measured Concentration. (µg/L) [a]
Study Day 84			
367	Blank	0.00	< MQL [b]
368	0.0 µg/L Rep D	0.00	< MQL [b]
369	3.6 µg/L Rep D	3.60	2.72
370	10.9 µg/L Rep D	10.9	7.26
371	33 µg/L Rep D	33.0	19.7
372	100 µg/L Rep D	100	35.4
373	Stock	6,000	6,650
Study Day 84 (Duplicate)			
372	100 µg/L Rep D DUPLICATE	100	263 [c]
Study Day 91			
376	Blank	0.00	< MQL [b]
377	0.0 µg/L Rep E	0.00	< MQL [b]
378	3.6 µg/L Rep A	3.60	3.61
379	10.9 µg/L Rep A	10.9	8.60
380	33 µg/L Rep A	33.0	18.7
381	100 µg/L Rep A	100	48.1
382	Stock	6,000	5,830
Study Day 91 (Duplicate)			
380	33 µg/L Rep A DUPLICATE	33.0	237 [c]
381	100 µg/L Rep A DUPLICATE	100	268 [c]
Study Day 98			
385	Blank	0.00	< MQL [b]
386	0.0 µg/L Rep F	0.00	< MQL [b]
387	3.6 µg/L Rep B	3.60	11.3
388	10.9 µg/L Rep B	10.9	16.2
389	33 µg/L Rep B	33.0	38.0
390	100 µg/L Rep B	100	99.5
391	Stock	6,000	7,940

[a] Measured Concentration (µg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L.

[c] Sample was re-vialed in duplicate and analyzed in CI5038 83147 113020169A. Average of the original and duplicate re-analysis was reported.

NA = Not applicable

Table 3. Measured Concentrations of 2-EHHB in Larval Amphibian Growth and Development Assay Exposure Samples (continued)

Sample Number	Sample ID	Nominal Concentration (µg/L)	Measured Concentration. (µg/L) [a]
Study Day 106			
634	Blank	0.00	< MQL [b]
635	0.0 µg/L Rep G	0.00	< MQL [b]
636	3.6 µg/L Rep C	3.60	4.24
637	10.9 µg/L Rep C	10.9	8.46
638	33 µg/L Rep C	33.0	23.8
639	100 µg/L Rep C	100	111
640	Stock	6,000	5,360

[a] Measured Concentration (µg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L.

NA = Not applicable

Table 3. Measured Concentrations of 2-EHHB in Larval Amphibian Growth and Development Assay Exposure Samples (continued)

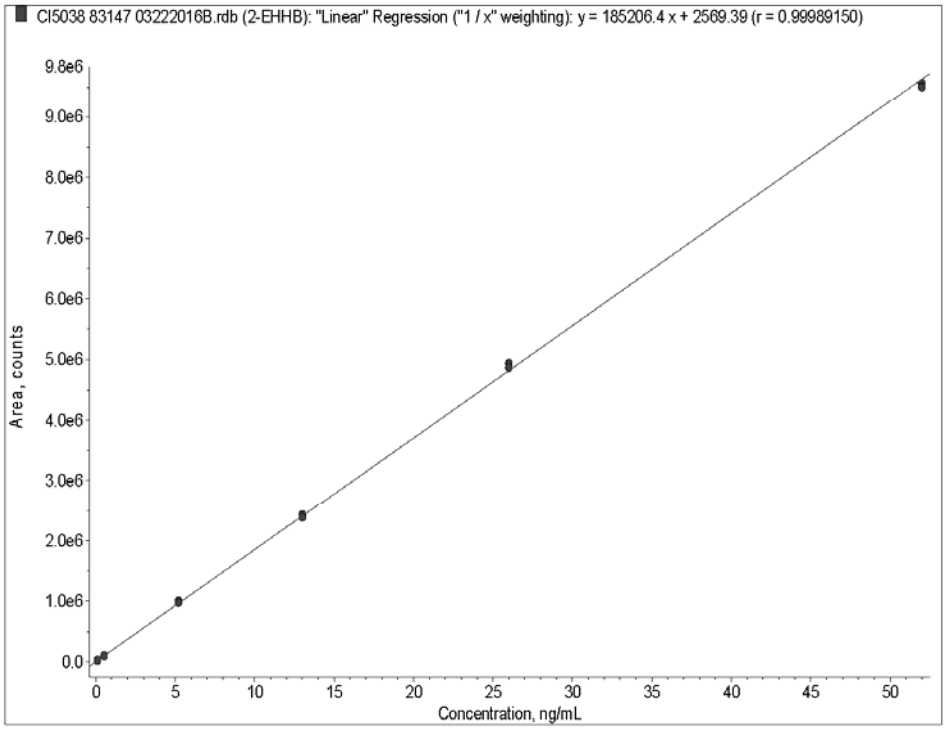
Sample Number	Sample ID	Nominal Concentration (µg/L)	Measured Concentration. (µg/L) [a]
Study Day 115			
1123	Blank	0.00	< MQL [b]
1124	0.0 µg/L Rep A	0.00	< MQL [b]
1125	0.0 µg/L Rep B	0.00	< MQL [b]
1126	0.0 µg/L Rep C	0.00	< MQL [b]
1127	0.0 µg/L Rep D	0.00	< MQL [b]
1128	0.0 µg/L Rep E	0.00	< MQL [b]
1129	0.0 µg/L Rep F	0.00	< MQL [b]
1130	0.0 µg/L Rep G	0.00	< MQL [b]
1131	0.0 µg/L Rep H	0.00	< MQL [b]
1132	3.6 µg/L Rep A	3.60	7.52
1133	3.6 µg/L Rep B	3.60	6.96
1134	3.6 µg/L Rep C	3.60	6.49
1135	3.6 µg/L Rep D	3.60	7.95
1136	10.9 µg/L Rep A	10.9	13.4
1137	10.9 µg/L Rep B	10.9	13.3
1138	10.9 µg/L Rep C	10.9	14.5
1139	10.9 µg/L Rep D	10.9	13.4
1140	33 µg/L Rep A	33.0	30.9
1141	33 µg/L Rep B	33.0	33.3
1142	33 µg/L Rep C	33.0	31.1
1143	33 µg/L Rep D	33.0	34.4
1144	100 µg/L Rep A	100	67.2
1145	100 µg/L Rep B	100	68.0
1146	100 µg/L Rep C	100	67.8
1147	100 µg/L Rep D	100	65.6
1148	Stock	6,000	4,910

[a] Measured Concentration (µg/L) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

[b] MQL = 0.208 µg/L.

NA = Not applicable

Figure 1 Typical Calibration Curve for 2-EHHB from the Larval Amphibian Growth and Development Assay 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 **EXPOSURE PHASE 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: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Initiation
Data file name: CI5038 83147 03222016B

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
83147-001	0.0 µg/L Rep A	0.00	1.74311	5	10	3.49	NA
83147-002	0.0 µg/L Rep B	0.00	0.17352	5	10	0.347	NA
83147-003	0.0 µg/L Rep C	0.00	0.22649	5	10	0.453	NA
83147-004	0.0 µg/L Rep D	0.00	0.22581	5	10	0.452	NA
83147-005	0.0 µg/L Rep E	0.00	0.31639	5	10	0.633	NA
83147-006	0.0 µg/L Rep F	0.00	< low std	5	10	< MQL [a]	NA
83147-007	0.0 µg/L Rep G	0.00	< low std	5	10	< MQL [a]	NA
83147-008	0.0 µg/L Rep H	0.00	< low std	5	10	< MQL [a]	NA
83147-009	3.6 µg/L Rep A	3.60	0.37962	5	10	0.759	21%
83147-010	3.6 µg/L Rep B	3.60	0.42051	5	10	0.841	23%
83147-011	3.6 µg/L Rep C	3.60	0.39554	5	10	0.791	22%
83147-012	3.6 µg/L Rep D	3.60	0.37904	5	10	0.758	21%
83147-013	10.9 µg/L Rep A	10.9	0.66713	5	50	6.67	63%
83147-014	10.9 µg/L Rep B	10.9	0.69831	5	50	6.98	64%
83147-015	10.9 µg/L Rep C	10.9	0.68141	5	50	6.81	62%
83147-016	10.9 µg/L Rep D	10.9	0.65340	5	50	6.53	60%
83147-017	33 µg/L Rep A	33.0	0.88178	5	100	17.6	53%
83147-018	33 µg/L Rep B	33.0	0.85439	5	100	17.1	52%
83147-019	33 µg/L Rep C	33.0	0.81941	5	100	16.4	50%
83147-020	33 µg/L Rep D	33.0	0.80886	5	100	16.2	49%
83147-021	100 µg/L Rep A	100	1.33527	5	200	53.4	53%
83147-022	100 µg/L Rep B	100	1.22132	5	200	48.9	49%
83147-023	100 µg/L Rep C	100	1.23906	5	200	49.6	50%
83147-024	100 µg/L Rep D	100	1.13358	5	200	45.3	45%
83147-027	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-028	Stock	20000	1.61383	5	16000	5160	26%
83147-1	Low Spike	2.00	1.00996	5	10	2.02	101%
83147-2	High Spike	100	2.46388	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 March 16

Reviewed by: _____ Date: 17 Aug 16

Study Director: _____ Date: Aug 17, 16

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Initiation DUPLICATE
Data file name: CI5038 83147 03282016A

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
83147-001	0.0 µg/L Rep A DUPLICATE	0.00	< low std	5	10	< MQL *	NA
83147-002	0.0 µg/L Rep B DUPLICATE	0.00	0.11942	5	10	0.239	NA
83147-003	0.0 µg/L Rep C DUPLICATE	0.00	< low std	5	10	< MQL *	NA
83147-004	0.0 µg/L Rep D DUPLICATE	0.00	< low std	5	10	< MQL *	NA
83147-005	0.0 µg/L Rep E DUPLICATE	0.00	0.11096	5	10	0.222	NA
83147-009	3.6 µg/L Rep A DUPLICATE	3.60	3.08964	5	10	6.18	172%
83147-010	3.6 µg/L Rep B DUPLICATE	3.60	4.09251	5	10	8.19	228%
83147-011	3.6 µg/L Rep C DUPLICATE	3.60	3.18910	5	10	6.38	177%
83147-012	3.6 µg/L Rep D DUPLICATE	3.60	3.44503	5	10	6.89	191%
83147-013	10.9 µg/L Rep A DUPLICATE	10.9	0.91321	5	50	9.13	84%
83147-014	10.9 µg/L Rep B DUPLICATE	10.9	0.89386	5	50	8.94	91%
83147-015	10.9 µg/L Rep C DUPLICATE	10.9	0.82496	5	50	8.25	76%
83147-016	10.9 µg/L Rep D DUPLICATE	10.9	0.89055	5	50	8.91	82%
83147-017	33 µg/L Rep A DUPLICATE	33.0	0.99058	5	100	19.8	60%
83147-018	33 µg/L Rep B DUPLICATE	33.0	1.16179	5	100	23.2	70%
83147-019	33 µg/L Rep C DUPLICATE	33.0	1.11131	5	100	22.2	67%
83147-020	33 µg/L Rep D DUPLICATE	33.0	0.99767	5	100	20.0	61%
83147-021	100 µg/L Rep A DUPLICATE	100	1.72178	5	200	68.9	68%
83147-022	100 µg/L Rep B DUPLICATE	100	1.79770	5	200	71.9	72%
83147-023	100 µg/L Rep C DUPLICATE	100	1.67405	5	200	67.0	67%
83147-024	100 µg/L Rep D DUPLICATE	100	1.77031	5	200	70.8	71%
83147-3	Low Spike	2.00	0.99493	5	10	1.99	100%
83147-4	High Spike	100	2.49219	5	200	99.7	100%

* MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104\ \text{ng/mL} \times 10\ \text{mL}}{5\ \text{mL}} = 0.208\ \text{ng/mL}$$

© 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\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 1
Data file name: CI5038 83147 03302016B

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
83147-028 24 C	0.0 µg/L Rep A	0.00	0.26032	5	10	0.521	NA
83147-029 34 C	3.6 µg/L Rep A	3.60	2.07730	5	10	4.15	115%
83147-030 24 C	10.9 µg/L Rep A	10.9	1.02762	5	50	10.3	94%
83147-031 34 C	33 µg/L Rep A	33.0	1.74582	5	100	34.9	106%
83147-032 34 C	100 µg/L Rep A	100	2.08721	5	200	83.5	84%
83147-033 34 C	Stock	20000	1.37178	5	16000	4390	22%
83147-034 34 C	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-5	Low Spike	2.00	0.98309	5	10	1.97	99%
83147-6	High Spike	100	2.44093	5	200	97.6	98%

① Corrected Sample # DRC calibration

[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'Connor Date: 3/Mar/16

Reviewed by: Alicia T. Bermudez Date: 17 Aug 16

Study Director: [illegible] Date: Aug 17, 16

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 2
Data file name: Ci5038 83147 04052016A

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
83147-029	0.0 µg/L Rep A DUPLICATE	0.00	0.16419	5	10	0.328	NA
83147-038	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-039	Stock	20000	1.75604	5	16000	5620	28%
83147-040	0.0 µg/L Rep B	0.00	0.42726	5	10	0.855	NA
83147-041	3.6 µg/L Rep B	3.60	2.56881	5	10	5.12	142%
83147-042	10.9 µg/L Rep B	10.9	1.19445	5	50	11.9	109%
83147-043	33 µg/L Rep B	33.0	1.49532	5	100	29.9	91%
83147-044	100 µg/L Rep B	100	1.88576	5	200	75.4	75%
83147-7	Low Spike	2.00	1.01559	5	10	2.03	102%
83147-8	High Spike	100	2.33333	5	200	93.3	93%

[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: 07 Apr 16

Reviewed by: _____ Date: 17 Aug 16

Study Director: _____ Date: 17 Aug 16

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 3
Data file name: CI5038 83147 04152016B

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
83147-040	0.0 µg/L Rep B DUPLICATE	0.00	< low std	5	10	< MQL *	NA
83147-047	Stock	20000	2.36974	5	16000	7580	38%
83147-048	Blank	0.00	No Peak	5	10	< MQL *	NA
83147-049	0.0 µg/L Rep C	0.00	No Peak	5	10	< MQL *	NA
83147-050	3.6 µg/L Rep C	3.60	2.62014	5	10	5.24	146%
83147-051	10.9 µg/L Rep C	10.9	1.11477	5	50	11.1	102%
83147-052	33 µg/L Rep C	33.0	1.29050	5	100	25.8	78%
83147-053	100 µg/L Rep C	100	1.76200	5	200	70.5	71%
83147-11	Low Spike	2.00	0.96649	5	10	1.93	97%
83147-12	High Spike	100	2.37151	5	200	94.9	95%

* 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 Aug 16

Reviewed by: Alicia T. Bermudez Date: 17 Aug 16

Study Director: _____ Date: 17 Aug 16

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 4
Data file name: X 83147 04202016B

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
83147-056	Stock	20000	2.33966	5	16000	7490	37%
83147-057	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-058	0.0 µg/L Rep D	0.00	No Peak	5	10	< MQL [a]	NA
83147-059	3.6 µg/L Rep D	3.60	2.23796	5	10	4.46	124%
83147-060	10.9 µg/L Rep D	10.9	1.22544	5	50	12.3	113%
83147-061	33 µg/L Rep D	33.0	1.58296	5	100	31.7	96%
83147-062	100 µg/L Rep D	100	2.54725	5	200	102	102%
83147-13	Low Spike	2.00	1.04567	5	10	2.09	105%
83147-14	High Spike	100	2.49609	5	200	99.8	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: Deborah R. O'Connor Date: 21 Apr 16
Reviewed by: Alexa T. Bermudez Date: 19 Aug 16
Study Director: [signature] Date: [illegible]

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytica\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 5
Data file name: X 83147 04262016A

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	
83147-065	Blank	0.00	No Peak	5	10	< MQL [a]	NA	
83147-066	0.0 µg/L Rep E	0.00	128.74036	5	10	257	NA	②
83147-067	3.6 µg/L Rep A	3.60	5.49135	5	10	11.0	306%	
83147-068	10.9 µg/L Rep A	10.9	1.40285	5	50	14.0	128%	
83147-069	33 µg/L Rep A	33.0	1.34711	5	100	26.9	82%	
83147-070	100 µg/L Rep A	100	1.51022	5	200	60.4	60%	
83147-073	Stock	6000	2.43623	5	16000	7800	130%	
83147-15	Low Spike	2.00	1.06326	5	10	2.13	107%	
83147-16	High Spike	100	2.57127	5	200	103	103%	

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

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 83147 04282016Drev1.

Prepared by: Date:
Reviewed by: Date:
Study Director: Date:

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 5 DUPLICATE
Data file name: X 83147 04282016Drev1

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
83147-066	0.0 µg/L Rep E	0.00	14.38770	5	100	288	NA
83147-066	0.0 µg/L Rep E DUPLICATE	0.00	0.11369	5	10	0.227	NA
83147-067	3.6 µg/L Rep A DUPLICATE	3.60	3.12304	5	10	6.25	174%
83147-070	100 µg/L Rep A DUPLICATE	100	1.80347	5	200	72.1	72%
83147-17	Low Spike	2.00	1.04749	5	10	2.09	105%
83147-18	High Spike	100	2.51509	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: Date:

Reviewed by: Date: 19Aug16

Study Director: Date:

File Location: X:\SharedClient\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 6
Data file name: X 83147 05042016B and X 83147 05062016D

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	
83147-085	Blank	0.00	< low std	5	10	< MQL *	NA	
83147-086	0.0 µg/L Rep F	0.00	0.59647	5	10	1.19	NA	②
83147-086	0.0 µg/L Rep F R-1	0.00	0.56620	5	10	1.13	NA	
83147-086	0.0 µg/L Rep F R-2	0.00	0.58346	5	10	1.17	NA	
					mean =	1.16	NA	
83147-087	3.6 µg/L Rep B	3.60	3.13540	5	10	6.27	174%	
83147-088	10.9 µg/L Rep B	10.9	1.05140	5	50	10.5	96%	
83147-089	33 µg/L Rep B	33.0	1.34695	5	100	26.9	82%	
83147-090	100 µg/L Rep B	100	1.69781	5	200	67.9	68%	
83147-093	Stock	6000	1.74909	5	16000	5600	93%	
83147-19	Low Spike	2.00	1.02703	5	10	2.05	103%	
83147-20	High Spike	100	2.38904	5	200	95.6	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)
② Sample was re-vialed in duplicate and analyzed in X 83147 05062016D. Average of the three injections was reported.

Prepared by: _____ Date: _____
Reviewed by: _____ Date: _____
Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 7
Data file name: X 83147 05132016B

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
83147-117	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-118	0.0 µg/L Rep G	0.00	0.59770	5	10	1.20	NA
83147-119	3.6 µg/L Rep C	3.60	1.92826	5	10	3.86	107%
83147-120	10.9 µg/L Rep C	10.9	0.82399	5	50	8.24	76%
83147-121	33 µg/L Rep C	33.0	1.51980	5	100	30.4	92%
83147-122	100 µg/L Rep C	100	1.91468	5	200	76.6	77%
83147-123	Stock	6000	1.34390	5	16000	4300	72%
83147-21	Low Spike	2.00	1.01677	5	10	2.03	102%
83147-22	High Spike	100	2.50851	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: _____ Date: _____

Reviewed by: _____ Date: 18 Aug 16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 8
Data file name: X 83147 05222016B

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
83147-086	0.0 µg/L Rep F DUPLICATE	0.00	< low std	5	10	< MQL [a]	NA
83147-118	0.0 µg/L Rep G DUPLICATE	0.00	< low std	5	10	< MQL [a]	NA
83147-175	Blank	0.00	< low std	5	10	< MQL [a]	NA
83147-176	0.0 µg/L Rep H	0.00	< low std	5	10	< MQL [a]	NA
83147-177	3.6 µg/L Rep D	3.60	1.74528	5	10	3.49	97%
83147-178	10.9 µg/L Rep D	10.9	0.84711	5	50	8.47	78%
83147-179	33 µg/L Rep D	33.0	1.32218	5	100	26.4	80%
83147-180	100 µg/L Rep D	100	1.73666	5	200	69.5	70%
83147-181	Stock	6000	1.37144	5	16000	4390	73%
83147-23	Low Spike	2.00	1.00613	5	10	2.01	101%
83147-24	High Spike	100	2.52741	5	200	101	101%

[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: 18 Aug 16
Study Director: _____ Date: Aug 18 16

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 9
Data file name: X 83147 05242016B

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
83147-205	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-206	0.0 µg/L Rep A	0.00	No Peak	5	10	< MQL [a]	NA
83147-207	3.6 µg/L Rep A	3.60	1.61391	5	10	3.23	90%
83147-208	10.9 µg/L Rep A	10.9	0.79254	5	50	7.93	73%
83147-209	33 µg/L Rep A	33.0	1.14486	5	100	22.9	69%
83147-210	100 µg/L Rep A	100	1.84040	5	200	73.6	74%
83147-211	Stock	6000	1.92454	5	16000	6160	103%
83147-25	Low Spike	2.00	1.05218	5	10	2.10	105%
83147-26	High Spike	100	2.42854	5	200	97.1	97%

[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\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 10
Data file name: X 83147 06062016A

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
83147-344	Blank	0.00	No Peak	5	10	< MQL [3]	NA
83147-345	0.0 µg/L Rep B	0.00	< low std	5	10	< MQL [4]	NA
83147-346	3.6 µg/L Rep B	3.60	4.66466	5	10	9.33	259%
83147-347	10.9 µg/L Rep B	10.9	1.80175	5	50	18.0	165%
83147-348	33 µg/L Rep B	33.0	1.66346	5	100	33.3	101%
83147-349	100 µg/L Rep B	100	1.31414	5	200	52.6	53%
83147-350	Stock	6000	1.64208	5	16000	5250	88%
83147-27	Low Spike	2.00	1.01897	5	10	2.04	102%
83147-28	High Spike	100	2.45610	5	200	98.2	98%

[3] 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 Aug 16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 11
Data file name: X 83147 08082016A

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
83147-358	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-359	0.0 µg/L Rep C	0.00	0.10888	5	10	0.218	NA
83147-360	3.6 µg/L Rep C	3.60	2.66871	5	10	5.34	148%
83147-361	10.9 µg/L Rep C	10.9	1.00619	5	50	10.1	93%
83147-362	33 µg/L Rep C	33.0	1.51944	5	100	30.4	92%
83147-363	100 µg/L Rep C	100	2.16810	5	200	86.7	87%
83147-364	Stock	6000	1.54867	5	16000	4960	83%
83147-29	Low Spike	2.00	0.97260	5	10	1.95	98%
83147-30	High Spike	100	2.41746	5	200	96.7	97%

[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: 16 Aug 16

Reviewed by: Alexa T. Bermudez Date: 18 Aug 16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 10 DUPLICATES
Data file name: X 83147 06132016A

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
83147-346	3.6 µg/L Rep B DUPLICATE	3.60	2.84392	5	10	5.69	158%
83147-349	100 µg/L Rep B DUPLICATE	100	1.90325	5	200	76.1	76%
83147-31	Low Spike	2.00	1.14027	5	10	2.28	114%
83147-32	High Spike	100	2.78606	5	200	111	111%

* 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: 14 Aug 16

Reviewed by: Alexa T. Bermudez Date: 19 Aug 16

Study Director: _____ Date: 19 Aug 16

File Location: X:\Shared\Client\Bathiebl\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 12
Data file name: X 83147 06162016B

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
83147-367	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-368	0.0 µg/L Rep D	0.00	< low std	5	10	< MQL [a]	NA
83147-369	3.6 µg/L Rep D	3.60	1.35856	5	10	2.72	76%
83147-370	10.9 µg/L Rep D	10.9	0.72626	5	50	7.26	67%
83147-371	33 µg/L Rep D	33.0	0.98478	5	100	19.7	60%
83147-372	100 µg/L Rep D	100	0.88495	5	200	35.4	35%
83147-373	Stock	6000	2.07854	5	16000	6650	111%
83147-33	Low Spike	2.00	1.13392	5	10	2.27	114%
83147-34	High Spike	100	2.72303	5	200	109	109%

[a] MQL = low std conc. x analysis volume / sample volume

$$= \frac{0.104 \text{ ng/mL} \times 10 \text{ mL}}{5 \text{ mL}} = 0.208 \text{ ng/mL}$$

ⓘ Measured Concentration (ng/mL) = Measured Conc. From Curve (ng/mL) x Analysis Volume (mL) / Sample Volume (mL)

Prepared by: _____ Date: 11 Aug 16

Reviewed by: _____ Date: 19 Aug 16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 13
Data file name: X 83147 06222016A

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
83147-376	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-377	0.0 µg/L Rep E	0.00	No Peak	5	10	< MQL [a]	NA
83147-378	3.6 µg/L Rep A	3.60	1.80745	5	10	3.61	100%
83147-379	10.9 µg/L Rep A	10.9	0.85977	5	50	8.60	79%
83147-380	33 µg/L Rep A	33.0	0.93418	5	100	18.7	57%
83147-381	100 µg/L Rep A	100	1.20183	5	200	48.1	48%
83147-382	Stock	6000	1.82055	5	16000	5830	97%
83147-35	Low Spike	2.00	1.12476	5	10	2.25	113%
83147-36	High Spike	100	2.79370	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)

Prepared by: _____ Date: 23 Aug 16

Reviewed by: _____ Date: 19 Aug 16

Study Director: _____ Date: 19 Aug 16

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 14
Data file name: X 83147 0629216B

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
83147-372	100 µg/L Rep D DUPLICATE	100	6.57301	5	200	263	263%
83147-380	33 µg/L Rep A DUPLICATE	33.0	11.88078	5	100	238	721%
83147-381	100 µg/L Rep A DUPLICATE	100	6.82622	5	200	273	273%
83147-385	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-386	0.0 µg/L Rep F	0.00	No Peak	5	10	< MQL [a]	NA
83147-387	3.6 µg/L Rep B	3.60	5.65642	5	10	11.3	314%
83147-388	10.9 µg/L Rep B	10.9	1.62213	5	50	16.2	149%
83147-389	33 µg/L Rep B	33.0	1.90084	5	100	38.0	115%
83147-390	100 µg/L Rep B	100	2.48737	5	200	99.5	100%
83147-391	Stock	6000	2.48261	5	16000	7940	132%
83147-37	Low Spike	2.00	1.15139	5	10	2.30	115%
83147-38	High Spike	100	2.69563	5	200	108	108%

[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: 30 June 16

Reviewed by: Alexis T. Bermudez Date: 19 Aug 16

Study Director: _____ Date: 19 Aug 16

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Week 15
Data file name: CI5038 83147 07112016A

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
83147-634	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-635	0.0 µg/L Rep G	0.00	No Peak	5	10	< MQL [a]	NA
83147-636	3.6 µg/L Rep C	3.60	2.11865	5	10	4.24	118%
83147-637	10.9 µg/L Rep C	10.9	0.84560	5	50	8.46	78%
83147-638	33 µg/L Rep C	33.0	1.18864	5	100	23.8	72%
83147-639	100 µg/L Rep C	100	2.78586	5	200	111	111%
83147-640	Stock	6000	1.67412	5	16000	5360	89%
83147-39	Low Spike	2.00	1.08310	5	10	2.17	109%
83147-40	High Spike	100	2.80319	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)

Prepared by: _____ Date: 12 July 16

Reviewed by: _____ Date: 19 July 16

Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

ABC Study Number: 83147
Test Substance: 2-ethylhexyl 4-hydroxybenzoate (2-EHHB)
Sample Point: Termination
Data file name: X 83147 07172016A

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
83147-1123	Blank	0.00	No Peak	5	10	< MQL [a]	NA
83147-1124	0.0 µg/L Rep A	0.00	No Peak	5	10	< MQL [a]	NA
83147-1125	0.0 µg/L Rep B	0.00	No Peak	5	10	< MQL [a]	NA
83147-1126	0.0 µg/L Rep C	0.00	No Peak	5	10	< MQL [a]	NA
83147-1127	0.0 µg/L Rep D	0.00	No Peak	5	10	< MQL [a]	NA
83147-1128	0.0 µg/L Rep E	0.00	No Peak	5	10	< MQL [a]	NA
83147-1129	0.0 µg/L Rep F	0.00	No Peak	5	10	< MQL [a]	NA
83147-1130	0.0 µg/L Rep G	0.00	No Peak	5	10	< MQL [a]	NA
83147-1131	0.0 µg/L Rep H	0.00	No Peak	5	10	< MQL [a]	NA
83147-1132	3.6 µg/L Rep A	3.60	3.75997	5	10	7.52	209%
83147-1133	3.6 µg/L Rep B	3.60	3.47944	5	10	6.96	193%
83147-1134	3.6 µg/L Rep C	3.60	3.24497	5	10	6.49	180%
83147-1135	3.6 µg/L Rep D	3.60	3.97256	5	10	7.95	221%
83147-1136	10.9 µg/L Rep A	10.9	1.33794	5	50	13.4	123%
83147-1137	10.9 µg/L Rep B	10.9	1.33343	5	50	13.3	122%
83147-1138	10.9 µg/L Rep C	10.9	1.45120	5	50	14.5	133%
83147-1139	10.9 µg/L Rep D	10.9	1.34419	5	50	13.4	123%
83147-1140	33 µg/L Rep A	33.0	1.54697	5	100	30.9	94%
83147-1141	33 µg/L Rep B	33.0	1.66522	5	100	33.3	101%
83147-1142	33 µg/L Rep C	33.0	1.55600	5	100	31.1	94%
83147-1143	33 µg/L Rep D	33.0	1.71866	5	100	34.4	104%
83147-1144	100 µg/L Rep A	100	1.68064	5	200	67.2	67%
83147-1145	100 µg/L Rep B	100	1.70072	5	200	68.0	68%
83147-1146	100 µg/L Rep C	100	1.69406	5	200	67.8	68%
83147-1147	100 µg/L Rep D	100	1.63984	5	200	65.6	66%
83147-1148	Stock	6000	1.53291	5	16000	4910	82%
83147-41	Low Spike	2.00	1.16465	5	10	2.33	117%
83147-42	High Spike	100	2.61207	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: 18 Aug 16
Reviewed by: Alexa T. Bermudez Date: 19 Aug 16
Study Director: _____ Date: _____

File Location: X:\Shared\Client\Battelle\Study Folders\83147_2-EHHB\Data\Analytical\83147_Results.xls

Appendix D.
Histopathology Data Reports

Experimental Pathology Laboratories, Inc.

FORT ENVIRONMENTAL LABORATORIES, INC.
STUDY NUMBER BATT01-00390
EPL PROJECT NUMBER 237-074

LARVAL AMPHIBIAN GROWTH AND DEVELOPMENT ASSAY (LAGDA) OF 2-ETHYLHEXYL 4-HYDROXYBENZOATE WITH AFRICAN CLAWED FROG, *XENOPUS LAEVIS*

PATHOLOGY REPORT

Submitted by:

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May 21, 2018

FINAL REPORT

Experimental Pathology Laboratories, Inc.

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PATHOLOGY NARRATIVE

Experimental Pathology Laboratories, Inc.

FORT ENVIRONMENTAL LABORATORIES, INC.
STUDY NUMBER BATT01-00390
EPL PROJECT NUMBER 237-074

LARVAL AMPHIBIAN GROWTH AND DEVELOPMENT ASSAY (LAGDA) OF 2-ETHYLHEXYL 4-HYDROXYBENZOATE WITH AFRICAN CLAWED FROG, *XENOPUS LAEVIS*

PATHOLOGY NARRATIVE

INTRODUCTION

Larval Amphibian Growth and Development Assay (LAGDA) is intended to identify and characterize the adverse consequences of exposure to substances which interfere with the normal development and growth of amphibians through larval development and metamorphosis. It is an important assay to address potential, inciting contributors to amphibian population declines by evaluating the effects, both through endocrine and non-endocrine mechanisms, from exposure to contaminants during the larval stage of development that may adversely affect populations. Thus, the primary objective of the study was to evaluate the potential developmental toxicity of 2-ethylhexyl 4-hydroxybenzoate (2-EHHB) to *Xenopus laevis* in general accordance with the US EPA guidelines established for the LAGDA (US EPA, 2015).

The general experimental design entails exposing Nieuwkoop and Faber (NF) Stage 8 *X. laevis* embryos (5) to four different concentrations of a test chemical and a control until 10 weeks post median metamorphosis time (MMT); which for this study was defined as the median time at which 50% of controls reached NF Stage 62 (Nieuwkoop and Faber, 1994). There was one interim sub-sample at MMT. There were four replicates in each test concentration with eight replicates for the control. Endpoints evaluated during the course of the exposure included those indicative of generalized toxicity: mortality, abnormal behavior, abnormal morphological features, time to metamorphosis at NF Stage 62 (TTM), and growth determinations (length and weight). Thyroid histopathology of NF Stage 62 specimens and gonad, liver, kidney, and gonadal duct histopathology of study termination specimens were performed by Experimental Pathology Laboratories, Inc. (EPL®), Sterling, Virginia in this study. The experimental design is presented in Table 1.

Table 1. Experimental Design				
2-EHHB Treatment Group (µg/L)	NF Stage 62 [a]	Termination [b]		
		Males	Females	Histologic Sex Unconfirmed
0.0 (control)	40	45	32	3
3.6	20	28	11	1
10.9	20	19	21	0
33.0	20	19	17	4
100.0	20	14	25	1
TOTALS	120	125	106	9

[a] Values represent the total individuals examined per group, with all replicates combined.
[b] Values represent total male, female, or sex unconfirmed individuals examined per group, with all replicates combined.

METHODS

LARVAL THYROID GLANDS (NF STAGE 62)

Head samples containing the thyroid glands were submitted to EPL for histologic processing and pathologic evaluation. At EPL, the head samples were processed for paraffin embedding on an automated processer using routine methods. A separate decalcification step was not deemed necessary and was not performed. The processed specimens were embedded so that the cut surface of the posterior margin (neck side) of each sample was microtomed first. For each block, excess paraffin was trimmed away until at least one of the thyroid glands was reached (approximately 500 microns into the tissue). Step sections, each 4-5 microns thick, were obtained at 50 micron intervals until the maximum diameter of at least one gland had been reached. Two additional step sections were then microtomed at 50 micron intervals, and these two sections were placed on a single glass slide. The sections were stained with hematoxylin and eosin, and mounted with a glass coverslip using an appropriate permanent mounting medium. If, upon inspection of the completed sections, inadequate numbers of follicles were represented, and it was apparent that further thyroid tissue remained in the block, additional step sections were cut at 50 micron intervals until the appropriate sections were captured, or until it was determined that additional recuts would not yield the required tissue.

LIVERS (TERMINATION)

Liver samples were submitted to EPL for histologic processing and pathologic evaluation. At EPL, liver samples were processed for paraffin embedding on an automated processer using routine methods. The processed specimens were embedded so that the area of liver to be examined was maximized. For each block, excess paraffin was trimmed away until the liver surface was reached. Step sections, each 4-5 microns thick, were obtained at 50 micron intervals until the maximum diameter of the liver sample was reached. Two additional step sections were then microtomed at 50 micron intervals, and both sections were placed on a single glass slide. The sections were stained with hematoxylin and eosin, and mounted with a glass coverslip using an appropriate permanent mounting medium.

KIDNEYS, GONADAL DUCTS, AND GONADS (TERMINATION)

Trunk samples that contained the juvenile gonads, gonadal ducts, and kidney were submitted to EPL for histologic processing and pathologic evaluation. At EPL, the trunk samples were trimmed to remove excess tissue anterior, posterior, and lateral to the gonads, and to bisect each sample into anterior and posterior segments. Decalcification was performed using a commercial decalcifying solution. The trunk segments were processed for paraffin embedding on an automated processer using routine methods. The processed specimens were embedded in two blocks (anterior segment in block “a”, posterior segment in block “p”), so that the caudal surfaces of the anterior and posterior segments would be microtomed first. For blocks containing anterior segments, excess paraffin was trimmed away until the gonad surface was reached, and then two serial sections were acquired and placed on a single slide (these represented the middle sections). Each anterior segment block was then microtomed 500 microns for males, or 1000 microns for females, and then a second pair of serial sections was taken and placed on a single slide (these represented the anterior sections). For blocks containing posterior segments, excess paraffin was trimmed away until the gonad surface was reached, and then microtomed 1000 microns for males and females at which point two serial sections were acquired and placed on a single slide (these represented the posterior sections). If the gonads were much larger or smaller than anticipated, adjustments were made as needed in the depths at which anterior and posterior sections

were acquired. Sections that contain gonad almost invariably also contain the gonadal ducts and kidneys. Sections were stained with hematoxylin and eosin, and mounted with glass coverslips using an appropriate permanent mounting medium.

The pathologist evaluated all sections using brightfield microscopy, with awareness of the treatment group status of individual animals. Histopathologic findings were scored for severity according to the following grading system: X = not remarkable, Grade 1 = minimal, Grade 2 = mild, Grade 3 = moderate, and Grade 4 = severe, in accordance with previously reported criteria (US EPA, 2015; Wolf, 2015). Gonad phenotype scores were recorded as follows: Grade 0 = gonad phenotype matches genotype; Grade 1 = phenotype primarily matches genotype; Grade 2 = equal parts testis and ovary; Grade 3 = phenotype primarily matches opposite genotype; Grade 4 = sex-reversed, phenotype completely opposite genotype. Results were recorded into a proprietary electronic data recording system, and were subsequently converted into spreadsheet format. Individual animal results were tabulated in the Histopathology Incidence Tables (HIT) and summarized in the Summary Incidence Tables (SIT).

RESULTS

LARVAL THYROID GLANDS (NF STAGE 62)

There were no treatment-related findings in the **thyroid glands** of frogs exposed to 2-EHHB. Minimal to mild follicular cell hypertrophy was a common finding, with a high prevalence in all groups (Table 2). Because anuran metamorphosis is considered to be a thyroid-dependent process, basal levels of follicular cell hypertrophy and hyperplasia are anticipated findings in control frogs at NF Stage 62 (Grim et al., 2009).

Table 2. Prevalence and Severity of Follicular Cell Hypertrophy and Hyperplasia in the Thyroid Glands of NF Stage 62 Frogs

Pathological Finding		Treatment Group (µg/L) [Mean Measured Concentration] 0.0 [<0.208]	3.6 [5.33]	10.9 [10.8]	33.0 [27.2]	100.0 [76.6]
Follicular Cell Hypertrophy	n	40	20	20	20	20
	# affected	31	15	15	13	15
	minimal	27	14	13	13	15
	mild	4	1	2	-	-
Follicular Cell Hyperplasia	n	40	20	20	20	20
	# affected	1	0	3	1	0
	minimal	1	-	3	1	-

LIVERS (TERMINATION)

There were no treatment-related findings in the **livers** of male or female terminal sacrifice frogs exposed to 2-EHHB.

KIDNEYS, GONADAL DUCTS, AND GONADS (TERMINATION): MALES

There were no treatment-related findings in the **kidneys** of male terminal sacrifice frogs exposed to 2-EHHB.

A treatment-related finding in the **gonadal ducts** of male terminal sacrifice frogs was a slight increase in mean oviduct stage scores (Table 3; Figs. 1-2). This finding was especially evident in the 100.0 µg/L dose group at the anterior and middle levels.

There was also a slight decrease in mean Wolffian duct stage scores in the posterior segment of 2-EHHB exposed frogs relative to controls; however, because that decrease occurred predominantly at a single anatomic level and there was no dose-response relationship pattern, the relationship of this finding to 2-EHHB exposure is questionable.

Table 3. Stage Scores in the Gonadal Ducts of Male Frogs

Pathological Finding	Treatment Group (µg/L) [Mean Measured Concentration] 0.0 [<0.208]	3.6 [5.33]	10.9 [10.8]	33.0 [27.2]	100.0 [76.6]
n	45	28	19	19	14
Anterior Oviduct: Stage Scores					
Stage 1	36	15	11	11	5
Stage 2	9	13	8	8	9
Mean Score	1.2	1.5	1.4	1.4	1.6
n	45	28	19	19	14
Middle Oviduct: Stage Scores					
Stage 1	36	15	10	11	6
Stage 2	9	13	9	8	8
Mean Score	1.2	1.5	1.5	1.4	1.6
n	45	27	19	19	14
Posterior Oviduct: Stage Scores					
Stage 1	34	13	12	12	7
Stage 2	11	14	7	7	7
Mean Score	1.2	1.5	1.4	1.4	1.5
n	45	28	19	19	14
Anterior Wolffian Duct: Stage Scores					
Stage 1	8	20	3	5	6
Stage 2	36	8	10	14	7
Stage 3	1	-	6	-	1
Mean Score	1.8	1.3	2.2	1.7	1.6
n	45	28	19	19	14
Middle Wolffian Duct: Stage Scores					
Stage 1	3	14	5	5	4
Stage 2	42	14	9	14	9
Stage 3	-	-	5	-	1
Mean Score	1.9	1.5	2.0	1.7	1.8
n	45	27	19	19	14
Posterior Wolffian Duct: Stage Scores					
Stage 1	8	18	10	10	8
Stage 2	35	9	7	9	5
Stage 3	2	-	2	-	1
Mean Score	1.9	1.3	1.6	1.5	1.5

Although mean testis stage scores were not substantially different among 2-EHHB-treated and control frogs, a treatment-related finding in the **testes** of male terminal sacrifice frogs was a shift in testis stage scores from Stage 5 to Stage 4 (Table 4; Figs. 3-4). This shift was evident at all three testis levels. Stage 5 testes were characterized by the presence of all spermatogenic phases, including spermatozoa, the latter of which were not evident in Stage 4 testes. However, the difference between these two stages

in this study was not profound, as many Stage 5 testes contained relatively few spermatozoa (i.e., they were often early Stage 5).

Table 4. Stage Scores in the Testes of Male Frogs

Pathological Finding	Treatment Group (µg/L) [Mean Measured Concentration] 0.0 [<0.208]	3.6 [5.33]	10.9 [10.8]	33.0 [27.2]	100.0 [76.6]
n	35	24	14	16	12
Anterior Testis: Stage Scores					
Stage 1	-	1	1	-	-
Stage 3	1	1	3	1	-
Stage 4	14	21	6	13	9
Stage 5	18	1	2	2	3
Mean Score	4.5	3.9	3.7	4.1	4.3
Unable to Stage	2	-	2	-	-
n	40	24	17	16	12
Middle Testis: Stage Scores					
Stage 1	-	1	1	-	-
Stage 3	2	-	1	1	-
Stage 4	18	23	13	13	11
Stage 5	19	-	2	2	1
Mean Score	4.4	3.9	3.9	4.1	4.1
Unable to Stage	1	-	-	-	-
n	33	13	13	10	11
Posterior Testis: Stage Scores					
Stage 1	-	1	-	-	-
Stage 2	-	-	1	-	-
Stage 3	3	1	2	-	-
Stage 4	17	10	7	8	8
Stage 5	10	-	2	2	1
Mean Score	4.2	3.7	3.8	4.2	4.1
Unable to Stage	3	1	1	-	2

KIDNEYS, GONADAL DUCTS, AND GONADS (TERMINATION): FEMALES

Treatment-related findings in the **kidneys** of female frogs included: a slight increase in the prevalence of mononuclear cell infiltrates in the anterior segment (100.0 µg/L dose group females) and the middle segment (33.0 and 100.0 µg/L dose group females); a slight general increase in the severity of mineralization in 2-EHHB-treated frogs relative to controls, and an increased prevalence of tubular dilation in all three segments of 100.0 µg/L dose group frogs (Table 5; Figs. 5-6). Based on past experience, mononuclear cell infiltrates and renal tubular dilation in LAGDA studies are frequent sequelae of renal mineralization; however, in this particular instance, the

prevalence of tubular dilation was increased in only the 10.9 and 100.0 µg/L dose groups.

Table 5. Prevalence and Severity of Selected Findings in the Kidneys of Female Frogs

Pathological Finding		Treatment Group (µg/L) [Mean Measured Concentration] 0.0 [<0.208]	3.6 [5.33]	10.9 [10.8]	33.0 [27.2]	100.0 [76.6]
Anterior Kidney: Cellular Infiltrate, Mononuclear Cell	n	31	11	21	17	25
	# affected	9	7	5	10	14
	minimal	9	7	5	10	14
Middle Kidney: Cellular Infiltrate, Mononuclear Cell	n	31	11	21	17	25
	# affected	7	3	7	10	11
	minimal	7	3	7	10	9
	mild	-	-	-	-	2
Posterior Kidney: Cellular Infiltrate, Mononuclear Cell	n	32	11	21	17	25
	# affected	6	3	3	4	6
	minimal	6	3	3	4	6
Anterior Kidney: Mineralization	n	31	11	21	17	25
	# affected	31	11	21	17	25
	minimal	9	2	2	-	2
	mild	21	8	18	17	23
	moderate	1	1	1	-	-
Middle Kidney: Mineralization	n	31	11	21	17	25
	# affected	31	11	21	17	25
	minimal	5	1	1	-	4
	mild	25	8	20	16	21
	moderate	1	2	-	1	-
Posterior Kidney: Mineralization	n	32	11	21	17	25
	# affected	32	11	21	17	25
	minimal	7	-	3	-	1
	mild	23	11	18	16	24
	moderate	2	-	-	1	-
Anterior Kidney: Tubules, Dilation	n	31	11	21	17	25
	# affected	2	0	2	2	9
	minimal	2	-	2	2	7
	mild	-	-	-	-	2
Middle Kidney: Tubules, Dilation	n	31	11	21	17	25
	# affected	1	0	2	1	9
	minimal	1	-	2	1	7
	mild	-	-	-	-	2
Posterior Kidney: Tubules, Dilation	n	32	11	21	17	25
	# affected	2	0	3	0	5
	minimal	2	-	3	-	3
	mild	-	-	-	-	2

There were no substantive differences in the **gonadal ducts** of 2-EHHB-treated females compared to controls.

The sole treatment-related finding in the **ovaries** of female frogs was a decrease in mean ovarian stage scores at all three levels (Table 6; Figs. 7-8). It was predominantly in the 100.0 µg/L dose group that scores were decreased consistently. The decrease was primarily from Stage 4 to Stage 3 ovaries, as Stage 2 ovaries were comparatively rare. Stage 3 ovaries were characterized by relatively low numbers of perinucleolar stage oocytes in proportion to less mature oogenic phases.

Table 6. Stage Scores in the Ovaries of Female Frogs

	Treatment Group (µg/L) [Mean Measured Concentration]				
Pathological Finding	0.0 [<0.208]	3.6 [5.33]	10.9 [10.8]	33.0 [27.2]	100.0 [76.6]
n	31	11	20	17	23
Anterior Ovary: Stage Scores					
Stage 2	1	-	1	-	-
Stage 3	8	6	12	4	17
Stage 4	22	5	7	13	6
Mean Score	3.7	3.5	3.3	3.8	3.3
n	32	11	21	17	23
Middle Ovary: Stage Scores					
Stage 2	2	-	-	-	-
Stage 3	7	7	11	3	16
Stage 4	23	4	10	14	7
Mean Score	3.7	3.4	3.5	3.8	3.3
n	31	10	21	16	23
Posterior Ovary: Stage Scores					
Stage 2	1	-	-	-	-
Stage 3	11	9	16	8	20
Stage 4	19	1	5	7	3
Mean Score	3.6	3.1	3.2	3.5	3.1
Unable to Stage	-	-	-	1	-

Oocytes (minimal) were observed as incidental findings in the testes of two control males, Animal Nos. B1-0.0 µg/L and D1-0.0 µg/L (Fig, 9). There were no oocytes evident in the testes of males exposed to 2-EHHB, and no other evidence of sex reversal (i.e., all other phenotype scores were 0).

Gonads were not recovered histologically from nine frogs scattered among four of the five dose groups. Four of those nine frogs had Stage 1 oviducts, which strongly suggests that they were males. It is suspected that most of the remaining five frogs

were also males, as macroscopically the testes are often very small, difficult to discern, loosely attached and thus easily displaced.

DISCUSSION

There were findings in this study that were suggestive of a minor delay in reproductive tract maturation in 2-EHHB exposed male and female terminal sacrifice frogs relative to controls, and these included increased oviduct stage scores in males, a shift in testis stage scores in males from Stage 5 to Stage 4, and decreased mean ovarian stage scores in high-dose females. In males, oviduct (Müllerian duct) stage scores typically decrease from Stage 2 to Stage 1 with advanced maturity, signifying physiologic atrophy of the ducts. Ancillary clinical data from this study provide mixed support for a delay in maturation. Although there was a slight decrease in median body weight in 100.0 µg/L dose group frogs relative to control frogs, there was an increase in median snout-vent lengths in 2-EHHB-treated frogs as compared to controls (Table 7). However, it has been observed previously that the degree of reproductive development does not appear to be closely linked to somatic growth in *X. laevis* (Ogielska and Kotusz, 2004; Wolf et al., 2010).

Although there were 2-EHHB-associated morphologic changes in female frogs that were suggestive of renal compromise (increased mineralization and tubular dilation), a brief review of the literature did not reveal a published link between 2-EHHB and renal toxicity.

Table 7. Median Body Weight and Snout-Vent Length

	Treatment Group (µg/L) [Mean Measured Concentration]				
Growth Determinations	0.0 [<0.208]	3.6 [5.33]	10.9 [10.8]	33.0 [27.2]	100.0 [76.6]
Median Body Weight (g)	11.1	11.5	11.2	11.5	10.8
Median Snout-Vent Length (mm)	31.7	32.8	34.9	34.3	37.3

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Battelle Memorial Institute Study Number BATT01-00390

CONCLUSION / SUMMARY

Treatment-related findings in this study that were suggestive of a minor delay in reproductive tract maturation occurred in terminal sacrifice frogs and consisted of slightly increased oviduct stage scores in males, a shift in testis stage scores in males from Stage 5 to Stage 4, and decreased mean ovarian stage scores in high-dose females. Treatment-related renal findings in females included an increase in the prevalence of mononuclear cell infiltrates, a slight general increase severity of mineralization, and an increased prevalence of tubular dilation.

There were no treatment-related findings in the thyroid glands of NF Stage 62 frogs, the livers of male or female terminal sacrifice frogs, the kidneys of male terminal sacrifice frogs, or gonadal ducts of female terminal sacrifice frogs.

21 May 2018

JEFFREY C. WOLF, DVM, Diplomate, ACVP — Date
Senior Pathologist

JCW/cb

REFERENCES

Grim KC, Wolfe M, Braunbeck T, Iguchi T, Ohta Y, Tooi O, Touart L, Wolf DC, Tietge J. (2009). Thyroid Histopathology Assessments for the Amphibian Metamorphosis Assay to Detect Thyroid-active Substances. *Toxicol Pathol.* **37:**415-424.

Nieuwkoop PD and Faber J. (1994). Normal Table of *Xenopus laevis* (Daudin). Garland Publishing, Inc. New York.

Ogielska M, Kotusz A (2004) Pattern and rate of ovary differentiation with reference to somatic development in anuran amphibians. J Morphol, 259:41–54.

US EPA 2015. OCSPP 890.2300: Larval Amphibian Growth and Development Assay (LAGDA). U.S. Environmental Protection Agency (US EPA), EPA Pub No. 740-C-15-001, July 2015.

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

Wolf JC, Lutz I, Kloas W, Springer TA, Holden LR, Krueger HO, Hosmer AJ (2010) Effects of 17 β-estradiol exposure on *Xenopus laevis* gonadal histopathology. Environ Toxicol Chem, 29(5):1091-1105.

EPL® Experimental Pathology Laboratories, Inc.

COMPLIANCE STATEMENT

Test Facility	Fort Environmental Laboratories, Inc.	EPL Principal Investigator	Dr. Jeffrey C. Wolf
Study No.	BATT01-00390	EPL Pathologist	Dr. Jeffrey C. Wolf
Species	*Xenopus laevis* (South African clawed frog)	EPL Project Number	237-074
Study Title	Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*		
Test Article	2-Ethylhexyl 4-Hydroxybenzoate (2-EHHB)		

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

21 May 2018
Date

EPL® Experimental Pathology Laboratories, Inc.

QUALITY ASSURANCE FINAL CERTIFICATION

Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethylhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

Client Study: BATT01-00390 EPL Principal Investigator: Dr. Jeffrey C. Wolf

EPL Project Number: 237-074 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	6/15/16; 7/1/16; 1/25/17; 1/31/17; 2/1/17; 5/16/18	6/15/16; 7/1/16; 1/25/17; 2/1/17; 2/14/17; 2/20/17; 5/16/18
Project Setup	6/22/16; 8/4,9/16	6/22/16; 8/10/16
In-Process - Microtomy	8/23/16	8/23/16
Data Review	7/5/16; 9/2/16; 9/7/16; 10/17,18/16; 1/9/17; 1/31/17; 2/20/17	7/5/16; 9/2/16; 9/7/16; 10/17,18/16; 1/9/17; 2/1/17; 2/20/17
Draft Pathology Report	1/11,12,16/17; 2/6-9,17/17; 2/20/17; 3/17,18/18; 5/7,14/18	1/18/17; 2/20/17; 2/21/17; 2/28/17; 3/6/17; 5/14/18
Final Pathology Report	5/21/18	5/21/18

Date reported to Study Director/Management 5/21/18

Date of last annual facility inspection 5/18

Betty Harwood 5/21/18

EPL Quality Assurance Unit Date

Form No. 6-2 (10/10/16)

SUMMARY INCIDENCE TABLE

NF STAGE 62 SACRIFICE

SUMMARY INCIDENCE TABLE

BATT01-00390
NF Stage 62
Xenopus laevis
(South African clawed frog)

	GROUP 0.0-Ctl-62	GROUP 3.6-ST-62	GROUP 10.9-ST-62	GROUP 33.0-ST-62	GROUP 100.0-ST-62	
THYROID (NO. EXAMINED)	(40)	(20)	(20)	(20)	(20)	
Follicular Cell Hyperplasia	1		3	1		
Follicular Cell Hypertrophy	31	15	15	13	15	

HISTOPATHOLOGY INCIDENCE TABLES

NF STAGE 62 SACRIFICE

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-62

BATT01-00390
NF Stage 62
Xenopus laevis
(South African clawed frog)

ANIMAL	074-A	075-C	076-E	077-F	078-G	080-B	081-G	082-F	083-H	094-D	095-G	096-E	099-D	100-H	110-A	111-B	112-C	113-F	114-G	115-H
THYROID			X	X	X		X		X			X			X			X		
Follicular Cell Hyperplasia																				
Follicular Cell Hypertrophy	1	1				1		1		2	1		2	1		1	1		1	1

EPL Experimental Pathology Laboratories, Inc.

II-1

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-62

BATT01-00390
NF Stage 62
Xenopus laevis
(South African clawed frog)

ANIMAL	126-B	127-E	128-H	135-A	136-A	137-C	138-D	139-D	140-E	141-F	142-G	143-H	146-A	147-D	148-E	150-B	151-F	163-C	188-B	201-C
THYROID															X					
Follicular Cell Hyperplasia								1												
Follicular Cell Hypertrophy	1	1	1	1	1	1	1	1	1	1	2	1	1	1		1	1	1	1	2

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00390
NF Stage 62
Xenopus laevis
(South African clawed frog)

GROUP 3.6-ST-62

ANIMAL	079-A	097-D	105-D	129-A	130-C	131-D	144-B	152-B	153-D	164-B	165-A	166-C	184-C	185-D	195-A	196-C	202-B	218-B	225-C	357-A
THYROID						X	X	X		X										X
Follicular Cell Hyperplasia																				
Follicular Cell Hypertrophy	1	1	1	1	1				1		1	1	1	2	1	1	1	1	1	

EPL Experimental Pathology Laboratories, Inc.

II-3

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-ST-62

BATT01-00390
NF Stage 62
Xenopus laevis
(South African clawed frog)

ANIMAL	098-B	101-C	106-A	107-D	132-A	133-C	154-A	155-C	156-D	171-C	172-D	189-D	199-B	203-A	214-B	215-C	219-A	221-B	222-D	356-B
THYROID						X			X	X				X			X			
Follicular Cell Hyperplasia	1												1					1		
Follicular Cell Hypertrophy	2	1	1	1	1		1	1			1	1	1		1	2		1	1	1

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II-4

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
33.0-ST-62

BATT01-00390
NF Stage 62
Xenopus laevis
(South African clawed frog)

ANIMAL	102-C	103-B	108-D	134-C	149-C	157-B	158-D	167-A	168-C	169-D	186-A	190-A	191-B	192-C	193-D	197-B	200-D	216-A	217-B	223-A
THYROID		X			X							X					X	X	X	X
Follicular Cell Hyperplasia						1														
Follicular Cell Hypertrophy	1		1	1		1	1	1	1	1	1		1	1	1	1				

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II-5

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-ST-62

BATT01-00390
NF Stage 62
Xenopus laevis
(South African clawed frog)

ANIMAL	084-D	104-C	109-D	116-B	145-A	159-B	160-C	161-C	162-D	170-B	173-A	174-C	187-D	194-A	198-B	204-A	220-C	224-D	226-B	355-A
THYROID		X	X	X			X							X						
Follicular Cell Hyperplasia																				
Follicular Cell Hypertrophy	1				1	1		1	1	1	1	1	1		1	1	1	1	1	1

EPL Experimental Pathology Laboratories, Inc.

II-6

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

SUMMARY INCIDENCE TABLES

TERMINAL SACRIFICE

SUMMARY INCIDENCE TABLE

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

	GROUP 0.0-Ctl-Term	GROUP 3.6-Term	GROUP 10.9-Term	GROUP 33.0-Term	GROUP 100.0-Term	
KIDNEY, ANTERIOR (NO. EXAMINED)	(45)	(28)	(19)	(19)	(14)	
Cellular Infiltrate,						
Mononuclear Cell	14	2	2	4	8	
Fibrosis, Interstitial	1	1	1	1	1	
Mineralization	45	28	19	19	14	
Tubular Epithelium,						
Cytoplasmic Pigment						
Tubules, Dilation	7	2	5	2	3	
Tubules, Vacuolation						
KIDNEY, MIDDLE (NO. EXAMINED)	(45)	(28)	(19)	(19)	(14)	
Cellular Infiltrate,						
Mononuclear Cell	11	6	7	4	5	
Fibrosis, Interstitial	1	1		1	1	
Mineralization	45	28	19	19	14	
Tubules, Dilation	7		2	2	2	
Tubules, Vacuolation						
KIDNEY, POSTERIOR (NO. EXAMINED)	(45)	(28)	(19)	(19)	(14)	
Cellular Infiltrate,						
Mononuclear Cell	13	5	4	1	8	
Fibrosis, Interstitial						
Mineralization	45	28	19	19	14	
Tubules, Dilation	5	1	2	3	3	
Tubules, Vacuolation				1		
LIVER (NO. EXAMINED)	(45)	(28)	(19)	(19)	(14)	
Bile Duct, Dilated	1					
Cellular Infiltrate,						
Parenchymal, Focal	34	22	12	14	7	
Hepatocellular Vacuolation,						
Decreased	5				3	
Hepatocellular Vacuolation,						
Increased	1	5		3		
OVIDUCT, ANTERIOR (NO. EXAMINED)	(45)	(28)	(19)	(19)	(14)	
Stage 1	36	15	11	11	5	
Stage 2	9	13	8	8	9	
Stage 3						
OVIDUCT, MIDDLE (NO. EXAMINED)	(45)	(28)	(19)	(19)	(14)	
Stage 1	36	15	10	11	6	
Stage 2	9	13	9	8	8	
Stage 3						

SUMMARY INCIDENCE TABLE

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

	GROUP 0.0-Ctl-Term	GROUP 3.6-Term	GROUP 10.9-Term	GROUP 33.0-Term	GROUP 100.0-Term	
OVIDUCT, POSTERIOR (NO.						
EXAMINED)	(45)	(27)	(19)	(19)	(14)	
Cellular Infiltrate,						
Mononuclear Cell						
Stage 1	34	13	12	12	7	
Stage 2	11	14	7	7	7	
TESTIS, ANTERIOR (NO. EXAMINED)	(35)	(24)	(14)	(16)	(12)	
Cellular Infiltrate,						
Mononuclear Cell	1	2	1		2	
Exfoliated Germ Cells	15	19	6	3	6	
Germ Cell Degeneration	17	3	4	9	3	
Germ Cell Vacuolation	3	2	3	2	1	
Germinal Epithelium, Thinning						
and Dilation	2					
Phenotype 0	35	24	14	16	12	
Stage 1		1	1			
Stage 3	1	1	3	1		
Stage 4	14	21	6	13	9	
Stage 5	18	1	2	2	3	
Unable to Stage	2		2			
TESTIS, MIDDLE (NO. EXAMINED)	(40)	(24)	(17)	(16)	(12)	
Cellular Infiltrate,						
Mononuclear Cell	3	3	3	1	3	
Exfoliated Germ Cells	15	19	9	3	6	
Germ Cell Degeneration	26	3	5	8	2	
Germ Cell Vacuolation	2		1			
Germinal Epithelium, Thinning						
and Dilation	2					
Phenotype 0	39	24	17	16	12	
Phenotype 1	1					
Stage 1		1	1			
Stage 3	2		1	1		
Stage 4	18	23	13	13	11	
Stage 5	19		2	2	1	
Testicular Oocytes	1					
Unable to Stage	1					
TESTIS, POSTERIOR (NO. EXAMINED)	(33)	(13)	(13)	(10)	(11)	
Cellular Infiltrate,						
Mononuclear Cell	2		2	1		
Exfoliated Germ Cells	7	8	5	2	5	
Germ Cell Degeneration	11	1	4	6	1	
Germ Cell Vacuolation	2	1			1	

SUMMARY INCIDENCE TABLE

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

	GROUP 0.0-Ctl-Term	GROUP 3.6-Term	GROUP 10.9-Term	GROUP 33.0-Term	GROUP 100.0-Term	
TESTIS, POSTERIOR (CONTINUED)						
Germinal Epithelium, Thinning						
and Dilation	3				1	
Phenotype 0	32	13	13	10	11	
Phenotype 1	1					
Stage 1		1				
Stage 2			1			
Stage 3	3	1	2			
Stage 4	17	10	7	8	8	
Stage 5	10		2	2	1	
Testicular Oocytes	1					
Unable to Stage	3	1	1		2	
WOLFFIAN DUCT, ANTERIOR (NO.						
EXAMINED)	(45)	(28)	(19)	(19)	(14)	
Epithelial Cells, Cytoplasmic						
Inclusions	2			1		
Stage 1	8	20	3	5	6	
Stage 2	36	8	10	14	7	
Stage 3	1		6		1	
WOLFFIAN DUCT, MIDDLE (NO.						
EXAMINED)	(45)	(28)	(19)	(19)	(14)	
Epithelial Cells, Cytoplasmic						
Inclusions	2	1	1			
Stage 1	3	14	5	5	4	
Stage 2	42	14	9	14	9	
Stage 3			5		1	
WOLFFIAN DUCT, POSTERIOR (NO.						
EXAMINED)	(45)	(27)	(19)	(19)	(14)	
Epithelial Cells, Cytoplasmic						
Inclusions				1		
Stage 1	8	18	10	10	8	
Stage 2	35	9	7	9	5	
Stage 3	2		2		1	

SUMMARY INCIDENCE TABLE

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

	GROUP 0.0-Ctl-Term	GROUP 3.6-Term	GROUP 10.9-Term	GROUP 33.0-Term	GROUP 100.0-Term	
KIDNEY, ANTERIOR (NO. EXAMINED)	(31)	(11)	(21)	(17)	(25)	
Cellular Infiltrate,						
Mononuclear Cell	9	7	5	10	14	
Fibrosis, Interstitial			1	1	1	
Mineralization	31	11	21	17	25	
Tubular Epithelium,						
Cytoplasmic Pigment	1					
Tubules, Dilation	2		2	2	9	
Tubules, Vacuolation	1	1				
KIDNEY, MIDDLE (NO. EXAMINED)	(31)	(11)	(21)	(17)	(25)	
Cellular Infiltrate,						
Mononuclear Cell	7	3	7	10	11	
Fibrosis, Interstitial			1	1	2	
Mineralization	31	11	21	17	25	
Tubules, Dilation	1		2	1	9	
Tubules, Vacuolation	1	1				
KIDNEY, POSTERIOR (NO. EXAMINED)	(32)	(11)	(21)	(17)	(25)	
Cellular Infiltrate,						
Mononuclear Cell	6	3	3	4	6	
Fibrosis, Interstitial			1			
Mineralization	32	11	21	17	25	
Tubules, Dilation	2		3		5	
Tubules, Vacuolation						
LIVER (NO. EXAMINED)	(32)	(11)	(21)	(17)	(25)	
Bile Duct, Dilated						
Cellular Infiltrate,						
Parenchymal, Focal	22	6	16	13	17	
Hepatocellular Vacuolation,						
Decreased	2	1	1	2	2	
Hepatocellular Vacuolation,						
Increased	5		2	2		
OVARY, ANTERIOR (NO. EXAMINED)	(31)	(11)	(20)	(17)	(23)	
Cellular Infiltrate,						
Mononuclear Cell	13	6	10	10	13	
Germ Cell Degeneration	12	3	7	5	3	
Phenotype 0	31	11	20	17	23	
Stage 2	1		1			
Stage 3	8	6	12	4	17	
Stage 4	22	5	7	13	6	

SUMMARY INCIDENCE TABLE

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

	GROUP 0.0-Ctl-Term	GROUP 3.6-Term	GROUP 10.9-Term	GROUP 33.0-Term	GROUP 100.0-Term	
OVARY, MIDDLE (NO. EXAMINED)	(32)	(11)	(21)	(17)	(23)	
Cellular Infiltrate,						
Mononuclear Cell	16	4	9	10	12	
Germ Cell Degeneration	9	1	6	4	4	
Phenotype 0	32	11	21	17	23	
Stage 2	2					
Stage 3	7	7	11	3	16	
Stage 4	23	4	10	14	7	
OVARY, POSTERIOR (NO. EXAMINED)	(31)	(10)	(21)	(16)	(23)	
Cellular Infiltrate,						
Mononuclear Cell	7	2	6	5	9	
Germ Cell Degeneration	8	2	3	3	5	
Inflammation, Granulomatous				1		
Phenotype 0	31	10	21	16	23	
Stage 2	1					
Stage 3	11	9	16	8	20	
Stage 4	19	1	5	7	3	
Unable to Stage				1		
OVIDUCT, ANTERIOR (NO. EXAMINED)	(31)	(10)	(20)	(17)	(25)	
Stage 1						
Stage 2	29	9	19	15	24	
Stage 3	2	1	1	2	1	
OVIDUCT, MIDDLE (NO. EXAMINED)	(32)	(10)	(21)	(17)	(25)	
Stage 1						
Stage 2	31	9	20	16	23	
Stage 3	1	1	1	1	2	
OVIDUCT, POSTERIOR (NO.						
EXAMINED)	(32)	(10)	(21)	(17)	(25)	
Cellular Infiltrate,						
Mononuclear Cell	1					
Stage 1	1					
Stage 2	31	10	21	17	25	
WOLFFIAN DUCT, ANTERIOR (NO.						
EXAMINED)	(31)	(11)	(21)	(17)	(25)	
Epithelial Cells, Cytoplasmic						
Inclusions		2				
Stage 1	14	7	14	6	14	
Stage 2	17	4	7	11	11	
Stage 3						

SUMMARY INCIDENCE TABLE

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

	GROUP 0.0-Ctl-Term	GROUP 3.6-Term	GROUP 10.9-Term	GROUP 33.0-Term	GROUP 100.0-Term	
WOLFFIAN DUCT, MIDDLE (NO.						
EXAMINED)	(31)	(11)	(21)	(17)	(25)	
Epithelial Cells, Cytoplasmic						
Inclusions		2	1		1	
Stage 1	13	7	12	5	16	
Stage 2	18	4	9	12	9	
Stage 3						
WOLFFIAN DUCT, POSTERIOR (NO.						
EXAMINED)	(32)	(11)	(21)	(17)	(25)	
Epithelial Cells, Cytoplasmic						
Inclusions	1					
Stage 1	14	9	14	12	17	
Stage 2	16	2	6	5	8	
Stage 3	2		1			

SUMMARY INCIDENCE TABLE

BATT01-00390
Terminal Sacrifice
Xenopus laevis
(South African clawed frog)

	GROUP 0.0-Ctl-Term	GROUP 3.6-Term	GROUP 33.0-Term	GROUP 100.0-Term		
GONAD (NO. EXAMINED)						
KIDNEY, ANTERIOR (NO. EXAMINED)	(3)	(1)	(4)	(1)		
Cellular Infiltrate,						
Mononuclear Cell	1	1	2			
Fibrosis, Interstitial		1				
Mineralization	3	1	4	1		
Tubular Epithelium,						
Cytoplasmic Pigment						
Tubules, Dilation	1					
Tubules, Vacuolation						
KIDNEY, MIDDLE (NO. EXAMINED)	(3)	(1)	(4)	(1)		
Cellular Infiltrate,						
Mononuclear Cell			2			
Fibrosis, Interstitial		1				
Mineralization	3	1	4	1		
Tubules, Dilation						
Tubules, Vacuolation			1			
KIDNEY, POSTERIOR (NO. EXAMINED)	(3)	(1)	(4)	(1)		
Cellular Infiltrate,						
Mononuclear Cell			2			
Fibrosis, Interstitial						
Mineralization	3	1	4	1		
Tubules, Dilation						
Tubules, Vacuolation						
LIVER (NO. EXAMINED)	(3)	(1)	(4)	(1)		
Bile Duct, Dilated						
Cellular Infiltrate,						
Parenchymal, Focal	2		4	1		
Hepatocellular Vacuolation,						
Decreased	1					
Hepatocellular Vacuolation,						
Increased						
OVIDUCT, ANTERIOR (NO. EXAMINED)	(3)	(1)	(4)	(1)		
Stage 1			4			
Stage 2	3	1		1		
Stage 3						
OVIDUCT, MIDDLE (NO. EXAMINED)	(3)	(1)	(4)	(1)		
Stage 1			4			
Stage 2	3	1		1		

SUMMARY INCIDENCE TABLE

BATT01-00390
Terminal Sacrifice
Xenopus laevis
(South African clawed frog)

	GROUP 0.0-Ctl-Term	GROUP 3.6-Term	GROUP 33.0-Term	GROUP 100.0-Term		
OVIDUCT, MIDDLE (CONTINUED)						
Stage 3						
OVIDUCT, POSTERIOR (NO.						
EXAMINED)	(3)	(1)	(4)	(1)		
Cellular Infiltrate,						
Mononuclear Cell						
Stage 1			4			
Stage 2	3	1		1		
WOLFFIAN DUCT, ANTERIOR (NO.						
EXAMINED)	(3)	(1)	(4)	(1)		
Epithelial Cells, Cytoplasmic						
Inclusions						
Stage 1			2	1		
Stage 2	3	1	2			
Stage 3						
WOLFFIAN DUCT, MIDDLE (NO.						
EXAMINED)	(3)	(1)	(4)	(1)		
Epithelial Cells, Cytoplasmic						
Inclusions		1				
Stage 1	1		1			
Stage 2	2	1	3	1		
Stage 3						
WOLFFIAN DUCT, POSTERIOR (NO.						
EXAMINED)	(3)	(1)	(4)	(1)		
Epithelial Cells, Cytoplasmic						
Inclusions						
Stage 1	2		2			
Stage 2	1	1	2	1		
Stage 3						

HISTOPATHOLOGY INCIDENCE TABLES

TERMINAL SACRIFICE

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	A1-0.0	A4-0.0	A5-0.0	A7-0.0	A9-0.0	B1-0.0	B2-0.0	B6-0.0	B7-0.0	B9-0.0	C1-0.0	C2-0.0	C3-0.0	C5-0.0	C6-0.0	C8-0.0	C9-0.0	D1-0.0	D2-0.0	D3-0.0
KIDNEY, ANTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell				1		1							1	1	1					1	
Fibrosis, Interstitial																					
Mineralization		2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2
Tubular Epithelium,																					
Cytoplasmic Pigment																					
Tubules, Dilation																				1	
Tubules, Vacuolation																					
KIDNEY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell								1			1	1	1						1		
Fibrosis, Interstitial																					
Mineralization		2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Tubules, Dilation								1												1	
Tubules, Vacuolation																					
KIDNEY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell			1	1				1	1				1	1						1	1
Fibrosis, Interstitial																					
Mineralization		2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Tubules, Dilation			1																	1	
Tubules, Vacuolation																					
LIVER								X							X						
Bile Duct, Dilated		4																			
Cellular Infiltrate,																					
Parenchymal, Focal		1	1	1	2	1	1			1	1	1	1	1	1			1	1	1	1
Hepatocellular Vacuolation,																					
Decreased			1						1								1				
Hepatocellular Vacuolation,																					
Increased																					1
OVIDUCT, ANTERIOR																					
Stage 1			P	P	P	P	P	P	P		P		P	P		P		P	P	P	P
Stage 2		P								P		P			P		P				
Stage 3																					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	A1-0.0	A4-0.0	A5-0.0	A7-0.0	A9-0.0	B1-0.0	B2-0.0	B6-0.0	B7-0.0	B9-0.0	C1-0.0	C2-0.0	C3-0.0	C5-0.0	C6-0.0	C8-0.0	C9-0.0	D1-0.0	D2-0.0	D3-0.0
OVIDUCT, MIDDLE																					
Stage 1			P	P	P	P	P	P	P		P		P	P		P		P	P	P	P
Stage 2		P								P		P			P		P				
Stage 3																					
OVIDUCT, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell																					
Stage 1			P	P	P	P	P	P	P		P		P	P		P		P	P	P	P
Stage 2		P								P		P			P		P				
TESTIS, ANTERIOR			I	N					N		N				N						
Cellular Infiltrate,																					
Mononuclear Cell																					
Exfoliated Germ Cells					1	1	1	1		1				1			1		1	1	1
Germ Cell Degeneration		1					1					1	1			1	1	1	1	1	1
Germ Cell Vacuolation					1									1				1			
Germinal Epithelium, Thinning																					
and Dilation		2								2											
Phenotype 0		P	P		P	P	P	P		P		P	P	P		P	P	P	P	P	P
Stage 1																					
Stage 3																		P			
Stage 4										P						P					
Stage 5		P			P	P	P	P				P	P	P			P		P	P	P
Unable to Stage			P																		
TESTIS, MIDDLE				N																	
Cellular Infiltrate,																					
Mononuclear Cell													1								
Exfoliated Germ Cells			1			1		1		1		1		1			1			1	1
Germ Cell Degeneration		1	1		1					1	1	2	1	1		1		2	1	1	1
Germ Cell Vacuolation					1																
Germinal Epithelium, Thinning																					
and Dilation		2								1											
Phenotype 0		P	P		P	P	P	P	P	P	P	P	P	P	P	P	P		P	P	
Phenotype 1																		P			
Stage 1																					
Stage 3															P			P			
Stage 4					P			P	P	P	P					P					
Stage 5		P	P			P	P					P	P	P			P		P	P	P

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IV-2

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	A1-0.0	A4-0.0	A5-0.0	A7-0.0	A9-0.0	B1-0.0	B2-0.0	B6-0.0	B7-0.0	B9-0.0	C1-0.0	C2-0.0	C3-0.0	C5-0.0	C6-0.0	C8-0.0	C9-0.0	D1-0.0	D2-0.0	D3-0.0
TESTIS, MIDDLE (CONTINUED)																					
Testicular Oocytes																			1		
Unable to Stage																					
TESTIS, POSTERIOR			I											N					N		N
Cellular Infiltrate,																					
Mononuclear Cell		1																			
Exfoliated Germ Cells		1		2						1					1	1	1				
Germ Cell Degeneration					1		1			1		1			1	1		1			
Germ Cell Vacuolation																					
Germinal Epithelium, Thinning																					
and Dilation		2								1							1				
Phenotype 0		P	P	P	P	P		P	P	P	P	P	P		P	P	P	P		P	
Phenotype 1							P														
Stage 1																					
Stage 2																					
Stage 3																P		P			
Stage 4					P			P	P		P	P	P		P					P	
Stage 5		P		P		P	P			P							P				
Testicular Oocytes							1														
Unable to Stage			P																		
WOLFFIAN DUCT, ANTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions									2											1	
Stage 1										P					P		P				
Stage 2		P	P	P	P	P	P	P	P		P	P	P	P		P		P	P	P	
Stage 3																					P
WOLFFIAN DUCT, MIDDLE																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					1
Stage 1																P			P		
Stage 2		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		P	P		P
Stage 3																					
WOLFFIAN DUCT, POSTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1																				P	

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	A1-0.0	A4-0.0	A5-0.0	A7-0.0	A9-0.0	B1-0.0	B2-0.0	B6-0.0	B7-0.0	B9-0.0	C1-0.0	C2-0.0	C3-0.0	C5-0.0	C6-0.0	C8-0.0	C9-0.0	D1-0.0	D2-0.0	D3-0.0
WOLFFIAN DUCT, POSTERIOR																				
(CONTINUED)																				
Stage 2	P	P	P	P	P	P	P		P	P	P	P	P		P	P	P	P		P
Stage 3								P						P						

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	D5-0.0	D9-0.0	E3-0.0	E4-0.0	E7-0.0	E9-0.0	F6-0.0	F8-0.0	G1-0.0	G3-0.0	G4-0.0	G5-0.0	G6-0.0	G8-0.0	G9-0.0	H1-0.0	H2-0.0	H3-0.0	H7-0.0	H8-0.0
KIDNEY, ANTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell							1	1		1				1					1	1	
Fibrosis, Interstitial																			1		
Mineralization		2	1	2	2	1	1	1	2	2	2	2	2	2	2	2	3	2	3	2	3
Tubular Epithelium,																					
Cytoplasmic Pigment																					
Tubules, Dilation				1						1		1				2		2			2
Tubules, Vacuolation																					
KIDNEY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell								1	1		1					2		1			
Fibrosis, Interstitial																1					
Mineralization		2	1	2	2	2	1	1	2	2	2	2	2	2	1	2	3	2	3	2	3
Tubules, Dilation										1		1					2		1		2
Tubules, Vacuolation																					
KIDNEY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell										1	1									1	
Fibrosis, Interstitial																					
Mineralization		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	3	2	3
Tubules, Dilation																	1		1		2
Tubules, Vacuolation																					
LIVER		X			X		X	X												X	
Bile Duct, Dilated																					
Cellular Infiltrate,																					
Parenchymal, Focal			1	1		1			2	1	1	1	2	2	1	1	1	1			2
Hepatocellular Vacuolation,																					
Decreased																			1		1
Hepatocellular Vacuolation,																					
Increased																					
OVIDUCT, ANTERIOR																					
Stage 1		P		P	P	P	P	P	P	P	P	P	P		P	P	P	P		P	P
Stage 2			P											P					P		
Stage 3																					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	D5-0.0	D9-0.0	E3-0.0	E4-0.0	E7-0.0	E9-0.0	F6-0.0	F8-0.0	G1-0.0	G3-0.0	G4-0.0	G5-0.0	G6-0.0	G8-0.0	G9-0.0	H1-0.0	H2-0.0	H3-0.0	H7-0.0	H8-0.0
OVIDUCT, MIDDLE																					
Stage 1		P		P	P	P	P	P	P	P	P	P	P		P	P	P	P		P	P
Stage 2			P											P					P		
Stage 3																					
OVIDUCT, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell																					
Stage 1		P		P	P	P		P	P		P	P	P		P	P	P	P		P	P
Stage 2			P				P			P				P					P		
TESTIS, ANTERIOR		I	N									N		N		N			N		
Cellular Infiltrate,																					
Mononuclear Cell															1						
Exfoliated Germ Cells					1	2															
Germ Cell Degeneration				1	1						1				1		1	1			
Germ Cell Vacuolation																					
Germinal Epithelium, Thinning																					
and Dilation																					
Phenotype 0		P		P	P	P	P	P	P	P	P		P		P		P	P		P	P
Stage 1																					
Stage 3																					
Stage 4						P	P		P	P	P		P				P	P		P	P
Stage 5				P	P			P							P						
Unable to Stage		P																			
TESTIS, MIDDLE			N									I		N		N		N			
Cellular Infiltrate,																					
Mononuclear Cell							2	1													
Exfoliated Germ Cells				1		2											1				
Germ Cell Degeneration				1	1	1	1	1	1		1		1		1		1		1		
Germ Cell Vacuolation									1												
Germinal Epithelium, Thinning																					
and Dilation																					
Phenotype 0		P		P	P	P	P	P	P	P	P	P	P		P		P		P	P	P
Phenotype 1																					
Stage 1																					
Stage 3																					
Stage 4		P				P	P		P	P	P		P		P				P	P	P
Stage 5				P	P			P									P				

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	D5-0.0	D9-0.0	E3-0.0	E4-0.0	E7-0.0	E9-0.0	F6-0.0	F8-0.0	G1-0.0	G3-0.0	G4-0.0	G5-0.0	G6-0.0	G8-0.0	G9-0.0	H1-0.0	H2-0.0	H3-0.0	H7-0.0	H8-0.0
TESTIS, MIDDLE (CONTINUED)																				
Testicular Oocytes																				
Unable to Stage											P									
TESTIS, POSTERIOR					N	N	I	N								N			N	N
Cellular Infiltrate,																				
Mononuclear Cell																				
Exfoliated Germ Cells											1									
Germ Cell Degeneration	1		1										1							
Germ Cell Vacuolation			1														1			
Germinal Epithelium, Thinning																				
and Dilation																				
Phenotype 0	P	P	P	P			P		P	P	P	P	P	P	P		P	P		
Phenotype 1																				
Stage 1																				
Stage 2																				
Stage 3											P									
Stage 4	P	P	P	P						P		P		P	P			P		
Stage 5									P				P							
Testicular Oocytes																				
Unable to Stage							P										P			
WOLFFIAN DUCT, ANTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1					P												P			
Stage 2	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P		P	P	P
Stage 3																				
WOLFFIAN DUCT, MIDDLE																				
Epithelial Cells, Cytoplasmic																				
Inclusions													1							
Stage 1							P													
Stage 2	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P
Stage 3																				
WOLFFIAN DUCT, POSTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1		P	P		P			P				P						P		

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	D5-0.0	D9-0.0	E3-0.0	E4-0.0	E7-0.0	E9-0.0	F6-0.0	F8-0.0	G1-0.0	G3-0.0	G4-0.0	G5-0.0	G6-0.0	G8-0.0	G9-0.0	H1-0.0	H2-0.0	H3-0.0	H7-0.0	H8-0.0
WOLFFIAN DUCT, POSTERIOR																				
(CONTINUED)																				
Stage 2	P			P		P	P		P	P	P		P	P	P	P	P		P	P
Stage 3																				

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	GROUP 0.0-Ctl-Term ANIMAL H9-0.0	A10-0.0	C10-0.0	E10-0.0	G10-0.0
KIDNEY, ANTERIOR					
Cellular Infiltrate,					
Mononuclear Cell		1		1	
Fibrosis, Interstitial					
Mineralization	2	2	2	2	2
Tubular Epithelium,					
Cytoplasmic Pigment					
Tubules, Dilation					
Tubules, Vacuolation					
KIDNEY, MIDDLE					
Cellular Infiltrate,					
Mononuclear Cell	1				
Fibrosis, Interstitial					
Mineralization	2	2	2	2	2
Tubules, Dilation					
Tubules, Vacuolation					
KIDNEY, POSTERIOR					
Cellular Infiltrate,					
Mononuclear Cell		1		1	
Fibrosis, Interstitial					
Mineralization	2	2	2	2	2
Tubules, Dilation					
Tubules, Vacuolation					
LIVER			X		
Bile Duct, Dilated					
Cellular Infiltrate,					
Parenchymal, Focal	1	1		1	2
Hepatocellular Vacuolation,					
Decreased					
Hepatocellular Vacuolation,					
Increased					
OVIDUCT, ANTERIOR					
Stage 1	P	P		P	P
Stage 2			P		
Stage 3					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	GROUP 0.0-Ctl-Term ANIMAL H9-0.0	A10-00.0	C10-00.0	E10-00.0	G10-00.0
OVIDUCT, MIDDLE					
Stage 1	P	P		P	P
Stage 2			P		
Stage 3					
OVIDUCT, POSTERIOR					
Cellular Infiltrate, Mononuclear Cell					
Stage 1	P	P		P	P
Stage 2			P		
TESTIS, ANTERIOR				N	
Cellular Infiltrate, Mononuclear Cell					
Exfoliated Germ Cells	1	2	1		
Germ Cell Degeneration		1			
Germ Cell Vacuolation					
Germinal Epithelium, Thinning and Dilation					
Phenotype 0	P	P	P		P
Stage 1					
Stage 3					
Stage 4		P	P		
Stage 5	P				P
Unable to Stage					
TESTIS, MIDDLE					
Cellular Infiltrate, Mononuclear Cell					
Exfoliated Germ Cells	1	2	1		
Germ Cell Degeneration	1	1			
Germ Cell Vacuolation					
Germinal Epithelium, Thinning and Dilation					
Phenotype 0	P	P	P	P	P
Phenotype 1					
Stage 1					
Stage 3					
Stage 4				P	
Stage 5	P	P	P		P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	GROUP 0.0-Ctl-Term ANIMAL H9-00.0	A10-00.0	C10-00.0	E10-00.0	G10-00.0
TESTIS, MIDDLE (CONTINUED)					
Testicular Oocytes					
Unable to Stage					
TESTIS, POSTERIOR	N	N	N		
Cellular Infiltrate,					
Mononuclear Cell					1
Exfoliated Germ Cells					
Germ Cell Degeneration				1	
Germ Cell Vacuolation					
Germinal Epithelium, Thinning					
and Dilation					
Phenotype 0				P	P
Phenotype 1					
Stage 1					
Stage 2					
Stage 3					
Stage 4					
Stage 5				P	P
Testicular Oocytes					
Unable to Stage					
WOLFFIAN DUCT, ANTERIOR					
Epithelial Cells, Cytoplasmic					
Inclusions					
Stage 1	P		P		P
Stage 2		P		P	
Stage 3					
WOLFFIAN DUCT, MIDDLE					
Epithelial Cells, Cytoplasmic					
Inclusions					
Stage 1					
Stage 2	P	P	P	P	P
Stage 3					
WOLFFIAN DUCT, POSTERIOR					
Epithelial Cells, Cytoplasmic					
Inclusions					
Stage 1					P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	GROUP 0.0-Ctl-Term ANIMAL H9-0.0	A10-0.0	C10-0.0	E10-0.0	G10-0.0																
WOLFFIAN DUCT, POSTERIOR																					
(CONTINUED)																					
Stage 2	P	P	P	P																	
Stage 3																					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	A1-3.6	A2-3.6	A3-3.6	A5-3.6	A6-3.6	A7-3.6	A8-3.6	B1-3.6	B2-3.6	B3-3.6	B4-3.6	B6-3.6	B7-3.6	C2-3.6	C4-3.6	C5-3.6	C7-3.6	C9-3.6	D1-3.6	D2-3.6
KIDNEY, ANTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell		1																			
Fibrosis, Interstitial			1																		
Mineralization		2	1	2	2	2	1	2	2	2	1	2	2	2	1	2	2	2	2	2	2
Tubular Epithelium,																					
Cytoplasmic Pigment																					
Tubules, Dilation											1										
Tubules, Vacuolation																					
KIDNEY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell		2	1									1									
Fibrosis, Interstitial			1																		
Mineralization		2	1	1	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2
Tubules, Dilation																					
Tubules, Vacuolation																					
KIDNEY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell		1		1						1			1								
Fibrosis, Interstitial																					
Mineralization		2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2
Tubules, Dilation						1															
Tubules, Vacuolation																					
LIVER				X		X															
Bile Duct, Dilated																					
Cellular Infiltrate,																					
Parenchymal, Focal			2		1		1	1	1	1	1	1	1	1	2	1	1		1	1	1
Hepatocellular Vacuolation,																					
Decreased																					
Hepatocellular Vacuolation,																					
Increased		1					1	1		1								1			
OVIDUCT, ANTERIOR																					
Stage 1		P			P	P	P	P	P		P		P	P		P		P	P		P
Stage 2			P	P						P		P			P		P			P	
Stage 3																					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	A1-3.6	A2-3.6	A3-3.6	A5-3.6	A6-3.6	A7-3.6	A8-3.6	B1-3.6	B2-3.6	B3-3.6	B4-3.6	B6-3.6	B7-3.6	C2-3.6	C4-3.6	C5-3.6	C7-3.6	C9-3.6	D1-3.6	D2-3.6
OVIDUCT, MIDDLE																				
Stage 1	P			P	P	P	P	P	P	P		P	P		P		P	P		P
Stage 2		P	P								P			P		P			P	
Stage 3																				
OVIDUCT, POSTERIOR						N														
Cellular Infiltrate,																				
Mononuclear Cell																				
Stage 1	P			P	P		P	P	P	P		P	P		P		P	P	P	
Stage 2		P	P								P			P		P				P
TESTIS, ANTERIOR				N	N	N	N													
Cellular Infiltrate,																				
Mononuclear Cell											1									
Exfoliated Germ Cells	2	2						2	2		1		1	2	2	2	1		1	1
Germ Cell Degeneration								1				1								
Germ Cell Vacuolation																				
Germinal Epithelium, Thinning																				
and Dilation																				
Phenotype 0	P	P	P					P	P	P	P	P	P	P	P	P	P	P	P	P
Stage 1																		P		
Stage 3																P				
Stage 4	P		P					P	P	P	P	P	P	P	P		P		P	P
Stage 5		P																		
Unable to Stage																				
TESTIS, MIDDLE				N	N	N	N													
Cellular Infiltrate,																				
Mononuclear Cell											1									
Exfoliated Germ Cells	2	2						2	2	1				2	2	2	1		2	1
Germ Cell Degeneration		1																		1
Germ Cell Vacuolation																				
Germinal Epithelium, Thinning																				
and Dilation																				
Phenotype 0	P	P	P					P	P	P	P	P	P	P	P	P	P	P	P	P
Phenotype 1																				
Stage 1																		P		
Stage 3																				
Stage 4	P	P	P					P	P	P	P	P	P	P	P	P	P		P	P
Stage 5																				

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	A1-3.6	A2-3.6	A3-3.6	A5-3.6	A6-3.6	A7-3.6	A8-3.6	B1-3.6	B2-3.6	B3-3.6	B4-3.6	B6-3.6	B7-3.6	C2-3.6	C4-3.6	C5-3.6	C7-3.6	C9-3.6	D1-3.6	D2-3.6
TESTIS, MIDDLE (CONTINUED)																					
Testicular Oocytes																					
Unable to Stage																					
TESTIS, POSTERIOR				N							N	I	N	N	N	N		N	N	N	
Cellular Infiltrate,																					
Mononuclear Cell																					
Exfoliated Germ Cells		2	1			1	2			1											1
Germ Cell Degeneration		1																			
Germ Cell Vacuolation																					1
Germinal Epithelium, Thinning																					
and Dilation																					
Phenotype 0		P	P		P	P	P	P	P	P		P					P				P
Phenotype 1																					
Stage 1									P												
Stage 2																					
Stage 3					P																
Stage 4		P	P			P	P	P		P							P				P
Stage 5																					
Testicular Oocytes																					
Unable to Stage												P									
WOLFFIAN DUCT, ANTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1			P	P	P	P	P	P	P	P	P		P	P		P	P		P	P	
Stage 2		P										P			P			P			P
Stage 3																					
WOLFFIAN DUCT, MIDDLE																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1			P	P	P		P	P	P					P		P	P		P	P	
Stage 2		P				P				P	P	P	P		P			P			P
Stage 3																					
WOLFFIAN DUCT, POSTERIOR							N														
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1		P	P	P	P	P		P	P	P	P						P		P		P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

GROUP 3.6-Term

ANIMAL	A1-3.6	A2-3.6	A3-3.6	A5-3.6	A6-3.6	A7-3.6	A8-3.6	B1-3.6	B2-3.6	B3-3.6	B4-3.6	B6-3.6	B7-3.6	C2-3.6	C4-3.6	C5-3.6	C7-3.6	C9-3.6	D1-3.6	D2-3.6
WOLFFIAN DUCT, POSTERIOR																				
(CONTINUED)																				
Stage 2											P	P	P	P	P		P		P	
Stage 3																				

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Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

	ANIMAL																				
	D3-3.6	D5-3.6	D6-3.6	D7-3.6	D8-3.6	D9-3.6	A10-3.6	C10-3.6													
KIDNEY, ANTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell					1																
Fibrosis, Interstitial																					
Mineralization	2	2	2	2	2	2	2	1													
Tubular Epithelium,																					
Cytoplasmic Pigment																					
Tubules, Dilation						1															
Tubules, Vacuolation																					
KIDNEY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell					1	1	1														
Fibrosis, Interstitial																					
Mineralization	2	2	2	2	2	2	1	1													
Tubules, Dilation																					
Tubules, Vacuolation																					
KIDNEY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell					1																
Fibrosis, Interstitial																					
Mineralization	2	2	2	2	2	2	2	1													
Tubules, Dilation																					
Tubules, Vacuolation																					
LIVER					X		X														
Bile Duct, Dilated																					
Cellular Infiltrate,																					
Parenchymal, Focal	1	1	1	1		1		1													
Hepatocellular Vacuolation,																					
Decreased																					
Hepatocellular Vacuolation,																					
Increased																					
OVIDUCT, ANTERIOR																					
Stage 1				P	P																
Stage 2	P	P	P			P	P	P													
Stage 3																					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	D3-36	D5-36	D6-36	D7-36	D8-36	D9-36	A10-36	C10-36
OVIDUCT, MIDDLE								
Stage 1					P			
Stage 2	P	P	P	P		P	P	P
Stage 3								
OVIDUCT, POSTERIOR								
Cellular Infiltrate,								
Mononuclear Cell								
Stage 1								
Stage 2	P	P	P	P	P	P	P	P
TESTIS, ANTERIOR								
Cellular Infiltrate,								
Mononuclear Cell								1
Exfoliated Germ Cells	2		2	2	2	1	2	1
Germ Cell Degeneration						1		
Germ Cell Vacuolation		1	1					
Germinal Epithelium, Thinning								
and Dilation								
Phenotype 0	P	P	P	P	P	P	P	P
Stage 1								
Stage 3								
Stage 4	P	P	P	P	P	P	P	P
Stage 5								
Unable to Stage								
TESTIS, MIDDLE								
Cellular Infiltrate,								
Mononuclear Cell						1		1
Exfoliated Germ Cells	2	1	2	2	2	2	1	1
Germ Cell Degeneration								1
Germ Cell Vacuolation								
Germinal Epithelium, Thinning								
and Dilation								
Phenotype 0	P	P	P	P	P	P	P	P
Phenotype 1								
Stage 1								
Stage 3								
Stage 4	P	P	P	P	P	P	P	P
Stage 5								

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	D3-3.6	D5-3.6	D6-3.6	D7-3.6	D8-3.6	D9-3.6	A10-3.6	C10-3.6												
TESTIS, MIDDLE (CONTINUED)																					
Testicular Oocytes																					
Unable to Stage																					
TESTIS, POSTERIOR		N	N	N		N	N	N													
Cellular Infiltrate,																					
Mononuclear Cell																					
Exfoliated Germ Cells					1				1												
Germ Cell Degeneration																					
Germ Cell Vacuolation																					
Germinal Epithelium, Thinning																					
and Dilation																					
Phenotype 0					P				P												
Phenotype 1																					
Stage 1																					
Stage 2																					
Stage 3																					
Stage 4					P				P												
Stage 5																					
Testicular Oocytes																					
Unable to Stage																					
WOLFFIAN DUCT, ANTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1		P	P	P	P			P													
Stage 2						P	P		P												
Stage 3																					
WOLFFIAN DUCT, MIDDLE																					
Epithelial Cells, Cytoplasmic																					
Inclusions						2															
Stage 1		P	P	P																	
Stage 2					P	P	P	P	P												
Stage 3																					
WOLFFIAN DUCT, POSTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1		P	P	P	P			P	P												

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	D3-3.6	D5-3.6	D6-3.6	D7-3.6	D8-3.6	D9-3.6	A10-3.6	C10-3.6
WOLFFIAN DUCT, POSTERIOR								
(CONTINUED)								
Stage 2					P	P		
Stage 3								

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL

	A10-10.9	A2-10.9	A7-10.9	A8-10.9	A9-10.9	B10-10.9	B3-10.9	B4-10.9	B5-10.9	B7-10.9	B8-10.9	B9-10.9	C3-10.9	C5-10.9	C9-10.9	D1-10.9	D4-10.9	D6-10.9	D9-10.9	
KIDNEY, ANTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell		1					1													
Fibrosis, Interstitial											1									
Mineralization	2	3	2	2	2	2	2	1	2	2	2	2	2	2	1	2	2	2	2	
Tubular Epithelium,																				
Cytoplasmic Pigment																				
Tubules, Dilation	1	2					1				1		1							
Tubules, Vacuolation																				
KIDNEY, MIDDLE																				
Cellular Infiltrate,																				
Mononuclear Cell			1	1	1		1				1		1				1			
Fibrosis, Interstitial																				
Mineralization	2	3	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	1	2	
Tubules, Dilation		1							1											
Tubules, Vacuolation																				
KIDNEY, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell				1	1	1									1					
Fibrosis, Interstitial																				
Mineralization	2	3	2	2	2	2	2	1	2	2	2	2	2	2	1	2	2	2	2	
Tubules, Dilation							1						1							
Tubules, Vacuolation																				
LIVER									X	X	X	X	X	X					X	
Bile Duct, Dilated																				
Cellular Infiltrate,																				
Parenchymal, Focal	1	1	2	1	1	2	1	1							1	1	1	1		
Hepatocellular Vacuolation,																				
Decreased																				
Hepatocellular Vacuolation,																				
Increased																				
OVIDUCT, ANTERIOR																				
Stage 1		P					P	P	P	P	P	P				P	P	P	P	
Stage 2	P		P	P	P	P							P	P	P					
Stage 3																				

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	A10-10.9	A2-10.9	A7-10.9	A8-10.9	A9-10.9	B10-10.9	B3-10.9	B4-10.9	B5-10.9	B7-10.9	B8-10.9	B9-10.9	C3-10.9	C5-10.9	C9-10.9	D1-10.9	D4-10.9	D6-10.9	D9-10.9
OVIDUCT, MIDDLE																			
Stage 1		P					P	P	P	P		P				P	P	P	P
Stage 2	P		P	P	P	P					P		P	P	P				
Stage 3																			
OVIDUCT, POSTERIOR																			
Cellular Infiltrate,																			
Mononuclear Cell																			
Stage 1		P				P	P	P	P	P	P	P				P	P	P	P
Stage 2	P		P	P	P								P	P	P				
TESTIS, ANTERIOR		N							N				N				I	N	N
Cellular Infiltrate,																			
Mononuclear Cell											1								
Exfoliated Germ Cells	1			2	2			1							1	2			
Germ Cell Degeneration				1			1			1				1					
Germ Cell Vacuolation	1			1						2									
Germinal Epithelium, Thinning																			
and Dilation																			
Phenotype 0	P		P	P	P	P	P	P		P	P	P		P	P	P	P		
Stage 1			P																
Stage 3						P	P					P							
Stage 4	P			P				P						P	P	P			
Stage 5					P					P									
Unable to Stage											P						P		
TESTIS, MIDDLE												N					N		
Cellular Infiltrate,																			
Mononuclear Cell											1					1		1	
Exfoliated Germ Cells	1			1	2			1						1	1	2	2		1
Germ Cell Degeneration	1					1	1			1									1
Germ Cell Vacuolation	1																		
Germinal Epithelium, Thinning																			
and Dilation																			
Phenotype 0	P	P	P	P	P	P	P	P	P	P	P		P	P	P	P	P		P
Phenotype 1																			
Stage 1			P																
Stage 3						P													
Stage 4	P	P		P			P	P	P		P		P	P	P	P	P		P
Stage 5					P					P									

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	A10-10.9	A2-10.9	A7-10.9	A8-10.9	A9-10.9	B10-10.9	B3-10.9	B4-10.9	B5-10.9	B7-10.9	B8-10.9	B9-10.9	C3-10.9	C5-10.9	C9-10.9	D1-10.9	D4-10.9	D6-10.9	D9-10.9
TESTIS, MIDDLE (CONTINUED)																				
Testicular Oocytes																				
Unable to Stage																				
TESTIS, POSTERIOR				N		N						I		N	N		N			N
Cellular Infiltrate,																				
Mononuclear Cell		1																	1	
Exfoliated Germ Cells	1			2				1										1	2	
Germ Cell Degeneration							1		1	1								1		
Germ Cell Vacuolation																				
Germinal Epithelium, Thinning																				
and Dilation																				
Phenotype 0	P	P		P		P	P	P	P	P	P	P			P		P	P		
Phenotype 1																				
Stage 1																				
Stage 2									P											
Stage 3						P						P								
Stage 4	P	P		P			P	P									P	P		
Stage 5										P					P					
Testicular Oocytes																				
Unable to Stage												P								
WOLFFIAN DUCT, ANTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1						P					P				P					
Stage 2	P		P	P								P		P		P	P	P	P	P
Stage 3		P					P	P	P	P			P							
WOLFFIAN DUCT, MIDDLE																				
Epithelial Cells, Cytoplasmic																				
Inclusions								2												
Stage 1	P				P							P			P		P			
Stage 2			P	P					P		P			P		P		P	P	P
Stage 3		P					P	P		P			P							
WOLFFIAN DUCT, POSTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1	P		P		P				P					P	P	P	P	P	P	

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	A10-10.9	A2-10.9	A7-10.9	A8-10.9	A9-10.9	B10-10.9	B3-10.9	B4-10.9	B5-10.9	B7-10.9	B8-10.9	B9-10.9	C3-10.9	C5-10.9	C9-10.9	D1-10.9	D4-10.9	D6-10.9	D9-10.9	
WOLFFIAN DUCT, POSTERIOR																				
(CONTINUED)																				
Stage 2				P		P	P	P		P	P		P							
Stage 3		P										P								

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
33.0-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	A4-330	A8-330	A9-330	B2-330	B4-330	B5-330	B8-330	C1-330	C2-330	C3-330	C6-330	C7-330	C8-330	D3-330	D4-330	D6-330	D7-330	D9-330	D10-330
KIDNEY, ANTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell								1									1		1	1
Fibrosis, Interstitial			1																	
Mineralization		2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2
Tubular Epithelium,																				
Cytoplasmic Pigment																				
Tubules, Dilation															1					1
Tubules, Vacuolation																				
KIDNEY, MIDDLE																				
Cellular Infiltrate,																				
Mononuclear Cell						1					1								1	1
Fibrosis, Interstitial				1																
Mineralization		2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2
Tubules, Dilation															1					1
Tubules, Vacuolation																				
KIDNEY, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell																		1		
Fibrosis, Interstitial																				
Mineralization		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Tubules, Dilation													1		2			1		
Tubules, Vacuolation													1							
LIVER			X									X		X			X			
Bile Duct, Dilated																				
Cellular Infiltrate,																				
Parenchymal, Focal		2		1	2	1	1	1	1	1	1		1		1	1		1	1	
Hepatocellular Vacuolation,																				
Decreased																				
Hepatocellular Vacuolation,																				
Increased				1			1													1
OVIDUCT, ANTERIOR																				
Stage 1		P	P	P	P	P		P	P			P	P				P	P		
Stage 2							P			P	P			P	P	P			P	P
Stage 3																				

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
33.0-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	A4-33.0	A8-33.0	A9-33.0	B2-33.0	B4-33.0	B5-33.0	B8-33.0	C1-33.0	C2-33.0	C3-33.0	C6-33.0	C7-33.0	C8-33.0	D3-33.0	D4-33.0	D6-33.0	D7-33.0	D9-33.0	D10-33.0
OVIDUCT, MIDDLE																				
Stage 1		P	P	P	P	P		P	P			P	P				P	P		
Stage 2							P			P	P			P	P	P			P	P
Stage 3																				
OVIDUCT, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell																				
Stage 1		P	P	P	P	P		P	P			P	P			P	P	P		
Stage 2							P			P	P			P	P				P	P
TESTIS, ANTERIOR													N	N			N			
Cellular Infiltrate,																				
Mononuclear Cell																				
Exfoliated Germ Cells																		2	1	2
Germ Cell Degeneration		1			1			1	1	2		2				2		1		2
Germ Cell Vacuolation										1	1									
Germinal Epithelium, Thinning																				
and Dilation																				
Phenotype 0		P	P	P	P	P	P	P	P	P	P	P			P	P		P	P	P
Stage 1																				
Stage 3		P																		
Stage 4				P	P	P	P	P	P	P	P	P			P	P		P		P
Stage 5			P																P	
Unable to Stage																				
TESTIS, MIDDLE													N	N			N			
Cellular Infiltrate,																				
Mononuclear Cell											2									
Exfoliated Germ Cells																		2	1	2
Germ Cell Degeneration		1		1					1	1		2			1	2			1	
Germ Cell Vacuolation																				
Germinal Epithelium, Thinning																				
and Dilation																				
Phenotype 0		P	P	P	P	P	P	P	P	P	P	P			P	P		P	P	P
Phenotype 1																				
Stage 1																				
Stage 3		P																		
Stage 4			P	P	P	P	P		P	P	P	P			P	P		P		P
Stage 5								P											P	

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
33.0-Term

BATT01-00390 Terminal Sacrifice Male *Xenopus laevis* (South African clawed frog)	ANIMAL	A4-33.0	A8-33.0	A9-33.0	B2-33.0	B4-33.0	B5-33.0	B8-33.0	C1-33.0	C2-33.0	C3-33.0	C6-33.0	C7-33.0	C8-33.0	D3-33.0	D4-33.0	D6-33.0	D7-33.0	D9-33.0	D10-33.0	
TESTIS, MIDDLE (CONTINUED)																					
Testicular Oocytes																					
Unable to Stage																					
TESTIS, POSTERIOR		N	N	N	N	N	N		N			N								N	
Cellular Infiltrate,																					
Mononuclear Cell											2										
Exfoliated Germ Cells																		2	1		
Germ Cell Degeneration								1		1				1		2	1		1		
Germ Cell Vacuolation																					
Germinal Epithelium, Thinning																					
and Dilation																					
Phenotype 0								P		P	P		P	P	P	P	P	P	P		
Phenotype 1																					
Stage 1																					
Stage 2																					
Stage 3																					
Stage 4										P	P		P	P	P	P	P	P			
Stage 5								P											P		
Testicular Oocytes																					
Unable to Stage																					
WOLFFIAN DUCT, ANTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions															1						
Stage 1							P			P					P	P	P				
Stage 2		P	P	P	P	P		P	P		P	P	P	P				P	P	P	
Stage 3																					
WOLFFIAN DUCT, MIDDLE																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1						P	P									P	P	P			
Stage 2		P	P	P	P			P	P	P	P	P	P	P	P				P	P	
Stage 3																					
WOLFFIAN DUCT, POSTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions															1						
Stage 1				P	P	P	P			P		P	P			P	P		P		

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
33.0-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	A4-33.0	A8-33.0	A9-33.0	B2-33.0	B4-33.0	B5-33.0	B8-33.0	C1-33.0	C2-33.0	C3-33.0	C6-33.0	C7-33.0	C8-33.0	D3-33.0	D4-33.0	D6-33.0	D7-33.0	D9-33.0	D10-33.0	
WOLFFIAN DUCT, POSTERIOR																				
(CONTINUED)																				
Stage 2	P	P					P	P		P			P	P			P		P	
Stage 3																				

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	A4-1000.0	A6-1000.0	B2-1000.0	B4-1000.0	B5-1000.0	B6-1000.0	B9-1000.0	C2-1000.0	C3-1000.0	C5-1000.0	C7-1000.0	D1-1000.0	D2-1000.0	D7-1000.0						
KIDNEY, ANTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell	2		1		1	1	1			1			1	1						
Fibrosis, Interstitial								2												
Mineralization	2	2	2	2	2	2	2	2	2	2	2	2	2	2						
Tubular Epithelium,																				
Cytoplasmic Pigment																				
Tubules, Dilation										1	1			1						
Tubules, Vacuolation																				
KIDNEY, MIDDLE																				
Cellular Infiltrate,																				
Mononuclear Cell	1		1								1	1	1							
Fibrosis, Interstitial								2												
Mineralization	2	2	2	2	1	2	2	2	2	2	2	1	2	2						
Tubules, Dilation											1			1						
Tubules, Vacuolation																				
KIDNEY, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell	1	2				1	1		1		1		1	1						
Fibrosis, Interstitial																				
Mineralization	2	2	2	2	2	2	2	2	2	2	2	1	2	2						
Tubules, Dilation									1			1		1						
Tubules, Vacuolation																				
LIVER	X					X	X				X		X	X						
Bile Duct, Dilated																				
Cellular Infiltrate,																				
Parenchymal, Focal		1	1	1	1			1	1			1								
Hepatocellular Vacuolation,																				
Decreased		1						1		1										
Hepatocellular Vacuolation,																				
Increased																				
OVIDUCT, ANTERIOR																				
Stage 1	P				P		P	P				P								
Stage 2		P	P	P		P			P	P	P		P	P						
Stage 3																				

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	A4-1000.0	A6-1000.0	B2-1000.0	B4-1000.0	B5-1000.0	B6-1000.0	B9-1000.0	C2-1000.0	C3-1000.0	C5-1000.0	C7-1000.0	D1-1000.0	D2-1000.0	D7-1000.0						
OVIDUCT, MIDDLE																				
Stage 1	P	P			P		P	P				P								
Stage 2			P	P		P			P	P	P		P	P						
Stage 3																				
OVIDUCT, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell																				
Stage 1	P	P			P	P	P	P				P								
Stage 2			P	P					P	P	P		P	P						
TESTIS, ANTERIOR							N	N												
Cellular Infiltrate,																				
Mononuclear Cell				2		1														
Exfoliated Germ Cells	2	2		1		2							1	1						
Germ Cell Degeneration				1					1			1								
Germ Cell Vacuolation				1																
Germinal Epithelium, Thinning																				
and Dilation																				
Phenotype 0	P	P	P	P	P	P			P	P	P	P	P	P						
Stage 1																				
Stage 3																				
Stage 4	P	P	P		P	P			P	P	P	P								
Stage 5				P									P	P						
Unable to Stage																				
TESTIS, MIDDLE							N	N												
Cellular Infiltrate,																				
Mononuclear Cell				2		1							1							
Exfoliated Germ Cells	2	2				2						1	1	1						
Germ Cell Degeneration										1				1						
Germ Cell Vacuolation																				
Germinal Epithelium, Thinning																				
and Dilation																				
Phenotype 0	P	P	P	P	P	P			P	P	P	P	P	P						
Phenotype 1																				
Stage 1																				
Stage 3																				
Stage 4	P	P	P	P		P			P	P	P	P	P	P						
Stage 5					P															

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL

	A4-100.0	A6-100.0	B2-100.0	B4-100.0	B5-100.0	B6-100.0	B9-100.0	C2-100.0	C3-100.0	C5-100.0	C7-100.0	D1-100.0	D2-100.0	D7-100.0						
TESTIS, MIDDLE (CONTINUED)																				
Testicular Oocytes																				
Unable to Stage																				
TESTIS, POSTERIOR	N			I	N	I				N										
Cellular Infiltrate,																				
Mononuclear Cell																				
Exfoliated Germ Cells		2					1	2					2	1						
Germ Cell Degeneration								1												
Germ Cell Vacuolation													1							
Germinal Epithelium, Thinning																				
and Dilation							1													
Phenotype 0		P	P	P		P	P	P	P		P	P	P	P						
Phenotype 1																				
Stage 1																				
Stage 2																				
Stage 3																				
Stage 4		P	P				P	P	P		P	P		P						
Stage 5													P							
Testicular Oocytes																				
Unable to Stage				P		P														
WOLFFIAN DUCT, ANTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1		P			P	P	P					P	P							
Stage 2	P		P	P				P	P	P				P						
Stage 3											P									
WOLFFIAN DUCT, MIDDLE																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1			P			P	P					P								
Stage 2	P	P		P	P			P	P	P			P	P						
Stage 3											P									
WOLFFIAN DUCT, POSTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1			P	P	P	P	P		P			P	P							

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390
Terminal Sacrifice
Male *Xenopus laevis*
(South African clawed frog)

ANIMAL	A4-100.0	A6-100.0	B2-100.0	B4-100.0	B5-100.0	B6-100.0	B9-100.0	C2-100.0	C3-100.0	C5-100.0	C7-100.0	D1-100.0	D2-100.0	D7-100.0						
WOLFFIAN DUCT, POSTERIOR																				
(CONTINUED)																				
Stage 2	P	P						P		P				P						
Stage 3											P									

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	A2-0.0	A3-0.0	A6-0.0	A8-0.0	B3-0.0	B4-0.0	B5-0.0	B8-0.0	C4-0.0	C7-0.0	D4-0.0	D7-0.0	D8-0.0	E1-0.0	E2-0.0	E5-0.0	E6-0.0	E8-0.0	F1-0.0	F2-0.0
KIDNEY, ANTERIOR													N								
Cellular Infiltrate,																					
Mononuclear Cell			1								1			1	1				1		
Fibrosis, Interstitial																					
Mineralization		1	1	2	2	2	2	1	1	2	2	2		2	2	2	2	2	1	2	1
Tubular Epithelium,																					
Cytoplasmic Pigment				1																	
Tubules, Dilation																				1	
Tubules, Vacuolation									1												
KIDNEY, MIDDLE													N								
Cellular Infiltrate,																					
Mononuclear Cell						1						1			1			1			
Fibrosis, Interstitial																					
Mineralization		2	2	2	2	2	2	1	2	2	2	2		2	2	2	2	2	2	2	1
Tubules, Dilation																					
Tubules, Vacuolation									1												
KIDNEY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell					1	1		1			1		1								
Fibrosis, Interstitial																					
Mineralization		2	1	2	3	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Tubules, Dilation													1								
Tubules, Vacuolation																					
LIVER					X		X					X			X						
Bile Duct, Dilated																					
Cellular Infiltrate,																					
Parenchymal, Focal		1	1	1		1		1	1	1	1			1		1	1	1	1	1	1
Hepatocellular Vacuolation,																					
Decreased													1								
Hepatocellular Vacuolation,																					
Increased		1																1		1	
OVARY, ANTERIOR										N											
Cellular Infiltrate,																					
Mononuclear Cell		1	1			1	1	1			1	1		1		1		1			1
Germ Cell Degeneration		1			1						1	1							1	1	
Phenotype 0		P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	A2-0.0	A3-0.0	A6-0.0	A8-0.0	B3-0.0	B4-0.0	B5-0.0	B8-0.0	C4-0.0	C7-0.0	D4-0.0	D7-0.0	D8-0.0	E1-0.0	E2-0.0	E5-0.0	E6-0.0	E8-0.0	F1-0.0	F2-0.0
OVARY, ANTERIOR (CONTINUED)																					
Stage 2														P							
Stage 3			P		P	P					P		P								
Stage 4		P		P			P	P	P			P			P	P	P	P	P	P	P
OVARY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell		1	1			1	1	2	1	1	1	1		1							1
Germ Cell Degeneration				1		1				1	1		1						1		
Phenotype 0		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Stage 2										P				P							
Stage 3			P		P						P		P								
Stage 4		P		P		P	P	P	P			P			P	P	P	P	P	P	P
OVARY, POSTERIOR														N							
Cellular Infiltrate,																					
Mononuclear Cell					2			1	1				1		1			1			
Germ Cell Degeneration									1						1			1			
Inflammation, Granulomatous																					
Phenotype 0		P	P	P	P	P	P	P	P	P	P	P	P		P	P	P	P	P	P	P
Stage 2										P											
Stage 3			P		P		P				P		P			P					
Stage 4		P		P		P		P	P			P			P		P	P	P	P	P
Unable to Stage																					
OVIDUCT, ANTERIOR													N								
Stage 1																					
Stage 2		P	P	P	P	P	P	P		P	P			P	P	P	P	P	P	P	P
Stage 3									P			P									
OVIDUCT, MIDDLE																					
Stage 1																					
Stage 2		P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P
Stage 3									P												
OVIDUCT, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell																					
Stage 1																		P			
Stage 2		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	A2-0.0	A3-0.0	A6-0.0	A8-0.0	B3-0.0	B4-0.0	B5-0.0	B8-0.0	C4-0.0	C7-0.0	D4-0.0	D7-0.0	D8-0.0	E1-0.0	E2-0.0	E5-0.0	E6-0.0	E8-0.0	F1-0.0	F2-0.0
WOLFFIAN DUCT, ANTERIOR												N								
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1	P				P	P				P	P		P					P		
Stage 2		P	P	P			P	P	P					P	P	P	P		P	P
Stage 3																				
WOLFFIAN DUCT, MIDDLE												N								
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1					P					P	P		P					P		
Stage 2	P	P	P	P		P	P	P	P					P	P	P	P		P	P
Stage 3																				
WOLFFIAN DUCT, POSTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions										1										
Stage 1					P										P		P	P		
Stage 2	P	P	P	P		P		P	P		P	P	P	P		P			P	P
Stage 3							P			P										

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	F3-0.0	F4-0.0	F5-0.0	F7-0.0	F9-0.0	G2-0.0	G7-0.0	H4-0.0	H5-0.0	H6-0.0	B10-0.0	F10-0.0								
KIDNEY, ANTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell			1					1	1	1											
Fibrosis, Interstitial																					
Mineralization		2	1	2	1	1	2	2	2	3	2	2	2								
Tubular Epithelium,																					
Cytoplasmic Pigment																					
Tubules, Dilation										1											
Tubules, Vacuolation																					
KIDNEY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell			1						1			1									
Fibrosis, Interstitial																					
Mineralization		2	1	2	1	1	2	2	2	3	2	2	2								
Tubules, Dilation										1											
Tubules, Vacuolation																					
KIDNEY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell						1															
Fibrosis, Interstitial																					
Mineralization		1	1	1	1	1	2	2	2	3	2	2	2								
Tubules, Dilation										1											
Tubules, Vacuolation																					
LIVER		X		X						X											
Bile Duct, Dilated																					
Cellular Infiltrate,																					
Parenchymal, Focal			1		2	1	1	1	2				1								
Hepatocellular Vacuolation,																					
Decreased												1									
Hepatocellular Vacuolation,																					
Increased					1						1										
OVARY, ANTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell										1		2									
Germ Cell Degeneration		1	1	1			1		1		1										
Phenotype 0		P	P	P	P	P	P	P	P	P	P	P	P								

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL F3-0.0	F4-0.0	F5-0.0	F7-0.0	F9-0.0	G2-0.0	G7-0.0	H4-0.0	H5-0.0	H6-0.0	B10-0.0	F10-0.0								
OVARY, ANTERIOR (CONTINUED)																				
Stage 2																				
Stage 3			P			P			P											
Stage 4	P	P		P	P		P	P		P	P	P								
OVARY, MIDDLE																				
Cellular Infiltrate,																				
Mononuclear Cell	2				1				2	1	1									
Germ Cell Degeneration	1									1	1									
Phenotype 0	P	P	P	P	P	P	P	P	P	P	P	P								
Stage 2																				
Stage 3		P	P						P											
Stage 4	P			P	P	P	P	P		P	P	P								
OVARY, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell			1																	
Germ Cell Degeneration		1	1			1					1	1								
Inflammation, Granulomatous																				
Phenotype 0	P	P	P	P	P	P	P	P	P	P	P	P								
Stage 2																				
Stage 3			P		P	P			P		P									
Stage 4	P	P		P			P	P		P		P								
Unable to Stage																				
OVIDUCT, ANTERIOR																				
Stage 1																				
Stage 2	P	P	P	P	P	P	P	P	P	P	P	P								
Stage 3																				
OVIDUCT, MIDDLE																				
Stage 1																				
Stage 2	P	P	P	P	P	P	P	P	P	P	P	P								
Stage 3																				
OVIDUCT, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell									1											
Stage 1																				
Stage 2	P	P	P	P	P	P	P	P	P	P	P	P								

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
0.0-Ctl-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	F3-0.0	F4-0.0	F5-0.0	F7-0.0	F9-0.0	G2-0.0	G7-0.0	H4-0.0	H5-0.0	H6-0.0	B10-0.0	F10-0.0
WOLFFIAN DUCT, ANTERIOR												
Epithelial Cells, Cytoplasmic Inclusions												
Stage 1		P	P	P	P		P			P	P	
Stage 2	P					P		P	P			P
Stage 3												
WOLFFIAN DUCT, MIDDLE												
Epithelial Cells, Cytoplasmic Inclusions												
Stage 1		P	P		P	P	P	P		P	P	
Stage 2	P			P					P			P
Stage 3												
WOLFFIAN DUCT, POSTERIOR												
Epithelial Cells, Cytoplasmic Inclusions												
Stage 1		P	P	P	P	P	P	P	P	P	P	
Stage 2	P											P
Stage 3												

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	A4-3.6	A9-3.6	B5-3.6	B8-3.6	B9-3.6	C1-3.6	C3-3.6	C6-3.6	C8-3.6	B10-3.6	D10-3.6
KIDNEY, ANTERIOR											
Cellular Infiltrate,											
Mononuclear Cell	1			1	1	1	1		1	1	
Fibrosis, Interstitial											
Mineralization	2	3	2	2	1	2	1	2	2	2	2
Tubular Epithelium,											
Cytoplasmic Pigment											
Tubules, Dilation											
Tubules, Vacuolation			1								
KIDNEY, MIDDLE											
Cellular Infiltrate,											
Mononuclear Cell				1	1	1					
Fibrosis, Interstitial											
Mineralization	2	3	2	2	1	2	2	2	2	3	2
Tubules, Dilation											
Tubules, Vacuolation											1
KIDNEY, POSTERIOR											
Cellular Infiltrate,											
Mononuclear Cell				1		1				1	
Fibrosis, Interstitial											
Mineralization	2	2	2	2	2	2	2	2	2	2	2
Tubules, Dilation											
Tubules, Vacuolation											
LIVER				X			X		X	X	
Bile Duct, Dilated											
Cellular Infiltrate,											
Parenchymal, Focal	1		1		1	1		1			1
Hepatocellular Vacuolation,											
Decreased		1									
Hepatocellular Vacuolation,											
Increased											
OVARY, ANTERIOR											
Cellular Infiltrate,											
Mononuclear Cell	1	1		1		1	1		1		
Germ Cell Degeneration		1	1		1						
Phenotype 0	P	P	P	P	P	P	P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	A4-3.6	A9-3.6	B5-3.6	B8-3.6	B9-3.6	C1-3.6	C3-3.6	C6-3.6	C8-3.6	B10-3.6	D10-3.6
OVARY, ANTERIOR (CONTINUED)											
Stage 2											
Stage 3		P		P		P		P	P	P	
Stage 4	P		P		P		P				P
OVARY, MIDDLE											
Cellular Infiltrate,											
Mononuclear Cell	1	1				1			1		
Germ Cell Degeneration		1									
Phenotype 0	P	P	P	P	P	P	P	P	P	P	P
Stage 2											
Stage 3		P		P		P	P	P	P	P	
Stage 4	P		P		P						P
OVARY, POSTERIOR				N							
Cellular Infiltrate,											
Mononuclear Cell		1	1								
Germ Cell Degeneration		1						1			
Inflammation, Granulomatous											
Phenotype 0	P	P	P		P	P	P	P	P	P	P
Stage 2											
Stage 3		P	P		P	P	P	P	P	P	P
Stage 4	P										
Unable to Stage											
OVIDUCT, ANTERIOR				N							
Stage 1											
Stage 2	P	P	P		P	P	P	P	P		P
Stage 3										P	
OVIDUCT, MIDDLE				N							
Stage 1											
Stage 2	P	P	P		P	P	P	P	P		P
Stage 3										P	
OVIDUCT, POSTERIOR				N							
Cellular Infiltrate,											
Mononuclear Cell											
Stage 1											
Stage 2	P	P	P		P	P	P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
3.6-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	A4-3.6	A9-3.6	B5-3.6	B8-3.6	B9-3.6	C1-3.6	C3-3.6	C6-3.6	C8-3.6	B10-3.6	D10-3.6
WOLFFIAN DUCT, ANTERIOR											
Epithelial Cells, Cytoplasmic											
Inclusions						1				1	
Stage 1	P	P		P	P		P	P	P		
Stage 2			P			P				P	P
Stage 3											
WOLFFIAN DUCT, MIDDLE											
Epithelial Cells, Cytoplasmic											
Inclusions						1				1	
Stage 1	P	P		P	P		P	P	P		
Stage 2			P			P				P	P
Stage 3											
WOLFFIAN DUCT, POSTERIOR											
Epithelial Cells, Cytoplasmic											
Inclusions											
Stage 1	P	P	P	P	P		P	P		P	P
Stage 2						P			P		
Stage 3											

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	A1-10.9	A3-10.9	A4-10.9	A5-10.9	A6-10.9	B1-10.9	B2-10.9	B6-10.9	C1-10.9	C10-10.9	C2-10.9	C4-10.9	C6-10.9	C7-10.9	C8-10.9	D10-10.9	D2-10.9	D3-10.9	D5-10.9	D7-10.9
KIDNEY, ANTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell					1					1	1			1				1		
Fibrosis, Interstitial												2								
Mineralization	2	2	2	2	2	2	2	2	1	2	2	3	2	2	1	2	2	2	2	2
Tubular Epithelium,																				
Cytoplasmic Pigment																				
Tubules, Dilation	1																			1
Tubules, Vacuolation																				
KIDNEY, MIDDLE																				
Cellular Infiltrate,																				
Mononuclear Cell										1		1			1		1		1	1
Fibrosis, Interstitial												2								
Mineralization	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2
Tubules, Dilation	1																			
Tubules, Vacuolation																				
KIDNEY, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell													1		1					
Fibrosis, Interstitial												1								
Mineralization	2	2	2	2	2	2	2	1	2	2	2	2	1	2	2	2	2	2	1	2
Tubules, Dilation		1									1					1				
Tubules, Vacuolation																				
LIVER		X			X	X													X	
Bile Duct, Dilated																				
Cellular Infiltrate,																				
Parenchymal, Focal	1		1	1			1	1	1	1	1	1	1	1	1		1	1		2
Hepatocellular Vacuolation,																				
Decreased										1										
Hepatocellular Vacuolation,																				
Increased				1												1				
OVARY, ANTERIOR	N																			
Cellular Infiltrate,																				
Mononuclear Cell		2	1	1		1		1		1				1				1	1	
Germ Cell Degeneration						1						1		1	1			1		1
Phenotype 0		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	A1-10.9	A3-10.9	A4-10.9	A5-10.9	A6-10.9	B1-10.9	B2-10.9	B6-10.9	C1-10.9	C10-10.9	C2-10.9	C4-10.9	C6-10.9	C7-10.9	C8-10.9	D10-10.9	D2-10.9	D3-10.9	D5-10.9	D7-10.9
OVARY, ANTERIOR (CONTINUED)																					
Stage 2																P					
Stage 3				P		P		P		P		P	P	P	P		P	P	P		P
Stage 4			P		P		P		P		P						P			P	
OVARY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell		1			1	2		1		1					1		1				1
Germ Cell Degeneration					1				1						1			1	1		1
Phenotype 0		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Stage 2																					
Stage 3				P		P		P		P		P		P		P	P	P	P		P
Stage 4		P	P		P		P		P		P		P		P					P	
OVARY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell						1				1	1	1					1				1
Germ Cell Degeneration									1									1			1
Inflammation, Granulomatous																					
Phenotype 0		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Stage 2																					
Stage 3			P	P	P	P	P	P	P	P		P	P	P	P			P	P		P
Stage 4		P									P					P	P			P	
Unable to Stage																					
OVIDUCT, ANTERIOR																N					
Stage 1																					
Stage 2		P	P	P	P	P	P	P	P	P	P	P	P	P	P		P	P	P	P	
Stage 3																					P
OVIDUCT, MIDDLE																					
Stage 1																					
Stage 2		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
Stage 3																					P
OVIDUCT, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell																					
Stage 1																					
Stage 2		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	A1-10.9	A3-10.9	A4-10.9	A5-10.9	A6-10.9	B1-10.9	B2-10.9	B6-10.9	C1-10.9	C10-10.9	C2-10.9	C4-10.9	C6-10.9	C7-10.9	C8-10.9	D10-10.9	D2-10.9	D3-10.9	D5-10.9	D7-10.9
WOLFFIAN DUCT, ANTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1		P	P	P		P	P	P	P		P		P		P			P	P	P
Stage 2	P				P					P		P		P		P	P			
Stage 3																				
WOLFFIAN DUCT, MIDDLE																				
Epithelial Cells, Cytoplasmic																				
Inclusions																			2	
Stage 1		P		P		P	P	P	P				P		P			P	P	P
Stage 2	P		P		P					P	P	P		P		P	P			
Stage 3																				
WOLFFIAN DUCT, POSTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1		P		P	P		P	P	P	P			P	P	P			P	P	P
Stage 2	P		P			P					P					P	P			
Stage 3						P						P								

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	D8-10.9																			
KIDNEY, ANTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell																				
Fibrosis, Interstitial																				
Mineralization	2																			
Tubular Epithelium,																				
Cytoplasmic Pigment																				
Tubules, Dilation																				
Tubules, Vacuolation																				
KIDNEY, MIDDLE																				
Cellular Infiltrate,																				
Mononuclear Cell	1																			
Fibrosis, Interstitial																				
Mineralization	2																			
Tubules, Dilation	1																			
Tubules, Vacuolation																				
KIDNEY, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell	1																			
Fibrosis, Interstitial																				
Mineralization	2																			
Tubules, Dilation																				
Tubules, Vacuolation																				
LIVER																				
Bile Duct, Dilated																				
Cellular Infiltrate,																				
Parenchymal, Focal	1																			
Hepatocellular Vacuolation,																				
Decreased																				
Hepatocellular Vacuolation,																				
Increased																				
OVARY, ANTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell	1																			
Germ Cell Degeneration	1																			
Phenotype 0	P																			

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	D8-10.9																			
OVARY, ANTERIOR (CONTINUED)																					
Stage 2																					
Stage 3																					
Stage 4		P																			
OVARY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell		1																			
Germ Cell Degeneration																					
Phenotype 0		P																			
Stage 2																					
Stage 3																					
Stage 4		P																			
OVARY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell																					
Germ Cell Degeneration																					
Inflammation, Granulomatous																					
Phenotype 0		P																			
Stage 2																					
Stage 3		P																			
Stage 4																					
Unable to Stage																					
OVIDUCT, ANTERIOR																					
Stage 1																					
Stage 2		P																			
Stage 3																					
OVIDUCT, MIDDLE																					
Stage 1																					
Stage 2		P																			
Stage 3																					
OVIDUCT, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell																					
Stage 1																					
Stage 2		P																			

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
10.9-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL

	D8-10.9																				
WOLFFIAN DUCT, ANTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1	P																				
Stage 2																					
Stage 3																					
WOLFFIAN DUCT, MIDDLE																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1	P																				
Stage 2																					
Stage 3																					
WOLFFIAN DUCT, POSTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1	P																				
Stage 2																					
Stage 3																					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
33.0-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	A2-33.0	A3-33.0	A5-33.0	A6-33.0	A7-33.0	B6-33.0	B7-33.0	B9-33.0	C4-33.0	C9-33.0	D1-33.0	D2-33.0	D5-33.0	D8-33.0	A10-33.0	B10-33.0	C10-33.0			
KIDNEY, ANTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell		1					1			1	1		1	1	1	1	1	1			
Fibrosis, Interstitial														1							
Mineralization		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Tubular Epithelium,																					
Cytoplasmic Pigment																					
Tubules, Dilation												1	1								
Tubules, Vacuolation																					
KIDNEY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell			1				1			1	1		1	1	1	1	1	1			
Fibrosis, Interstitial														1							
Mineralization		3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Tubules, Dilation													1								
Tubules, Vacuolation																					
KIDNEY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell					1		1				1							1			
Fibrosis, Interstitial																					
Mineralization		3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Tubules, Dilation																					
Tubules, Vacuolation																					
LIVER							X			X			X								
Bile Duct, Dilated																					
Cellular Infiltrate,																					
Parenchymal, Focal		2	2	1	1	1			1		1	1		1	1	1	1	1			
Hepatocellular Vacuolation,																					
Decreased								1						1							
Hepatocellular Vacuolation,																					
Increased															1			1			
OVARY, ANTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell		1		1	1	1	1				1	1			1	1		1			
Germ Cell Degeneration				1							1			1	1	1					
Phenotype 0		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
33.0-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	A2-33.0	A3-33.0	A5-33.0	A6-33.0	A7-33.0	B6-33.0	B7-33.0	B9-33.0	C4-33.0	C9-33.0	D1-33.0	D2-33.0	D5-33.0	D8-33.0	A10-33.0	B10-33.0	C10-33.0			
OVARY, ANTERIOR (CONTINUED)																				
Stage 2																				
Stage 3							P			P	P	P								
Stage 4	P	P	P	P	P	P		P	P				P	P	P	P	P			
OVARY, MIDDLE																				
Cellular Infiltrate,																				
Mononuclear Cell	1			1	1	1	1				1	1		1	1		1			
Germ Cell Degeneration										1	1	1			1					
Phenotype 0	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
Stage 2																				
Stage 3							P			P		P								
Stage 4	P	P	P	P	P	P		P	P		P		P	P	P	P	P			
OVARY, POSTERIOR											N					I				
Cellular Infiltrate,																				
Mononuclear Cell	1					1	1		1	1										
Germ Cell Degeneration	1									1		1								
Inflammation, Granulomatous																	1			
Phenotype 0	P	P	P	P	P	P	P	P	P	P		P	P	P	P	P	P			
Stage 2																				
Stage 3	P			P		P	P		P	P		P		P						
Stage 4		P	P		P			P					P		P		P			
Unable to Stage																P				
OVIDUCT, ANTERIOR																				
Stage 1																				
Stage 2	P	P	P	P	P	P	P	P	P	P	P		P	P	P	P				
Stage 3												P					P			
OVIDUCT, MIDDLE																				
Stage 1																				
Stage 2	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P				
Stage 3																	P			
OVIDUCT, POSTERIOR																				
Cellular Infiltrate,																				
Mononuclear Cell																				
Stage 1																				
Stage 2	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
33.0-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	A2-33.0	A3-33.0	A5-33.0	A6-33.0	A7-33.0	B6-33.0	B7-33.0	B9-33.0	C4-33.0	C9-33.0	D1-33.0	D2-33.0	D5-33.0	D8-33.0	A10-33.0	B10-33.0	C10-33.0			
WOLFFIAN DUCT, ANTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1	P			P							P	P		P	P					
Stage 2		P	P		P	P	P	P	P	P			P			P	P			
Stage 3																				
WOLFFIAN DUCT, MIDDLE																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1					P						P	P		P	P					
Stage 2	P	P	P	P		P	P	P	P	P			P			P	P			
Stage 3																				
WOLFFIAN DUCT, POSTERIOR																				
Epithelial Cells, Cytoplasmic																				
Inclusions																				
Stage 1				P	P	P		P	P	P	P	P	P	P	P		P			
Stage 2	P	P	P				P									P				
Stage 3																				

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	A1-100.0	A2-100.0	A3-100.0	A5-100.0	A7-100.0	A8-100.0	B1-100.0	B3-100.0	B7-100.0	B8-100.0	C1-100.0	C4-100.0	C6-100.0	C8-100.0	C9-100.0	D3-100.0	D4-100.0	D5-100.0	D6-100.0	D8-100.0
KIDNEY, ANTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell		1	1		1	1					1	1	1			1			1	1	1
Fibrosis, Interstitial										1											
Mineralization		2	2	2	2	2	2	1	2	2	2	1	2	2	2	2	2	2	2	2	2
Tubular Epithelium,																					
Cytoplasmic Pigment																					
Tubules, Dilation			1	1			1			2		1			1		1		1		
Tubules, Vacuolation																					
KIDNEY, MIDDLE																					
Cellular Infiltrate,																					
Mononuclear Cell		2			1					1	1	1	2			1					1
Fibrosis, Interstitial			1							1											
Mineralization		2	2	1	2	2	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2
Tubules, Dilation			1	1			2			1					2		1		1	1	
Tubules, Vacuolation																					
KIDNEY, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell				1						1						1			1	1	
Fibrosis, Interstitial																					
Mineralization		2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2
Tubules, Dilation		1		2			2									1					
Tubules, Vacuolation																					
LIVER			X				X				X			X		X					
Bile Duct, Dilated																					
Cellular Infiltrate,																					
Parenchymal, Focal		1		1	1	1		2	1	1		1	1		1		1	1	1	1	1
Hepatocellular Vacuolation,																					
Decreased																					
Hepatocellular Vacuolation,																					
Increased																					
OVARY, ANTERIOR								N				N									
Cellular Infiltrate,																					
Mononuclear Cell		1	1			1	1		1					2	1	1	1		1		
Germ Cell Degeneration		1									1							1			
Phenotype 0		P	P	P	P	P	P		P	P	P		P	P	P	P	P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	A1-1000.0	A2-1000.0	A3-1000.0	A5-1000.0	A7-1000.0	A8-1000.0	B1-1000.0	B3-1000.0	B7-1000.0	B8-1000.0	C1-1000.0	C4-1000.0	C6-1000.0	C8-1000.0	C9-1000.0	D3-1000.0	D4-1000.0	D5-1000.0	D6-1000.0	D8-1000.0
OVARY, ANTERIOR (CONTINUED)																					
Stage 2																					
Stage 3		P	P	P	P	P	P			P	P				P	P	P	P		P	P
Stage 4									P				P	P					P		
OVARY, MIDDLE								N				N									
Cellular Infiltrate,																					
Mononuclear Cell		1				1	1		1				1	2	1	1	1				
Germ Cell Degeneration		1	1												1			1			
Phenotype 0		P	P	P	P	P	P		P	P	P		P	P	P	P	P	P	P	P	P
Stage 2																					
Stage 3		P	P	P		P	P			P	P				P	P	P	P		P	P
Stage 4					P				P				P	P				P			
OVARY, POSTERIOR					N													N			
Cellular Infiltrate,																					
Mononuclear Cell		1						2	1			1		1	1	1					
Germ Cell Degeneration									1					1	1	1				1	
Inflammation, Granulomatous																					
Phenotype 0		P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P		P	P
Stage 2																					
Stage 3		P	P	P		P	P	P		P	P	P	P		P	P	P	P		P	P
Stage 4									P					P							
Unable to Stage																					
OVIDUCT, ANTERIOR																					
Stage 1																					
Stage 2		P	P	P	P	P	P	P	P	P	P	P	P		P	P	P	P	P	P	P
Stage 3														P							
OVIDUCT, MIDDLE																					
Stage 1																					
Stage 2			P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P
Stage 3		P						P													
OVIDUCT, POSTERIOR																					
Cellular Infiltrate,																					
Mononuclear Cell																					
Stage 1																					
Stage 2		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	A1-100.0	A2-100.0	A3-100.0	A5-100.0	A7-100.0	A8-100.0	B1-100.0	B3-100.0	B7-100.0	B8-100.0	C1-100.0	C4-100.0	C6-100.0	C8-100.0	C9-100.0	D3-100.0	D4-100.0	D5-100.0	D6-100.0	D8-100.0
WOLFFIAN DUCT, ANTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1		P	P	P		P	P				P	P		P	P			P			P
Stage 2					P			P	P	P			P			P	P		P	P	
Stage 3																					
WOLFFIAN DUCT, MIDDLE																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1		P		P			P	P	P	P	P	P		P	P			P	P		P
Stage 2			P		P	P							P			P	P			P	
Stage 3																					
WOLFFIAN DUCT, POSTERIOR																					
Epithelial Cells, Cytoplasmic																					
Inclusions																					
Stage 1		P	P	P		P	P	P		P	P	P		P	P			P		P	P
Stage 2					P				P				P			P	P		P		
Stage 3																					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	D 9 - 1 0 0 0 . 0	A 1 0 - 1 0 0 0 . 0	B 1 0 - 1 0 0 0 . 0	C 1 0 - 1 0 0 0 . 0	D 1 0 - 1 0 0 0 . 0
KIDNEY, ANTERIOR						
Cellular Infiltrate,						
Mononuclear Cell				1	1	1
Fibrosis, Interstitial						
Mineralization		2	2	2	2	2
Tubular Epithelium,						
Cytoplasmic Pigment						
Tubules, Dilation					2	
Tubules, Vacuolation						
KIDNEY, MIDDLE						
Cellular Infiltrate,						
Mononuclear Cell		1		1		1
Fibrosis, Interstitial						
Mineralization		1	2	2	2	2
Tubules, Dilation					1	
Tubules, Vacuolation						
KIDNEY, POSTERIOR						
Cellular Infiltrate,						
Mononuclear Cell					1	
Fibrosis, Interstitial						
Mineralization		2	2	2	2	2
Tubules, Dilation					1	
Tubules, Vacuolation						
LIVER				X		
Bile Duct, Dilated						
Cellular Infiltrate,						
Parenchymal, Focal			1		1	
Hepatocellular Vacuolation,						
Decreased		1				1
Hepatocellular Vacuolation,						
Increased						
OVARY, ANTERIOR						
Cellular Infiltrate,						
Mononuclear Cell		1	1		1	
Germ Cell Degeneration						
Phenotype 0		P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390 Terminal Sacrifice Female *Xenopus laevis* (South African clawed frog)	ANIMAL	D9-100.0	A10-100.0	B10-100.0	C10-100.0	D10-100.0
OVARY, ANTERIOR (CONTINUED)						
Stage 2						
Stage 3		P			P	P
Stage 4			P	P		
OVARY, MIDDLE						
Cellular Infiltrate,						
Mononuclear Cell		1	1		2	
Germ Cell Degeneration						
Phenotype 0		P	P	P	P	P
Stage 2						
Stage 3		P			P	P
Stage 4			P	P		
OVARY, POSTERIOR						
Cellular Infiltrate,						
Mononuclear Cell					1	1
Germ Cell Degeneration						
Inflammation, Granulomatous						
Phenotype 0		P	P	P	P	P
Stage 2						
Stage 3		P		P	P	P
Stage 4			P			
Unable to Stage						
OVIDUCT, ANTERIOR						
Stage 1						
Stage 2		P	P	P	P	P
Stage 3						
OVIDUCT, MIDDLE						
Stage 1						
Stage 2		P	P	P	P	P
Stage 3						
OVIDUCT, POSTERIOR						
Cellular Infiltrate,						
Mononuclear Cell						
Stage 1						
Stage 2		P	P	P	P	P

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

GROUP
100.0-Term

BATT01-00390
Terminal Sacrifice
Female *Xenopus laevis*
(South African clawed frog)

ANIMAL	D9-100.0	A10-100.0	B10-100.0	C10-100.0	D10-100.0
WOLFFIAN DUCT, ANTERIOR					
Epithelial Cells, Cytoplasmic					
Inclusions					
Stage 1	P		P		P
Stage 2		P		P	
Stage 3					
WOLFFIAN DUCT, MIDDLE					
Epithelial Cells, Cytoplasmic					
Inclusions	1				
Stage 1		P	P		P
Stage 2	P			P	
Stage 3					
WOLFFIAN DUCT, POSTERIOR					
Epithelial Cells, Cytoplasmic					
Inclusions					
Stage 1	P	P	P		
Stage 2				P	P
Stage 3					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

		GROUP 0.0-Ctl-Term				GROUP 3.6-Term			GROUP 33.0-Term					GROUP 100.0-Term									
BATT01-00390 Terminal Sacrifice *Xenopus laevis* (South African clawed frog)	ANIMAL	D6-0.0	D10-0.0	H10-0.0		D4-3.6			A1-33.0	B1-33.0	B3-33.0	C5-33.0		A9-100.0									
GONAD		N	N	N		N			N	N	N	N		N									
KIDNEY, ANTERIOR																							
Cellular Infiltrate,																							
Mononuclear Cell		1				1			1		1												
Fibrosis, Interstitial						1																	
Mineralization		1	2	1		2			2	2	2	2		2									
Tubular Epithelium,																							
Cytoplasmic Pigment																							
Tubules, Dilation				1																			
Tubules, Vacuolation																							
KIDNEY, MIDDLE																							
Cellular Infiltrate,																							
Mononuclear Cell										1	1												
Fibrosis, Interstitial						2																	
Mineralization		2	2	3		2			2	2	2	2		2									
Tubules, Dilation																							
Tubules, Vacuolation										1													
KIDNEY, POSTERIOR																							
Cellular Infiltrate,																							
Mononuclear Cell										1		1											
Fibrosis, Interstitial																							
Mineralization		2	2	3		2			2	2	2	2		2									
Tubules, Dilation																							
Tubules, Vacuolation																							
LIVER						X																	
Bile Duct, Dilated																							
Cellular Infiltrate,																							
Parenchymal, Focal		1		1					1	1	1	1		1									
Hepatocellular Vacuolation,																							
Decreased			1																				
Hepatocellular Vacuolation,																							
Increased																							
OVIDUCT, ANTERIOR																							
Stage 1									P	P	P	P											
Stage 2		P	P	P		P								P									

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

HISTOPATHOLOGY INCIDENCE TABLE

	GROUP 0.0-Ctl-Term				GROUP 3.6-Term			GROUP 33.0-Term					GROUP 100.0-Term								
BATT01-00390 ANIMAL	D6-0.0	D10-00.0	H10-00.0		D4-3.6			A1-33.0	B1-33.0	B3-33.0	C5-33.0		A9-100.0								
Terminal Sacrifice																					
Xenopus laevis																					
(South African clawed frog)																					
OVIDUCT, ANTERIOR (CONTINED)																					
Stage 3																					
OVIDUCT, MIDDLE																					
Stage 1								P	P	P	P										
Stage 2	P	P	P		P								P								
Stage 3																					
OVIDUCT, POSTERIOR																					
Cellular Infiltrate, Mononuclear Cell																					
Stage 1								P	P	P	P										
Stage 2	P	P	P		P								P								
WOLFFIAN DUCT, ANTERIOR																					
Epithelial Cells, Cytoplasmic Inclusions																					
Stage 1									P		P		P								
Stage 2	P	P	P		P			P		P											
Stage 3																					
WOLFFIAN DUCT, MIDDLE																					
Epithelial Cells, Cytoplasmic Inclusions					1																
Stage 1		P									P										
Stage 2	P		P		P			P	P	P			P								
Stage 3																					
WOLFFIAN DUCT, POSTERIOR																					
Epithelial Cells, Cytoplasmic Inclusions																					
Stage 1	P	P							P		P										
Stage 2			P		P			P		P			P								
Stage 3																					

Key: X=Not Remarkable N=No Section I=Incomplete P=Present
1=minimal 2=mild 3=moderate 4=severe

APPENDIX A

FIGURES AND LEGENDS

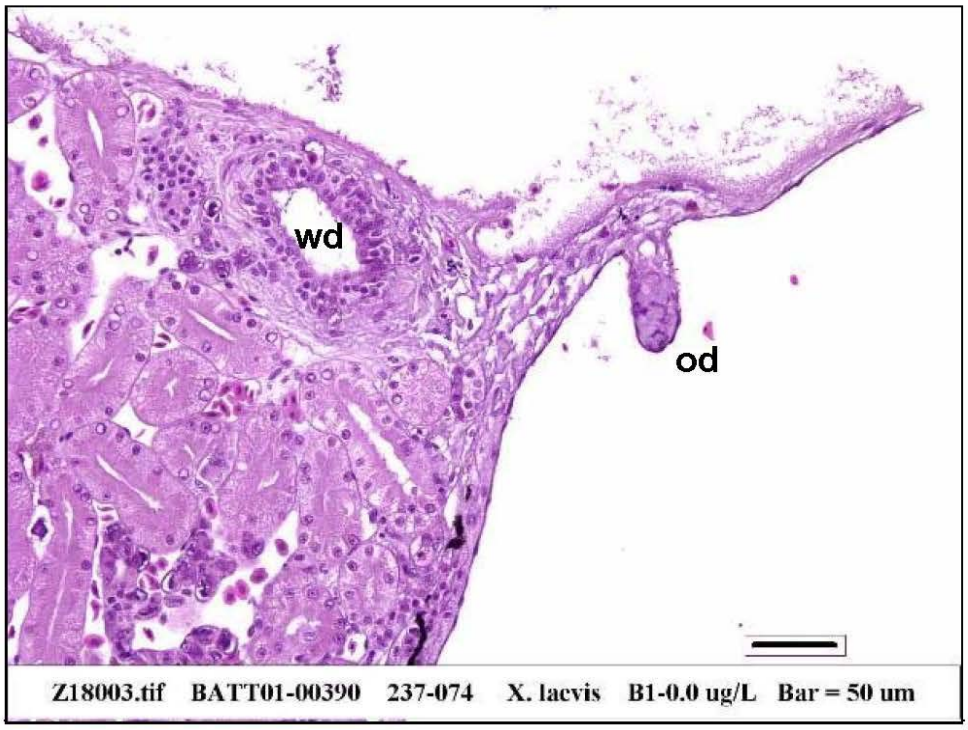


Figure 1 (Z18003). Stage 1 oviduct (od) and Wolffian duct (wd) from a control male, Animal No. B1-0.0 µg/L. This involuted oviduct was recorded as Stage 1. H&E.

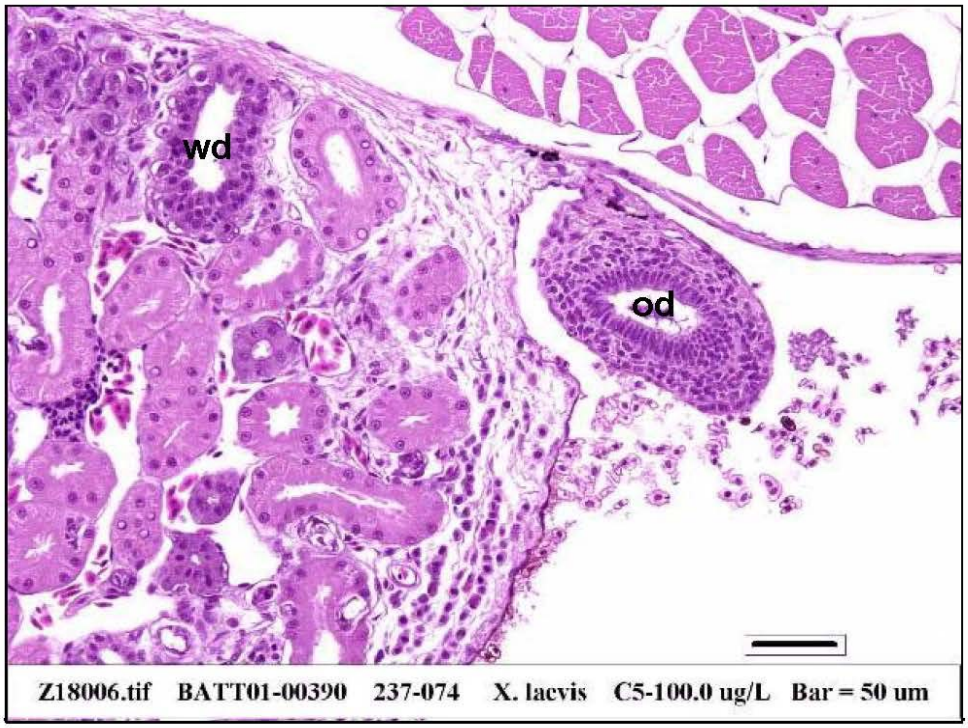


Figure 2 (Z18006). Stage 2 oviduct (od) and Wolffian duct (wd) from a male exposed to 100.0 µg/L 2-EHHB, Animal No. C5-100.0 µg/L. Compared to controls, there was a higher proportion of Stage 2 to Stage 1 oviducts in 2-EHHB-exposed frogs. H&E.

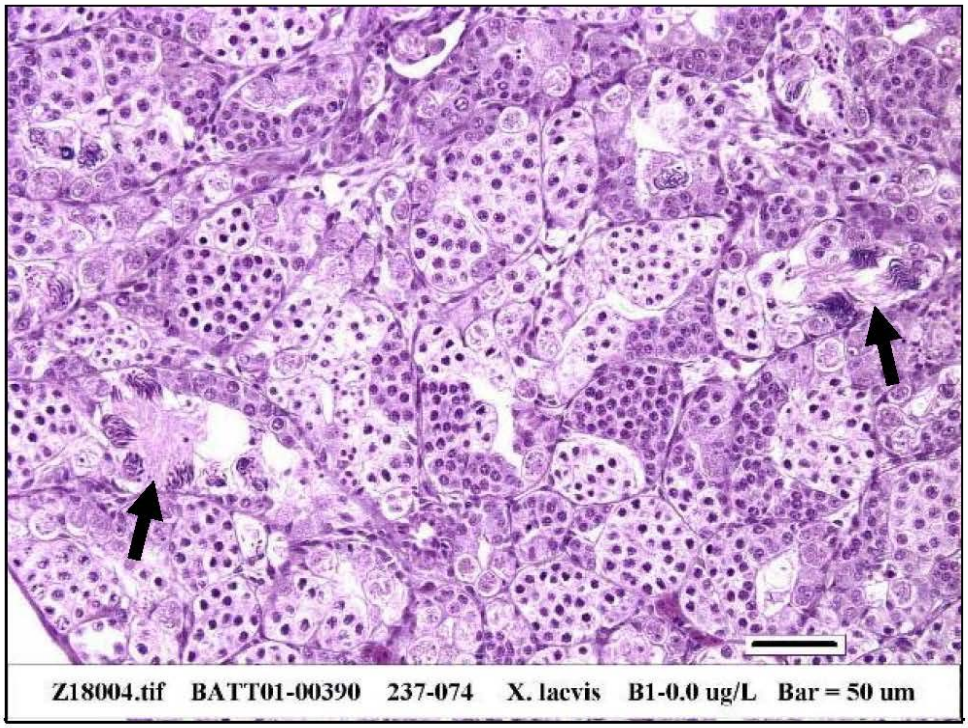


Figure 3 (Z18004). Testis from a control male, Animal No. B1-0.0 µg/L. Early Stage 5 testis characterized by the presence of all spermatogenic phases, including spermatozoa (arrows). H&E.

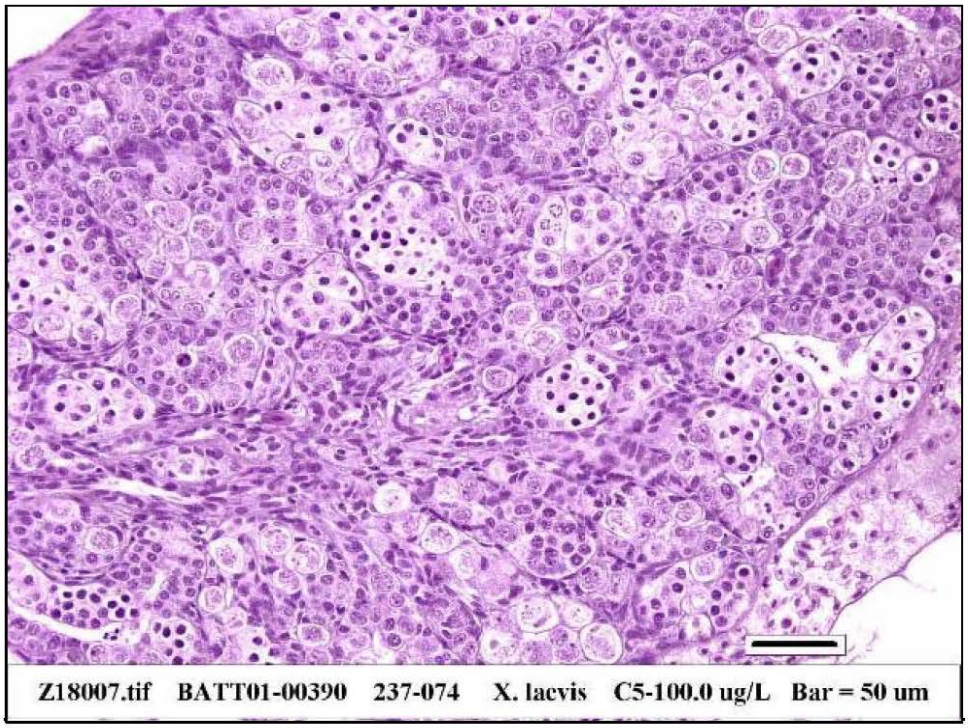


Figure 4 (Z18007). Stage 4 testis from a male exposed to 100.0 µg/L 2-EHHB, Animal No. C5-100.0 µg/L. Stage 4 testes lack nests of spermatozoa. H&E.

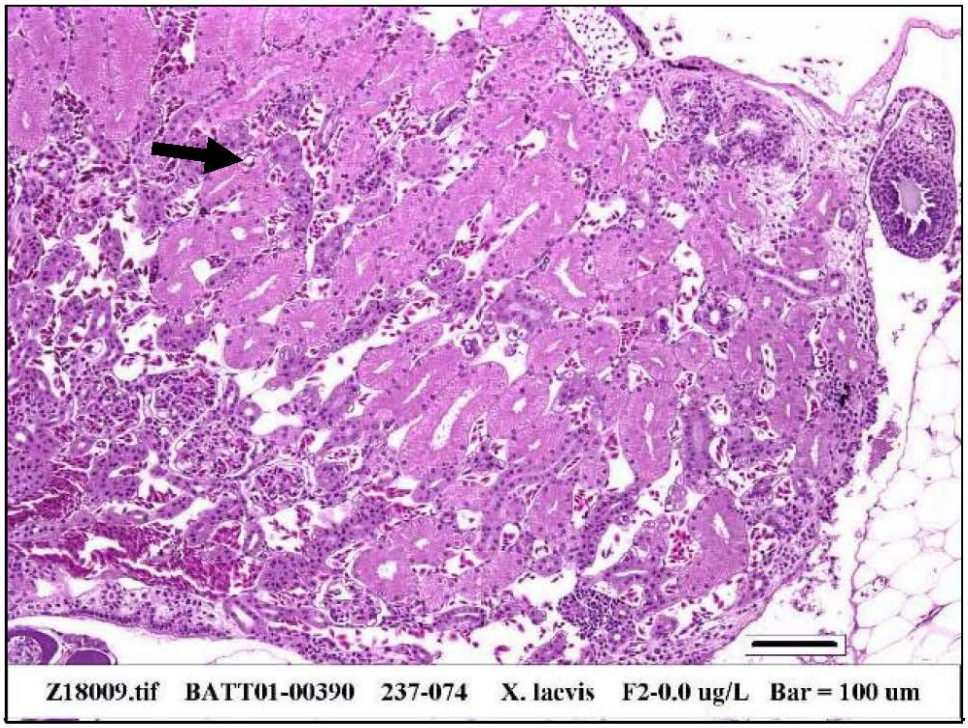


Figure 5 (Z18009). Kidney from a control female, Animal No. F2-0.0 µg/L. There is minimal mineralization (arrow) and no tubular dilation. H&E.

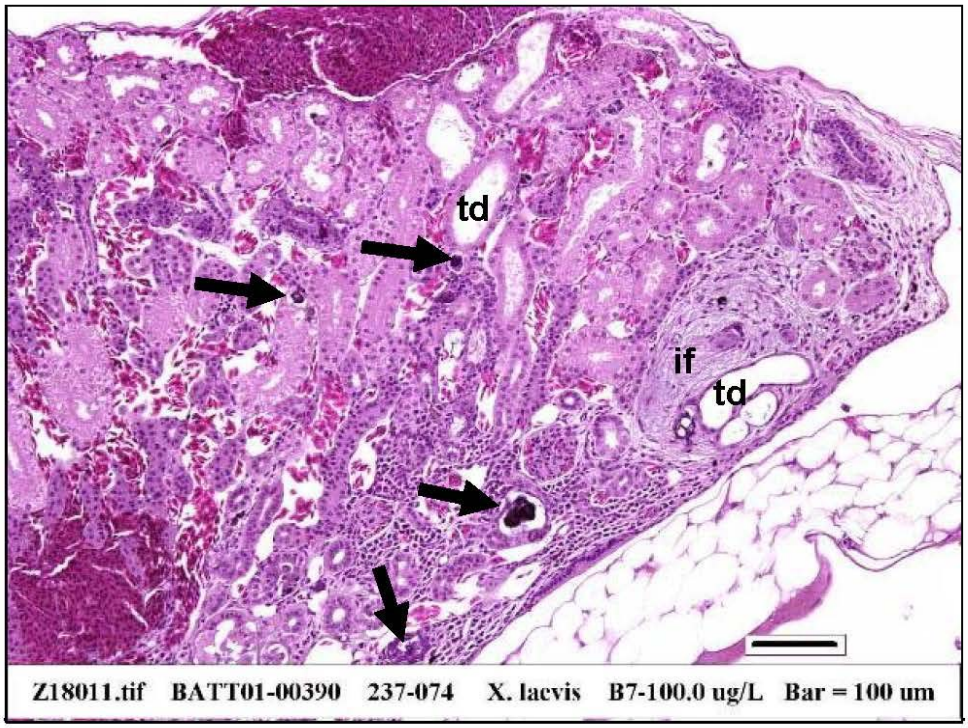


Figure 6 (Z18011). Kidney from a female exposed to 100.0 µg/L 2-EHHB, Animal No. B7-100.0 µg/L. There is Grade 2 mineralization (arrows) and tubular dilation (td). This particular frog also had interstitial fibrosis (if), the prevalence and severity of which were not substantially increased in treated females relative to controls. H&E.

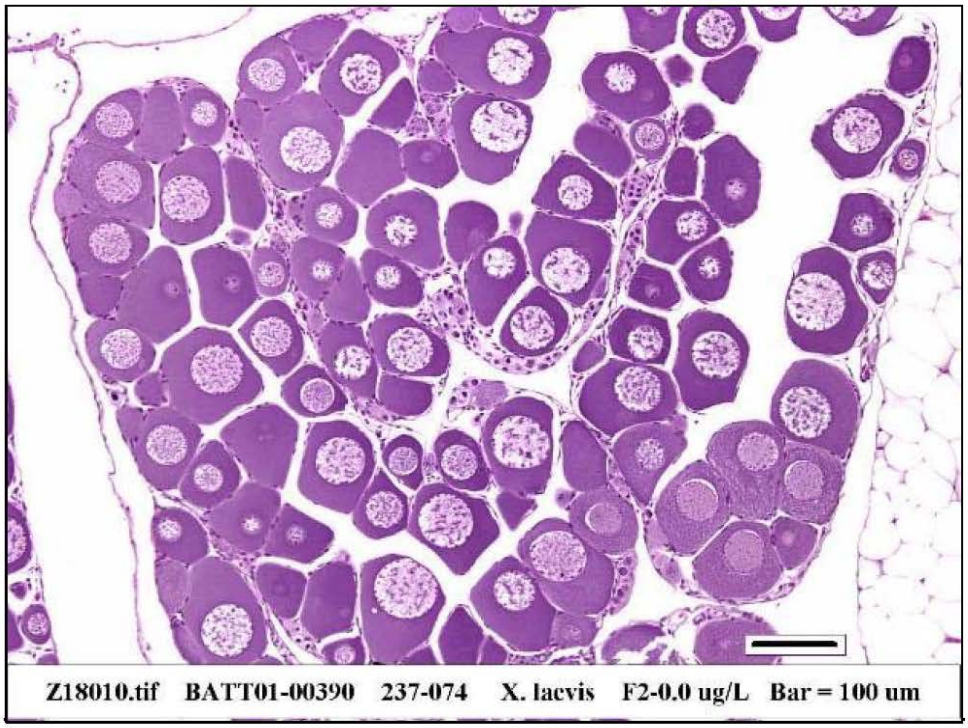


Figure 7 (Z18010). Stage 4 ovary from a control female, Animal No. F2-0.0 µg/L. H&E.

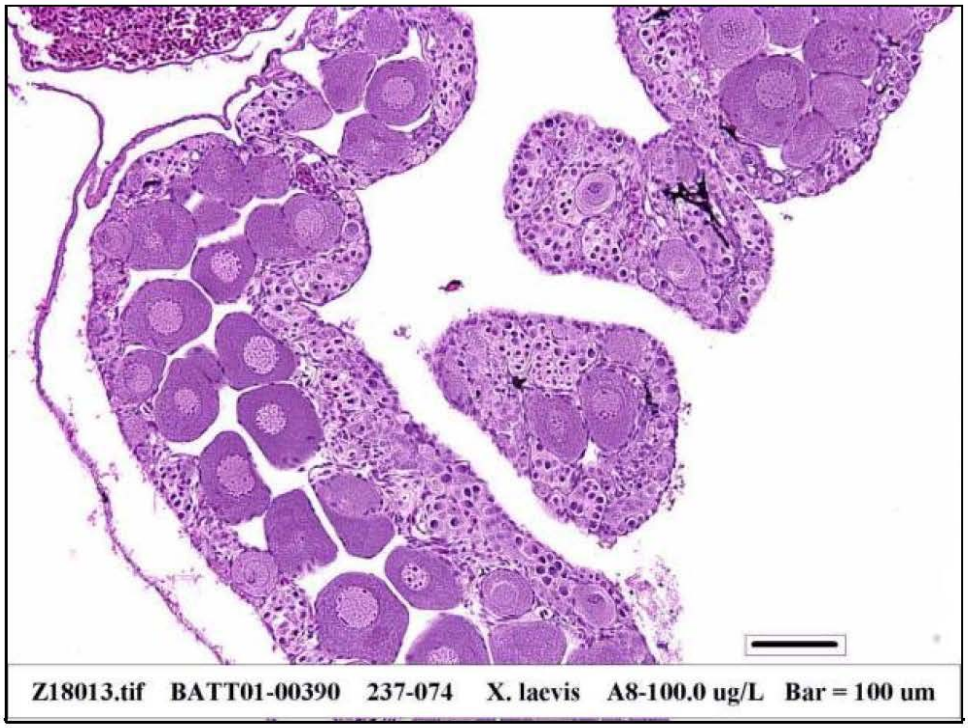


Figure 8 (Z18013). Stage 3 ovary from a female exposed to 100.0 µg/L 2-EHHB, Animal No. A8-100.0 µg/L. There was a higher proportion of Stage 3 ovaries in high-dose females when compared to the ovaries of controls. H&E.

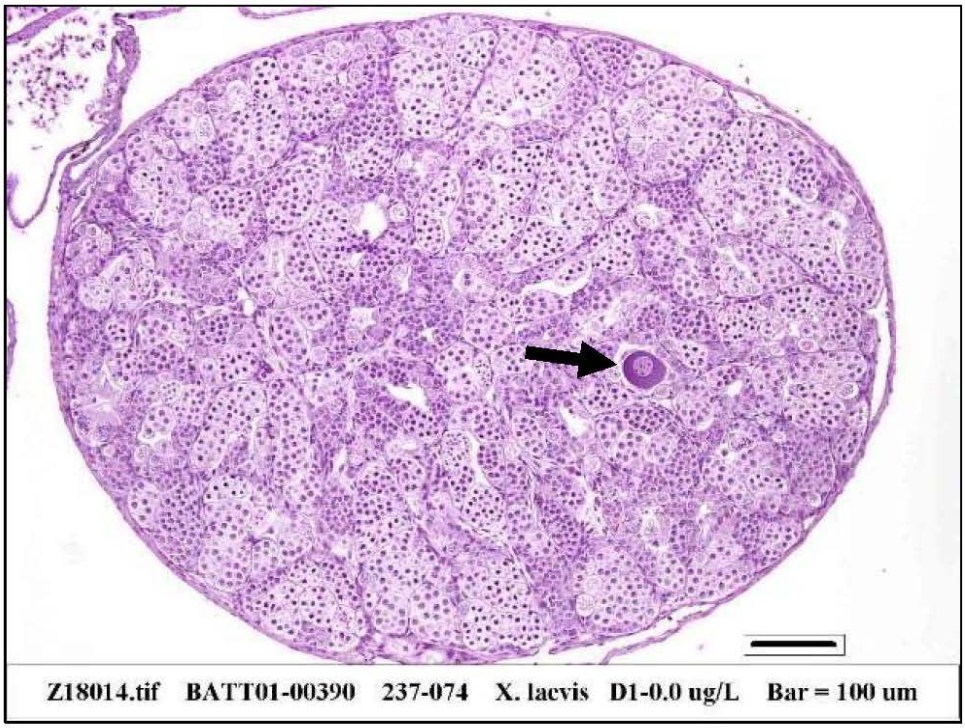


Figure 9 (Z18014). Testis from a control male, Animal No. D1-0.0 µg/L. This was one of two control males in which a single oocyte (arrow) was evident in at least one testis section. H&E.

Appendix E.
DEST

DEST

BATT01-00390

Adult Care and Breeding

Study ID	Breeding Date	Adult Breeder (pair) ID	hCG Dose - Female (IU)	hCG Dose - Male (IU)	Breeding Success	Comments
BATT01-00390	3/18/16	2	350	300	Y	1500 Total Eggs - 97% Fertilized / 3% Unfertilized / 3% Necrotic
BATT01-00390	3/18/16	3	350	300	Y	1500 Total Eggs - 97% Fertilized / 3% Unfertilized / 3% Necrotic
BATT01-00390	3/20/16	1	350	300	Y	900 Total Eggs - 90% Fertilized / 10% Unfertilized / 5% Necrotic
BATT01-00390	3/20/16	2	350	300	Y	1500 Total Eggs - 85% Fertilized / 15% Unfertilized / 5% Necrotic

Breeding Pair 2 from 3/20/16 usec in study.

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FEL

DEST

Substance 2-EHMB
Study BATT01-00390

Analytical CVs

BATT01-00390

CONCENTRATION ANALYSIS

Treatment and Replicate	Nominal Conc. µg/L	Measured Concentration µg/L																Mean	Overall treatment			%
		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	µg/L	Mean (µg/L)	Replicate Mean CVs (Within)	SEMs	Nominal
0.0 µg/L A	<LOQ	0.104	0.425								0.104							0.104	0.184				
0.0 µg/L B	<LOQ	0.299		0.104														0.104	0.151				
0.0 µg/L C	<LOQ	0.229			0.104								0.218					0.104	0.176			10.66%	
0.0 µg/L D	<LOQ	0.278				0.104									0.104			0.104	0.148	0.150	30.2%		
0.0 µg/L E	<LOQ	0.428					0.277									0.104		0.104	0.238			14.3%	
0.0 µg/L F	<LOQ	0.104						0.104									0.104	0.104	0.104				
0.0 µg/L G	<LOQ	0.104							0.104								0.104	0.104	0.104				
0.0 µg/L H	<LOQ	0.104								0.104								0.104	0.104				
0.0 µg/L Mean		0.185	0.425	0.104	0.104	0.104	0.277	0.104	0.104	0.104	0.104	0.104	0.218	0.104	0.104	0.104	0.104	0.104	0.156				
Replicate CV		87.5																0.000	30.2				
3.6 µg/L A	3.60	3.47	4.15				8.69				3.23				3.61			7.52	5.10				
3.6 µg/L B	3.60	4.52		5.12				6.27				7.51				11.3		6.96	6.85	5.33	20.7%	10.45%	148
3.6 µg/L C	3.60	3.59			5.34				3.86				5.34				4.24	6.49	4.79			10.23%	
3.6 µg/L D	3.60	3.82				4.48				8.49				2.72				7.95	4.48				
3.6 µg/L Mean		3.85	4.15	5.12	5.34	4.48	8.69	6.27	3.86	8.49	3.23	7.51	5.34	2.72	3.61	11.30	4.24	7.23	5.33				
Replicate CV		12.2																8.68	20.7				
10.9 µg/L A	10.9	8.00	10.3				14.0				7.93				8.60			13.4	10.4				
10.9 µg/L B	10.9	9.46		11.9				10.5				18.0				16.2		13.3	13.1	10.8	14.0%	7.01%	99.2
10.9 µg/L C	10.9	7.53			11.1				8.24				10.1				8.46	14.5	10.0			6.98%	
10.9 µg/L D	10.9	7.72				12.3				8.47				7.26				13.4	9.83				
10.9 µg/L Mean		7.93	10.3	11.9	11.1	12.3	14.0	10.5	8.24	8.47	7.93	18.0	10.1	7.26	8.60	16.2	8.46	13.7	10.8				
Replicate CV		5.10																4.17	14.0				
33.0 µg/L A	33.0	18.7	34.9				26.9				22.9				18.7			30.9	25.5				
33.0 µg/L B	33.0	20.2		29.9				26.9				33.3				38.0		33.3	30.3	27.2	7.9%	3.93%	82.3
33.0 µg/L C	33.0	19.9			25.8				30.4				30.4				29.8	31.1	26.8			5.05%	
33.0 µg/L D	33.0	18.1				31.7				26.4				13.7				34.4	26.1				
33.0 µg/L Mean		19.1	34.9	29.9	25.8	31.7	26.9	26.9	30.4	26.4	22.9	33.3	30.4	13.7	18.7	38.0	29.8	32.4	27.2				
Replicate CV		4.59																5.27	7.87				
100 µg/L A	100	61.2	83.5				66.3				73.6				48.1			67.2	66.6				
100 µg/L B	100	60.4		75.4				67.9				64.8				99.5		68.0	72.6	76.6	12.4%	6.18%	76.6
100 µg/L C	100	58.3			76.5				76.6				86.7				111	67.8	78.5			7.56%	
100 µg/L D	100	58.1				102				69.5				149				65.6	68.9				
100 µg/L Mean		59.5	83.5	75.4	76.5	102	66.3	67.9	76.6	69.5	73.6	64.8	86.7	149	48.1	99.5	111	67.2	76.6				
Replicate CV		2.58																1.62	12.4				

Outlier value taken from Duncan's test

Outlier, no duplicate value available since value was within 20% of nominal concentration, reported as measured

NOTE: <LOQ reported as 1/2 of MQL (0.104)

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FEL

DEST

BATT01-00390

Analytical (Vs

DUPLICATES

Analytical results, IQR calculations, and Means

ID	Week 0				Week 1				Week 4				Week 7				Week 10				Week 13				Week 16			
	Desc	Orig	Dup	Avg	Desc	Orig	Dup	Avg	Desc	Orig	Dup	Avg	Desc	Orig	Dup	Avg	Desc	Orig	Dup	Avg	Desc	Orig	Dup	Avg	Desc	Orig	Dup	Avg
1	0.0 µg/L Rep A	3.49	0.104	1.80	29	0.0 µg/L Rep A	0.321	0.425	58	0.0 µg/L Rep D			118	0.0 µg/L Rep G	1.20	0.104	0.652	345	0.0 µg/L Rep B				377	0.0 µg/L Rep E				
2	0.0 µg/L Rep B	0.347	0.239	0.293	30	3.6 µg/L Rep A			59	3.6 µg/L Rep D			119	3.6 µg/L Rep C				346	3.6 µg/L Rep B	9.39	5.69	7.51	378	3.6 µg/L Rep A				
3	0.0 µg/L Rep C	0.453	0.104	0.279	31	10.9 µg/L Rep A			60	10.9 µg/L Rep E			120	10.9 µg/L Rep D				347	10.9 µg/L Rep A				379	10.9 µg/L Rep A				
4	0.0 µg/L Rep D	0.452	0.104	0.278	32	33 µg/L Rep A			61	33 µg/L Rep D			121	33 µg/L Rep C				348	33 µg/L Rep B				380	33 µg/L Rep A	18.7	237	128	
5	0.0 µg/L Rep E	0.633	0.222	0.428	33	100 µg/L Rep A			62	100 µg/L Rep D			122	100 µg/L Rep C				349	100 µg/L Rep B	52.6	76.1	64.4	381	100 µg/L Rep A	48.1	268	158	
6	0.0 µg/L Rep F																											
7	0.0 µg/L Rep G																											
8	0.0 µg/L Rep H																											
9	3.6 µg/L Rep A	0.799	6.18	3.49																								
10	3.6 µg/L Rep B	0.841	8.19	4.52		Week 2				Week 5				Week 8				Week 11				Week 14						
11	3.6 µg/L Rep C	0.791	6.38	3.59	ID	Desc	Orig	Dup	Avg	ID	Desc	Orig	Dup	Avg	ID	Desc	Orig	Dup	Avg	ID	Desc	Orig	Dup	Avg	ID	Desc	Orig	Dup	Avg
12	3.6 µg/L Rep D	0.795	6.39	3.593	40	0.0 µg/L Rep B	0.559	0.104	0.432	66	0.0 µg/L Rep E	288	0.277	144	176	0.0 µg/L Rep H				353	0.0 µg/L Rep C				386	0.0 µg/L Rep F				
13	10.9 µg/L Rep A	0.87	9.13	5.00	41	3.6 µg/L Rep B				67	3.6 µg/L Rep A	11.0	6.25	8.63	177	3.6 µg/L Rep D				382	3.6 µg/L Rep B				387	3.6 µg/L Rep G				
14	10.9 µg/L Rep B	0.795	9.74	5.27	42	10.9 µg/L Rep B				68	10.9 µg/L Rep A				178	10.9 µg/L Rep D				383	10.9 µg/L Rep C				388	10.9 µg/L Rep G				
15	10.9 µg/L Rep C	0.84	8.25	4.55	43	33 µg/L Rep B				69	33 µg/L Rep A				179	33 µg/L Rep D				384	33 µg/L Rep B				389	10.9 µg/L Rep B				
16	10.9 µg/L Rep D	6.33	8.91	7.72	44	100 µg/L Rep B				70	100 µg/L Rep A	60.4	72.1	66.3	180	100 µg/L Rep D				385	100 µg/L Rep B				390	10.9 µg/L Rep C				
17	33 µg/L Rep A	17.6	19.8	18.7																								
18	33 µg/L Rep B	17.1	23.2	20.2		Week 3				Week 6				Week 9				Week 12				Week 15						
19	33 µg/L Rep C	16.4	22.2	19.3	ID	Desc	Orig	Dup	Avg	ID	Desc	Orig	Dup	Avg	ID	Desc	Orig	Dup	Avg	ID	Desc	Orig	Dup	Avg	ID	Desc	Orig	Dup	Avg
20	33 µg/L Rep D	16.2	26.0	21.1	45	0.0 µg/L Rep C				86	0.0 µg/L Rep F	1.16	0.104	0.632	206	0.0 µg/L Rep A				368	0.0 µg/L Rep D				636	0.0 µg/L Rep G				
21	100 µg/L Rep A	53.4	68.9	61.2	50	3.6 µg/L Rep C				87	3.6 µg/L Rep B				207	3.6 µg/L Rep A				369	3.6 µg/L Rep C				636	3.6 µg/L Rep C				
22	100 µg/L Rep B	48.9	71.9	60.4	51	10.9 µg/L Rep C				88	10.9 µg/L Rep B				208	10.9 µg/L Rep A				370	10.9 µg/L Rep D				637	10.9 µg/L Rep C				
23	100 µg/L Rep C	49.6	67.0	58.3	52	33 µg/L Rep C				89	33 µg/L Rep B				209	33 µg/L Rep A				371	33 µg/L Rep D				638	33 µg/L Rep C				
24	100 µg/L Rep D	41.3	76.8	59.1	53	100 µg/L Rep C				90	100 µg/L Rep B				210	100 µg/L Rep A				372	100 µg/L Rep D	35.4	26.3	14.9	639	100 µg/L Rep C				

This color indicates the value was determined to be outside IQR, therefor not used in calculating average.
This color indicates the value used in the Concentration Analysis Sheet.

IQR Calculations	Q	3.6	10.9	33	100
1st Quartile	0.104	3.61	8.25	20.0	63.0
3rd Quartile	0.328	6.89	12.8	31.3	76.4
IQR	0.224	3.28	4.56	11.3	13.4
Upper	0.664	11.8	19.63	48.2	96
Lower	-0.232	-1.31	1.413	3.00	43.0

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DEST

BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	0	0.104	653	21.3	8.6	7.9	132	44						**Measured Treatment Concentration -** Week 0 0.0µg/L A - 3.49µg/L identified as outlier as determined by Q3+1(Q3-Q1)*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	0	0.293	742	21.3	8.5	7.8								**Measured Treatment Concentration -** Based on mean of original (0.347µg/L) and duplicate (0.239µg/L) sample
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	0	0.279	931	21.4	8.6	7.9								**Measured Treatment Concentration -** Based on mean of original (0.453µg/L) and duplicate (0.104µg/L) sample
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	0	0.278	987	21.5	8.5	7.9								**Measured Treatment Concentration -** Based on mean of original (0.452µg/L) and duplicate (0.104µg/L) sample
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	0	0.428	843	21.5	8.4	7.9								**Measured Treatment Concentration -** Based on mean of original (0.633µg/L) and duplicate (0.222µg/L) sample
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	0	0.104	857	21.3	8.7	7.9								**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.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	0	0.104	823	21.3	8.3	7.9								**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.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	0	0.104	854	21.3	8.7	7.9								**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.
BATT01-00390	3.6µg/L	3.6	A	0	3.47	877	21.4	8.6	7.8								**Measured Treatment Concentration -** Based on mean of original (3.759µg/L) and duplicate (3.18µg/L) sample
BATT01-00390	3.6µg/L	3.6	B	0	4.53	836	21.7	8.5	7.9								**Measured Treatment Concentration -** Based on mean of original (3.841µg/L) and duplicate (5.53µg/L) sample
BATT01-00390	3.6µg/L	3.6	C	0	3.59	845	21.7	8.7	7.9								**Measured Treatment Concentration -** Based on mean of original (3.731µg/L) and duplicate (3.38µg/L) sample
BATT01-00390	3.6µg/L	3.6	D	0	3.82	902	21.7	8.2	7.9								**Measured Treatment Concentration -** Based on mean of original (3.758µg/L) and duplicate (3.89µg/L) sample
BATT01-00390	10.9µg/L	10.9	A	0	8.00	642	21.5	8.7	7.9								**Measured Treatment Concentration -** Based on mean of original (6.87µg/L) and duplicate (9.13µg/L) sample
BATT01-00390	10.9µg/L	10.9	B	0	8.46	618	21.6	8.2	7.9								**Measured Treatment Concentration -** Based on mean of original (6.98µg/L) and duplicate (9.94µg/L) sample
BATT01-00390	10.9µg/L	10.9	C	0	7.53	674	21.7	8.5	7.9								**Measured Treatment Concentration -** Based on mean of original (6.81µg/L) and duplicate (8.25µg/L) sample
BATT01-00390	10.9µg/L	10.9	D	0	7.72	702	21.7	9.0	7.9								**Measured Treatment Concentration -** Based on mean of original (6.53µg/L) and duplicate (8.9µg/L) sample
BATT01-00390	33µg/L	33	A	0	18.7	754	21.6	7.9	7.9								**Measured Treatment Concentration -** Based on mean of original (17.6µg/L) and duplicate (19.8µg/L) sample
BATT01-00390	33µg/L	33	B	0	20.2	697	21.6	8.5	7.9								**Measured Treatment Concentration -** Based on mean of original (17.1µg/L) and duplicate (23.3µg/L) sample
BATT01-00390	33µg/L	33	C	0	19.3	703	21.7	8.2	7.9								**Measured Treatment Concentration -** Based on mean of original (16.4µg/L) and duplicate (22.2µg/L) sample
BATT01-00390	33µg/L	33	D	0	18.1	725	21.7	8.6	7.9								**Measured Treatment Concentration -** Based on mean of original (16.2µg/L) and duplicate (20.0µg/L) sample
BATT01-00390	100µg/L	100	A	0	61.2	699	21.7	8.3	7.9	132	40						**Measured Treatment Concentration -** Based on mean of original (53.4µg/L) and duplicate (68.9µg/L) sample
BATT01-00390	100µg/L	100	B	0	60.4	741	21.6	8.1	7.9								**Measured Treatment Concentration -** Based on mean of original (48.9µg/L) and duplicate (71.9µg/L) sample
BATT01-00390	100µg/L	100	C	0	58.3	745	21.3	8.4	7.9								**Measured Treatment Concentration -** Based on mean of original (49.6µg/L) and duplicate (67.0µg/L) sample
BATT01-00390	100µg/L	100	D	0	58.1	757	21.3	8.5	7.9								**Measured Treatment Concentration -** Based on mean of original (45.3µg/L) and duplicate (70.8µg/L) sample
BATT01-00390	Dilution Water			0												8.6	
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	1			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	1			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	1			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	1			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	1			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	1			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	1			21.2										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	1			21.4										
BATT01-00390	3.6µg/L	3.6	A	1			21.4										

DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	3.6µg/L	3.6	B	1			21.5										
BATT01-00390	3.6µg/L	3.6	C	1			21.5										
BATT01-00390	3.6µg/L	3.6	D	1			21.3										
BATT01-00390	10.9µg/L	10.9	A	1			21.3										
BATT01-00390	10.9µg/L	10.9	B	1			21.3										
BATT01-00390	10.9µg/L	10.9	C	1			21.5										
BATT01-00390	10.9µg/L	10.9	D	1			21.4										
BATT01-00390	33µg/L	33	A	1			21.5										
BATT01-00390	33µg/L	33	B	1			21.5										
BATT01-00390	33µg/L	33	C	1			21.5										
BATT01-00390	33µg/L	33	D	1			21.2										
BATT01-00390	100µg/L	100	A	1			21.3										
BATT01-00390	100µg/L	100	B	1			21.2										
BATT01-00390	100µg/L	100	C	1			21.4										
BATT01-00390	100µg/L	100	D	1			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	2		672	21.6	7.9	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	2		693	21.7	7.3	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	2		705	21.3	7.4	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	2		727	21.3	7.7	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	2		831	21.4	7.8	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	2		927	21.5	7.1	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	2		844	21.6	7.4	7.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	2		818	21.3	8.0	7.6								
BATT01-00390	3.6µg/L	3.6	A	2		856	21.3	7.3	7.7								
BATT01-00390	3.6µg/L	3.6	B	2		797	21.4	8.4	7.7								
BATT01-00390	3.6µg/L	3.6	C	2		862	21.5	8.0	7.7								
BATT01-00390	3.6µg/L	3.6	D	2		798	21.3	7.7	7.7								
BATT01-00390	10.9µg/L	10.9	A	2		613	21.4	7.9	7.7								
BATT01-00390	10.9µg/L	10.9	B	2		651	21.5	7.2	7.7								
BATT01-00390	10.9µg/L	10.9	C	2		698	21.6	7.6	7.8								
BATT01-00390	10.9µg/L	10.9	D	2		741	21.7	7.7	7.8								
BATT01-00390	33µg/L	33	A	2		759	21.7	7.9	7.8								
BATT01-00390	33µg/L	33	B	2		786	21.6	8.1	7.8								
BATT01-00390	33µg/L	33	C	2		803	21.7	8.5	7.8								
BATT01-00390	33µg/L	33	D	2		826	21.7	8.2	7.8								
BATT01-00390	100µg/L	100	A	2		773	21.3	7.7	7.8								
BATT01-00390	100µg/L	100	B	2		740	21.3	7.3	7.8								
BATT01-00390	100µg/L	100	C	2		682	21.3	7.6	7.9								
BATT01-00390	100µg/L	100	D	2		634	21.3	7.1	7.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	3			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	3			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	3			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	3			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	3			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	3			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	3			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	3			21.6										
BATT01-00390	3.6µg/L	3.6	A	3			21.5										
BATT01-00390	3.6µg/L	3.6	B	3			21.5										
BATT01-00390	3.6µg/L	3.6	C	3			21.4										
BATT01-00390	3.6µg/L	3.6	D	3			21.6										
BATT01-00390	10.9µg/L	10.9	A	3			21.5										
BATT01-00390	10.9µg/L	10.9	B	3			21.5										
BATT01-00390	10.9µg/L	10.9	C	3			21.4										
BATT01-00390	10.9µg/L	10.9	D	3			21.6										
BATT01-00390	33µg/L	33	A	3			21.5										
BATT01-00390	33µg/L	33	B	3			21.4										
BATT01-00390	33µg/L	33	C	3			21.5										
BATT01-00390	33µg/L	33	D	3			21.6										
BATT01-00390	100µg/L	100	A	3			21.5										
BATT01-00390	100µg/L	100	B	3			21.4										
BATT01-00390	100µg/L	100	C	3			21.5										
BATT01-00390	100µg/L	100	D	3			21.5										

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DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	4		633	21.3	6.7	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	4		691	21.3	6.9	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	4		724	21.3	7.2	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	4		777	21.7	7.3	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	4		823	21.6	7.4	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	4		908	21.3	6.9	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	4		836	21.3	7.0	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	4		792	21.3	7.2	7.7								
BATT01-00390	3.6µg/L	3.6	A	4		844	21.6	7.1	7.6								
BATT01-00390	3.6µg/L	3.6	B	4		763	21.5	7.4	7.7								
BATT01-00390	3.6µg/L	3.6	C	4		709	21.7	7.2	7.7								
BATT01-00390	3.6µg/L	3.6	D	4		685	21.7	7.3	7.7								
BATT01-00390	10.5µg/L	10.9	A	4		602	21.3	6.8	7.7								
BATT01-00390	10.5µg/L	10.9	B	4		624	21.4	6.9	7.7								
BATT01-00390	10.5µg/L	10.9	C	4		712	21.4	7.0	7.7								
BATT01-00390	10.5µg/L	10.9	D	4		751	21.6	7.1	7.8								
BATT01-00390	33µg/L	33	A	4		793	21.7	7.3	7.8								
BATT01-00390	33µg/L	33	B	4		826	21.7	7.1	7.6								
BATT01-00390	33µg/L	33	C	4		847	21.6	7.0	7.7								
BATT01-00390	33µg/L	33	D	4		831	21.5	6.8	7.6								
BATT01-00390	100µg/L	100	A	4		800	21.3	7.1	7.7								
BATT01-00390	100µg/L	100	B	4		745	21.4	7.4	7.7								
BATT01-00390	100µg/L	100	C	4		698	21.3	7.6	7.7								
BATT01-00390	100µg/L	100	D	4		665	21.3	7.3	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	5			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	5			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	5			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	5			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	5			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	5			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	5			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	5			21.5										
BATT01-00390	3.6µg/L	3.6	A	5			21.6										
BATT01-00390	3.6µg/L	3.6	B	5			21.5										
BATT01-00390	3.6µg/L	3.6	C	5			21.5										
BATT01-00390	3.6µg/L	3.6	D	5			21.4										
BATT01-00390	10.5µg/L	10.9	A	5			21.5										
BATT01-00390	10.5µg/L	10.9	B	5			21.4										
BATT01-00390	10.5µg/L	10.9	C	5			21.6										
BATT01-00390	10.5µg/L	10.9	D	5			21.5										
BATT01-00390	33µg/L	33	A	5			21.4										
BATT01-00390	33µg/L	33	B	5			21.5										
BATT01-00390	33µg/L	33	C	5			21.5										
BATT01-00390	33µg/L	33	D	5			21.4										
BATT01-00390	100µg/L	100	A	5			21.5										
BATT01-00390	100µg/L	100	B	5			21.4										
BATT01-00390	100µg/L	100	C	5			21.5										
BATT01-00390	100µg/L	100	D	5			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	6			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	6			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	6			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	6			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	6			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	6			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	6			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	6			21.4										
BATT01-00390	3.6µg/L	3.6	A	6			21.5										
BATT01-00390	3.6µg/L	3.6	B	6			21.4										
BATT01-00390	3.6µg/L	3.6	C	6			21.6										
BATT01-00390	3.6µg/L	3.6	D	6			21.5										
BATT01-00390	10.5µg/L	10.9	A	6			21.4										
BATT01-00390	10.5µg/L	10.9	B	6			21.5										
BATT01-00390	10.5µg/L	10.9	C	6			21.5										

DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	10.5µg/L	10.9	D	6			21.6										
BATT01-00390	33µg/L	33	A	6			21.5										
BATT01-00390	33µg/L	33	B	6			21.5										
BATT01-00390	33µg/L	33	C	6			21.4										
BATT01-00390	33µg/L	33	D	6			21.5										
BATT01-00390	100µg/L	100	A	6			21.6										
BATT01-00390	100µg/L	100	B	6			21.5										
BATT01-00390	100µg/L	100	C	6			21.5										
BATT01-00390	100µg/L	100	D	6			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	7	0.425	622	21.3	7.1	7.6	132	44						**Measured Treatment Concentration -** Based on mean of original (0.521µg/L) and duplicate (0.328µg/L) sample
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	7		674	21.3	7.4	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	7		698	21.3	7.6	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	7		727	21.7	7.8	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	7		805	21.4	7.6	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	7		893	21.5	7.5	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	7		946	21.5	7.7	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	7		883	21.7	7.3	7.7								
BATT01-00390	3.6µg/L	3.6	A	7	4.15	826	21.7	7.2	7.8								
BATT01-00390	3.6µg/L	3.6	B	7		779	21.6	7.5	7.7								
BATT01-00390	3.6µg/L	3.6	C	7		744	21.3	7.4	7.6								
BATT01-00390	3.6µg/L	3.6	D	7		691	21.3	7.9	7.7								
BATT01-00390	10.5µg/L	10.9	A	7	10.3	647	21.5	7.9	7.7								
BATT01-00390	10.5µg/L	10.9	B	7		686	21.4	7.6	7.7								
BATT01-00390	10.5µg/L	10.9	C	7		755	21.7	7.4	7.8								
BATT01-00390	10.5µg/L	10.9	D	7		772	21.7	7.5	7.8								
BATT01-00390	33µg/L	33	A	7	34.9	831	21.6	7.1	7.7								
BATT01-00390	33µg/L	33	B	7		854	21.7	7.3	7.6								
BATT01-00390	33µg/L	33	C	7		897	21.6	7.6	7.6								
BATT01-00390	33µg/L	33	D	7		856	21.5	7.9	7.6								
BATT01-00390	100µg/L	100	A	7	83.5	813	21.3	7.8	7.7								
BATT01-00390	100µg/L	100	B	7		750	21.3	7.1	7.7	128	44						
BATT01-00390	100µg/L	100	C	7		703	21.3	7.4	7.6								
BATT01-00390	100µg/L	100	D	7		681	21.3	7.5	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	8			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	8			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	8			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	8			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	8			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	8			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	8			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	8			21.6										
BATT01-00390	3.6µg/L	3.6	A	8			21.5										
BATT01-00390	3.6µg/L	3.6	B	8			21.5										
BATT01-00390	3.6µg/L	3.6	C	8			21.4										
BATT01-00390	3.6µg/L	3.6	D	8			21.6										
BATT01-00390	10.5µg/L	10.9	A	8			21.5										
BATT01-00390	10.5µg/L	10.9	B	8			21.5										
BATT01-00390	10.5µg/L	10.9	C	8			21.6										
BATT01-00390	10.5µg/L	10.9	D	8			21.5										
BATT01-00390	33µg/L	33	A	8			21.4										
BATT01-00390	33µg/L	33	B	8			21.5										
BATT01-00390	33µg/L	33	C	8			21.6										
BATT01-00390	33µg/L	33	D	8			21.5										
BATT01-00390	100µg/L	100	A	8			21.4										
BATT01-00390	100µg/L	100	B	8			21.5										
BATT01-00390	100µg/L	100	C	8			21.5										
BATT01-00390	100µg/L	100	D	8			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	9		671	21.3	7.2	7.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	9		693	21.3	7.5	7.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	9		709	21.3	7.9	7.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	9		745	21.4	6.8	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	9		816	21.5	6.7	7.7								

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DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	9		824	21.3	7.1	7.8								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	9		856	21.7	7.0	7.7								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	9		885	21.7	6.9	7.7								
BATT01-00390	3.6ug/L	3.6	A	9		837	21.6	7.3	7.7								
BATT01-00390	3.6ug/L	3.6	B	9		782	21.6	7.0	7.8								
BATT01-00390	3.6ug/L	3.6	C	9		717	21.3	7.1	7.7								
BATT01-00390	3.6ug/L	3.6	D	9		671	21.3	7.7	7.7								
BATT01-00390	10.9ug/L	10.9	A	9		654	21.7	6.8	7.7								
BATT01-00390	10.9ug/L	10.9	B	9		693	21.7	7.3	7.7								
BATT01-00390	10.9ug/L	10.9	C	9		726	21.3	7.5	7.8								
BATT01-00390	10.9ug/L	10.9	D	9		774	21.3	7.9	7.8								
BATT01-00390	33ug/L	33	A	9		820	21.5	6.9	7.7								
BATT01-00390	33ug/L	33	B	9		869	21.6	7.0	7.7								
BATT01-00390	33ug/L	33	C	9		907	21.7	7.2	7.8								
BATT01-00390	33ug/L	33	D	9		876	21.7	7.4	7.8								
BATT01-00390	100ug/L	100	A	9		815	21.6	7.0	7.7								
BATT01-00390	100ug/L	100	B	9		731	21.3	7.4	7.8								
BATT01-00390	100ug/L	100	C	9		685	21.3	7.5	7.8								
BATT01-00390	100ug/L	100	D	9		634	21.3	7.1	7.8								
BATT01-00390	Facility Water Chemistry			9				6.6	7.6	128	52	661	<0.03	<0.05			
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	10			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	10			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	10			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	10			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	10			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	10			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	10			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	10			21.4										
BATT01-00390	3.6ug/L	3.6	A	10			21.6										
BATT01-00390	3.6ug/L	3.6	B	10			21.5										
BATT01-00390	3.6ug/L	3.6	C	10			21.5										
BATT01-00390	3.6ug/L	3.6	D	10			21.4										
BATT01-00390	10.9ug/L	10.9	A	10			21.4										
BATT01-00390	10.9ug/L	10.9	B	10			21.4										
BATT01-00390	10.9ug/L	10.9	C	10			21.5										
BATT01-00390	10.9ug/L	10.9	D	10			21.4										
BATT01-00390	33ug/L	33	A	10			21.5										
BATT01-00390	33ug/L	33	B	10			21.4										
BATT01-00390	33ug/L	33	C	10			21.4										
BATT01-00390	33ug/L	33	D	10			21.5										
BATT01-00390	100ug/L	100	A	10			21.4										
BATT01-00390	100ug/L	100	B	10			21.5										
BATT01-00390	100ug/L	100	C	10			21.4										
BATT01-00390	100ug/L	100	D	10			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	11		615	21.3	7.0	7.7								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	11		649	21.3	7.2	7.7								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	11		682	21.7	6.8	7.7								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	11		729	21.3	7.4	7.8								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	11		758	21.5	7.5	7.7								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	11		805	21.6	7.1	7.7								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	11		892	21.4	7.3	7.7								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	11		746	21.3	6.9	7.7								
BATT01-00390	3.6ug/L	3.6	A	11		703	21.3	6.7	7.7								
BATT01-00390	3.6ug/L	3.6	B	11		687	21.7	7.4	7.8								
BATT01-00390	3.6ug/L	3.6	C	11		651	21.7	6.8	7.8								
BATT01-00390	3.6ug/L	3.6	D	11		620	21.7	7.0	7.8								
BATT01-00390	10.9ug/L	10.9	A	11		667	21.7	7.2	7.7								
BATT01-00390	10.9ug/L	10.9	B	11		633	21.6	7.7	7.7								
BATT01-00390	10.9ug/L	10.9	C	11		672	21.5	7.5	7.6								
BATT01-00390	10.9ug/L	10.9	D	11		745	21.6	7.0	7.6								
BATT01-00390	33ug/L	33	A	11		756	21.4	6.8	7.7								
BATT01-00390	33ug/L	33	B	11		801	21.4	7.3	7.6								
BATT01-00390	33ug/L	33	C	11		872	21.3	7.1	7.6								

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DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	33ug/L	33	D	11		794	21.5	7.0	7.6								
BATT01-00390	100ug/L	100	A	11		765	21.6	7.6	7.6								
BATT01-00390	100ug/L	100	B	11		621	21.3	7.2	7.6								
BATT01-00390	100ug/L	100	C	11		632	21.3	6.9	7.6								
BATT01-00390	100ug/L	100	D	11		626	21.3	6.1	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	12			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	12			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	12			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	12			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	12			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	12			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	12			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	12			21.6										
BATT01-00390	3.6ug/L	3.6	A	12			21.5										
BATT01-00390	3.6ug/L	3.6	B	12			21.5										
BATT01-00390	3.6ug/L	3.6	C	12			21.6										
BATT01-00390	3.6ug/L	3.6	D	12			21.5										
BATT01-00390	10.5ug/L	10.5	A	12			21.5										
BATT01-00390	10.5ug/L	10.5	B	12			21.6										
BATT01-00390	10.5ug/L	10.5	C	12			21.5										
BATT01-00390	10.5ug/L	10.5	D	12			21.5										
BATT01-00390	33ug/L	33	A	12			21.6										
BATT01-00390	33ug/L	33	B	12			21.5										
BATT01-00390	33ug/L	33	C	12			21.5										
BATT01-00390	33ug/L	33	D	12			21.4										
BATT01-00390	100ug/L	100	A	12			21.4										
BATT01-00390	100ug/L	100	B	12			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	13			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	13			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	13			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	13			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	13			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	13			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	13			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	13			21.5										
BATT01-00390	3.6ug/L	3.6	A	13			21.6										
BATT01-00390	3.6ug/L	3.6	B	13			21.4										
BATT01-00390	3.6ug/L	3.6	C	13			21.4										
BATT01-00390	3.6ug/L	3.6	D	13			21.5										
BATT01-00390	10.5ug/L	10.5	A	13			21.5										
BATT01-00390	10.5ug/L	10.5	B	13			21.6										
BATT01-00390	10.5ug/L	10.5	C	13			21.6										
BATT01-00390	10.5ug/L	10.5	D	13			21.5										
BATT01-00390	33ug/L	33	A	13			21.5										
BATT01-00390	33ug/L	33	B	13			21.4										
BATT01-00390	33ug/L	33	C	13			21.4										
BATT01-00390	33ug/L	33	D	13			21.5										
BATT01-00390	100ug/L	100	A	13			21.6										
BATT01-00390	100ug/L	100	B	13			21.5										
BATT01-00390	100ug/L	100	C	13			21.4										
BATT01-00390	100ug/L	100	D	13			21.3	6.4	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	14	0.104	679	21.3	6.9	7.6								**Measured Treatment Concentration** - Week 2 0.0ug/L B - 0.855ug/L identified as outlier as determined by Q3+1(IQR*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	14		714	21.6	7.1	7.6	128	44						
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	14		786	21.4	7.3	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	14		832	21.5	7.1	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	14		891	21.3	6.8	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	14		905	21.4	7.2	7.7								

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DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	14		871	21.6	7.1	7.7								
BATT01-00390	3.6µg/L	3.6	A	14		803	21.3	6.8	7.7								
BATT01-00390	3.6µg/L	3.6	B	14	5.12	725	21.6	6.9	7.7								
BATT01-00390	3.6µg/L	3.6	C	14		821	21.5	7.3	7.7								
BATT01-00390	3.6µg/L	3.6	D	14		654	21.3	7.0	7.7								
BATT01-00390	10.9µg/L	10.9	A	14		629	21.4	7.1	7.7								
BATT01-00390	10.9µg/L	10.9	B	14	11.9	692	21.5	7.4	7.7								
BATT01-00390	10.9µg/L	10.9	C	14		713	21.4	6.8	7.7								
BATT01-00390	10.9µg/L	10.9	D	14		755	21.7	6.7	7.8								
BATT01-00390	33µg/L	33	A	14		820	21.7	6.9	7.7								
BATT01-00390	33µg/L	33	B	14	29.9	876	21.3	7.2	7.7								
BATT01-00390	33µg/L	33	C	14		725	21.6	7.1	7.7								
BATT01-00390	33µg/L	33	D	14		701	21.3	7.0	7.7								
BATT01-00390	100µg/L	100	A	14		699	21.5	6.9	7.7								
BATT01-00390	100µg/L	100	B	14	75.4	671	21.6	6.7	7.7								
BATT01-00390	100µg/L	100	C	14		683	21.3	7.1	7.7	118	44						
BATT01-00390	100µg/L	100	D	14		623	21.3	7.2	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	15			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	15			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	15			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	15			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	15			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	15			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	15			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	15			21.5										
BATT01-00390	3.6µg/L	3.6	A	15			21.4										
BATT01-00390	3.6µg/L	3.6	B	15			21.5										
BATT01-00390	3.6µg/L	3.6	C	15			21.5										
BATT01-00390	3.6µg/L	3.6	D	15			21.6										
BATT01-00390	10.9µg/L	10.9	A	15			21.5										
BATT01-00390	10.9µg/L	10.9	B	15			21.5										
BATT01-00390	10.9µg/L	10.9	C	15			21.5										
BATT01-00390	10.9µg/L	10.9	D	15			21.6										
BATT01-00390	33µg/L	33	A	15			21.6										
BATT01-00390	33µg/L	33	B	15			21.5										
BATT01-00390	33µg/L	33	C	15			21.4										
BATT01-00390	33µg/L	33	D	15			21.5										
BATT01-00390	100µg/L	100	A	15			21.5										
BATT01-00390	100µg/L	100	B	15			21.6										
BATT01-00390	100µg/L	100	C	15			21.5										
BATT01-00390	100µg/L	100	D	15			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	16		712	21.5	7.0	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	16		715	21.4	7.0	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	16		754	21.4	7.2	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	16		696	21.5	7.1	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	16		698	21.5	7.1	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	16		742	21.5	6.9	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	16		751	21.6	6.8	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	16		763	21.6	7.1	7.7								
BATT01-00390	3.6µg/L	3.6	A	16		802	21.5	7.2	7.8								
BATT01-00390	3.6µg/L	3.6	B	16		719	21.6	7.2	7.7								
BATT01-00390	3.6µg/L	3.6	C	16		726	21.4	7.1	7.7								
BATT01-00390	3.6µg/L	3.6	D	16		815	21.5	7.1	7.7								
BATT01-00390	10.9µg/L	10.9	A	16		752	21.6	7.0	7.8								
BATT01-00390	10.9µg/L	10.9	B	16		726	21.5	6.9	7.7								
BATT01-00390	10.9µg/L	10.9	C	16		780	21.5	6.9	7.7								
BATT01-00390	10.9µg/L	10.9	D	16		755	21.6	7.0	7.7								
BATT01-00390	33µg/L	33	A	16		695	21.4	7.0	7.8								
BATT01-00390	33µg/L	33	B	16		690	21.4	6.8	7.8								
BATT01-00390	33µg/L	33	C	16		726	21.5	6.8	7.7								
BATT01-00390	33µg/L	33	D	16		743	21.5	7.0	7.7								
BATT01-00390	100µg/L	100	A	16		780	21.6	7.1	7.8								
BATT01-00390	100µg/L	100	B	16		695	21.5	7.0	7.8								

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DEST

BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	100µg/L	100	C	16		756	21.5	7.0	7.7								
BATT01-00390	100µg/L	100	D	16		753	21.5	7.1	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	17			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	17			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	17			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	17			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	17			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	17			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	17			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	17			21.6										
BATT01-00390	3.6µg/L	3.6	A	17			21.5										
BATT01-00390	3.6µg/L	3.6	B	17			21.4										
BATT01-00390	3.6µg/L	3.6	C	17			21.5										
BATT01-00390	3.6µg/L	3.6	D	17			21.6										
BATT01-00390	10.5µg/L	10.5	A	17			21.5										
BATT01-00390	10.5µg/L	10.5	B	17			21.5										
BATT01-00390	10.5µg/L	10.5	C	17			21.4										
BATT01-00390	10.5µg/L	10.5	D	17			21.5										
BATT01-00390	33µg/L	33	A	17			21.5										
BATT01-00390	33µg/L	33	B	17			21.5										
BATT01-00390	33µg/L	33	C	17			21.6										
BATT01-00390	33µg/L	33	D	17			21.6										
BATT01-00390	100µg/L	100	A	17			21.5										
BATT01-00390	100µg/L	100	B	17			21.5										
BATT01-00390	100µg/L	100	C	17			21.6										
BATT01-00390	100µg/L	100	D	17			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	18		798	21.6	7.0	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	18		852	21.5	6.9	7.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	18		908	21.5	6.8	7.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	18		873	21.6	6.8	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	18		916	21.5	6.6	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	18		922	21.5	6.7	7.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	18		849	21.6	6.7	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	18		816	21.5	6.8	7.7								
BATT01-00390	3.6µg/L	3.6	A	18		823	21.5	7.1	7.7								
BATT01-00390	3.6µg/L	3.6	B	18		894	21.4	6.9	7.8								
BATT01-00390	3.6µg/L	3.6	C	18		792	21.5	7.0	7.8								
BATT01-00390	3.6µg/L	3.6	D	18		790	21.5	6.7	7.7								
BATT01-00390	10.5µg/L	10.5	A	18		928	21.6	6.8	7.6								
BATT01-00390	10.5µg/L	10.5	B	18		916	21.6	6.9	7.7								
BATT01-00390	10.5µg/L	10.5	C	18		855	21.5	7.0	7.7								
BATT01-00390	10.5µg/L	10.5	D	18		959	21.5	7.0	7.7								
BATT01-00390	33µg/L	33	A	18		872	21.4	6.8	7.8								
BATT01-00390	33µg/L	33	B	18		886	21.5	6.9	7.7								
BATT01-00390	33µg/L	33	C	18		899	21.4	6.8	7.7								
BATT01-00390	33µg/L	33	D	18		920	21.5	6.6	7.8								
BATT01-00390	100µg/L	100	A	18		998	21.6	6.9	7.6								
BATT01-00390	100µg/L	100	B	18		1009	21.5	6.8	7.7								
BATT01-00390	100µg/L	100	C	18		974	21.5	6.8	7.8								
BATT01-00390	100µg/L	100	D	18		883	21.6	6.7	7.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	19			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	19			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	19			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	19			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	19			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	19			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	19			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	19			21.5										
BATT01-00390	3.6µg/L	3.6	A	19			21.4										
BATT01-00390	3.6µg/L	3.6	B	19			21.5										
BATT01-00390	3.6µg/L	3.6	C	19			21.5										
BATT01-00390	3.6µg/L	3.6	D	19			21.4										
BATT01-00390	10.5µg/L	10.5	A	19			21.5										

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DEST

BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	10.3ug/L	10.3	B	19			21.6										
BATT01-00390	10.3ug/L	10.3	C	19			21.6										
BATT01-00390	10.3ug/L	10.3	D	19			21.5										
BATT01-00390	33ug/L	33	A	19			21.4										
BATT01-00390	33ug/L	33	B	19			21.5										
BATT01-00390	33ug/L	33	C	19			21.5										
BATT01-00390	33ug/L	33	D	19			21.5										
BATT01-00390	100ug/L	100	A	19			21.6										
BATT01-00390	100ug/L	100	B	19			21.6										
BATT01-00390	100ug/L	100	C	19			21.5										
BATT01-00390	100ug/L	100	D	19			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	20			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	20			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	20			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	20			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	20			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	20			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	20			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	20			21.5										
BATT01-00390	3.6ug/L	3.6	A	20			21.6										
BATT01-00390	3.6ug/L	3.6	B	20			21.5										
BATT01-00390	3.6ug/L	3.6	C	20			21.5										
BATT01-00390	3.6ug/L	3.6	D	20			21.5										
BATT01-00390	10.3ug/L	10.3	A	20			21.6										
BATT01-00390	10.3ug/L	10.3	B	20			21.5										
BATT01-00390	10.3ug/L	10.3	C	20			21.5										
BATT01-00390	10.3ug/L	10.3	D	20			21.6										
BATT01-00390	33ug/L	33	A	20			21.5										
BATT01-00390	33ug/L	33	B	20			21.6										
BATT01-00390	33ug/L	33	C	20			21.5										
BATT01-00390	33ug/L	33	D	20			21.6										
BATT01-00390	100ug/L	100	A	20			21.5										
BATT01-00390	100ug/L	100	B	20			21.6										
BATT01-00390	100ug/L	100	C	20			21.5										
BATT01-00390	100ug/L	100	D	20			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	21		761	21.3	5.5	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	21		795	21.7	5.4	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	21	0.104	827	21.5	5.6	7.6	140	32						**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.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	21		854	21.6	5.4	7.9								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	21		982	21.5	5.7	7.7								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	21		1036	21.3	5.5	7.8								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	21		944	21.7	5.5	7.8								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	21		951	21.7	6.1	7.8								
BATT01-00390	3.6ug/L	3.6	A	21		857	21.6	5.6	7.8								
BATT01-00390	3.6ug/L	3.6	B	21		796	21.6	6.2	7.8								
BATT01-00390	3.6ug/L	3.6	C	21	5.24	718	21.5	6.1	7.8								
BATT01-00390	3.6ug/L	3.6	D	21		695	21.7	5.7	7.7								
BATT01-00390	10.3ug/L	10.3	A	21		698	21.7	4.7	7.6								
BATT01-00390	10.3ug/L	10.3	B	21	11.1	724	21.3	5.6	7.6								
BATT01-00390	10.3ug/L	10.3	C	21		756	21.4	6.0	7.6								
BATT01-00390	10.3ug/L	10.3	D	21		825	21.5	6.2	7.7								
BATT01-00390	33ug/L	33	A	21		871	21.7	6.4	7.7								
BATT01-00390	33ug/L	33	B	21	25.8	922	21.6	6.7	7.7								
BATT01-00390	33ug/L	33	C	21		938	21.7	6.3	7.7								
BATT01-00390	33ug/L	33	D	21		980	21.6	6.1	7.7								
BATT01-00390	100ug/L	100	A	21		817	21.7	5.7	7.7								
BATT01-00390	100ug/L	100	B	21		739	21.3	5.6	7.6								
BATT01-00390	100ug/L	100	C	21	70.5	740	21.3	5.1	7.6								
BATT01-00390	100ug/L	100	D	21		699	21.3	6.2	7.7	138	28						
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	22			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	22			21.5										

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	22			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	22			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	22			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	22			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	22			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	22			21.6										
BATT01-00390	3.6µg/L	3.6	A	22			21.4										
BATT01-00390	3.6µg/L	3.6	B	22			21.5										
BATT01-00390	3.6µg/L	3.6	C	22			21.5										
BATT01-00390	3.6µg/L	3.6	D	22			21.6										
BATT01-00390	10.5µg/L	10.5	A	22			21.5										
BATT01-00390	10.5µg/L	10.5	B	22			21.6										
BATT01-00390	10.5µg/L	10.5	C	22			21.5										
BATT01-00390	10.5µg/L	10.5	D	22			21.4										
BATT01-00390	33µg/L	33	A	22			21.6										
BATT01-00390	33µg/L	33	B	22			21.5										
BATT01-00390	33µg/L	33	C	22			21.4										
BATT01-00390	33µg/L	33	D	22			21.5										
BATT01-00390	100µg/L	100	A	22			21.4										
BATT01-00390	100µg/L	100	B	22			21.5										
BATT01-00390	100µg/L	100	C	22			21.6										
BATT01-00390	100µg/L	100	D	22			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	23	615		21.3	6.1	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	23	697		21.3	5.5	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	23	723		21.6	6.3	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	23	785		21.5	7.0	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	23	809		21.3	5.7	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	23	916		21.7	6.2	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	23	944		21.3	6.1	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	23	871		21.7	7.3	7.3								
BATT01-00390	3.6µg/L	3.6	A	23	836		21.5	6.9	7.3								
BATT01-00390	3.6µg/L	3.6	B	23	772		21.6	6.7	7.4								
BATT01-00390	3.6µg/L	3.6	C	23	717		21.7	5.9	7.4								
BATT01-00390	3.6µg/L	3.6	D	23	670		21.4	6.3	7.4								
BATT01-00390	10.5µg/L	10.5	A	23	623		21.3	6.2	7.4								
BATT01-00390	10.5µg/L	10.5	B	23	705		21.6	6.5	7.3								
BATT01-00390	10.5µg/L	10.5	C	23	798		21.7	7.1	7.4								
BATT01-00390	10.5µg/L	10.5	D	23	823		21.4	7.0	7.4								
BATT01-00390	33µg/L	33	A	23	906		21.3	6.8	7.4								
BATT01-00390	33µg/L	33	B	23	957		21.7	6.5	7.4								
BATT01-00390	33µg/L	33	C	23	893		21.5	6.4	7.4								
BATT01-00390	33µg/L	33	D	23	894		21.6	7.1	7.4								
BATT01-00390	100µg/L	100	A	23	796		21.3	6.9	7.4								
BATT01-00390	100µg/L	100	B	23	745		21.3	6.7	7.4								
BATT01-00390	100µg/L	100	C	23	682		21.3	6.3	7.3								
BATT01-00390	100µg/L	100	D	23	621		21.3	6.5	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	24			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	24			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	24			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	24			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	24			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	24			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	24			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	24			21.4										
BATT01-00390	3.6µg/L	3.6	A	24			21.4										
BATT01-00390	3.6µg/L	3.6	B	24			21.4										
BATT01-00390	3.6µg/L	3.6	C	24			21.4										
BATT01-00390	3.6µg/L	3.6	D	24			21.4										
BATT01-00390	10.5µg/L	10.5	A	24			21.5										
BATT01-00390	10.5µg/L	10.5	B	24			21.4										
BATT01-00390	10.5µg/L	10.5	C	24			21.4										
BATT01-00390	10.5µg/L	10.5	D	24			21.4										
BATT01-00390	33µg/L	33	A	24			21.4										

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Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	33ug/L	33	B	24			21.4										
BATT01-00390	33ug/L	33	C	24			21.4										
BATT01-00390	33ug/L	33	D	24			21.4										
BATT01-00390	100ug/L	100	A	24			21.5										
BATT01-00390	100ug/L	100	B	24			21.5										
BATT01-00390	100ug/L	100	C	24			21.4										
BATT01-00390	100ug/L	100	D	24			21.4										
BATT01-00390	Facility Water Chemistry			24				6.7	7.5	1.6	36	670	<0.05	<0.06			
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	25		625	21.6	7.1	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	25		677	21.5	7.0	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	25		742	21.3	7.6	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	25		816	21.4	7.1	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	25		886	21.6	7.3	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	25		921	21.5	7.4	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	25		1054	21.66	7.5	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	25		1135	21.4	7.0	7.3								
BATT01-00390	3.6ug/L	3.6	A	25		1041	21.4	6.9	7.3								
BATT01-00390	3.6ug/L	3.6	B	25		957	21.6	7.3	7.3								
BATT01-00390	3.6ug/L	3.6	C	25		893	21.6	7.1	7.3								
BATT01-00390	3.6ug/L	3.6	D	25		756	21.5	7.4	7.3								
BATT01-00390	10.3ug/L	10.3	A	25		616	21.4	7.0	7.3								
BATT01-00390	10.3ug/L	10.3	B	25		672	21.3	6.8	7.3								
BATT01-00390	10.3ug/L	10.3	C	25		729	21.3	6.9	7.3								
BATT01-00390	10.3ug/L	10.3	D	25		801	21.5	7.3	7.3								
BATT01-00390	33ug/L	33	A	25		844	21.5	7.1	7.3								
BATT01-00390	33ug/L	33	B	25		893	21.3	7.2	7.3								
BATT01-00390	33ug/L	33	C	25		956	21.5	7.1	7.3								
BATT01-00390	33ug/L	33	D	25		813	21.4	7.4	7.3								
BATT01-00390	100ug/L	100	A	25		775	21.3	7.1	7.3								
BATT01-00390	100ug/L	100	B	25		737	21.3	6.8	7.4								
BATT01-00390	100ug/L	100	C	25		699	21.4	6.9	7.4								
BATT01-00390	100ug/L	100	D	25		642	21.3	7.2	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	26			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	26			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	26			21.66										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	26			21.3										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	26			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	26			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	26			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	26			21.5										
BATT01-00390	3.6ug/L	3.6	A	26			21.5										
BATT01-00390	3.6ug/L	3.6	B	26			21.3										
BATT01-00390	3.6ug/L	3.6	C	26			21.7										
BATT01-00390	3.6ug/L	3.6	D	26			21.3										
BATT01-00390	10.3ug/L	10.3	A	26			21.66										
BATT01-00390	10.3ug/L	10.3	B	26			21.5										
BATT01-00390	10.3ug/L	10.3	C	26			21.5										
BATT01-00390	10.3ug/L	10.3	D	26			21.6										
BATT01-00390	33ug/L	33	A	26			21.3										
BATT01-00390	33ug/L	33	B	26			21.4										
BATT01-00390	33ug/L	33	C	26			21.3										
BATT01-00390	33ug/L	33	D	26			21.4										
BATT01-00390	100ug/L	100	A	26			21.5										
BATT01-00390	100ug/L	100	B	26			21.5										
BATT01-00390	100ug/L	100	C	26			21.66										
BATT01-00390	100ug/L	100	D	26			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	27			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	27			21.3										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	27			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	27			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	27			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	27			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	27			21.6										

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Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	27			21.3										
BATT01-00390	3.6µg/L	3.6	A	27			21.4										
BATT01-00390	3.6µg/L	3.6	B	27			21.5										
BATT01-00390	3.6µg/L	3.6	C	27			21.3										
BATT01-00390	3.6µg/L	3.6	D	27			21.6										
BATT01-00390	10.9µg/L	10.9	A	27			21.3										
BATT01-00390	10.9µg/L	10.9	B	27			21.4										
BATT01-00390	10.9µg/L	10.9	C	27			21.4										
BATT01-00390	10.9µg/L	10.9	D	27			21.6										
BATT01-00390	33µg/L	33	A	27			21.3										
BATT01-00390	33µg/L	33	B	27			21.4										
BATT01-00390	33µg/L	33	C	27			21.5										
BATT01-00390	33µg/L	33	D	27			21.6										
BATT01-00390	100µg/L	100	A	27			21.7										
BATT01-00390	100µg/L	100	B	27			21.6										
BATT01-00390	100µg/L	100	C	27			21.7										
BATT01-00390	100µg/L	100	D	27			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	28		615	21.6	6.3	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	28		674	21.4	6.7	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	28		799	21.4	6.1	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	28	0.104	752	21.3	7.0	7.3	124	32						**Measured Treatment Concentration** - MQL = 0.2398µg/L for results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	28		826	21.5	6.5	7.3	124							
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	28		853	21.3	6.6	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	28		900	21.4	6.1	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	28		877	21.5	6.3	7.3								
BATT01-00390	3.6µg/L	3.6	A	28		815	21.5	6.5	7.3								
BATT01-00390	3.6µg/L	3.6	B	28		731	21.4	6.4	7.3								
BATT01-00390	3.6µg/L	3.6	C	28		704	21.3	6.1	7.3								
BATT01-00390	3.6µg/L	3.6	D	28	4.48	662	21.3	6.7	7.3								
BATT01-00390	10.9µg/L	10.9	A	28		608	21.4	7.0	7.2								
BATT01-00390	10.9µg/L	10.9	B	28		657	21.5	6.9	7.2								
BATT01-00390	10.9µg/L	10.9	C	28		774	21.3	6.8	7.2								
BATT01-00390	10.9µg/L	10.9	D	28	12.3	788	21.6	6.3	7.2								
BATT01-00390	33µg/L	33	A	28		812	21.6	6.1	7.3								
BATT01-00390	33µg/L	33	B	28		839	21.4	6.7	7.3								
BATT01-00390	33µg/L	33	C	28		904	21.4	6.6	7.3								
BATT01-00390	33µg/L	33	D	28	31.7	856	21.3	6.5	7.4								
BATT01-00390	100µg/L	100	A	28		805	21.3	6.9	7.4	124	28						
BATT01-00390	100µg/L	100	B	28		748	21.3	6.0	7.4								
BATT01-00390	100µg/L	100	C	28		706	21.5	7.0	7.3								
BATT01-00390	100µg/L	100	D	28	102	644	21.6	6.8	7.4								**Measured Treatment Concentration** - Outlier; no duplicate value available since value was within 20% of nominal concentration reported as measured.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	29			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	29			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	29			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	29			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	29			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	29			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	29			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	29			21.5										
BATT01-00390	3.6µg/L	3.6	A	29			21.4										
BATT01-00390	3.6µg/L	3.6	B	29			21.5										
BATT01-00390	3.6µg/L	3.6	C	29			21.6										
BATT01-00390	3.6µg/L	3.6	D	29			21.6										
BATT01-00390	10.9µg/L	10.9	A	29			21.5										
BATT01-00390	10.9µg/L	10.9	B	29			21.5										
BATT01-00390	10.9µg/L	10.9	C	29			21.6										
BATT01-00390	10.9µg/L	10.9	D	29			21.6										
BATT01-00390	33µg/L	33	A	29			21.5										
BATT01-00390	33µg/L	33	B	29			21.5										

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Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	33ug/L	33	C	29			21.6										
BATT01-00390	33ug/L	33	D	29			21.6										
BATT01-00390	100ug/L	100	A	29			21.5										
BATT01-00390	100ug/L	100	B	29			21.5										
BATT01-00390	100ug/L	100	C	29			21.6										
BATT01-00390	100ug/L	100	D	29			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	30		657	21.3	7.6	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	30		713	21.5	7.7	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	30		769	21.6	7.6	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	30		825	21.5	7.3	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	30		973	21.4	7.2	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	30		1003	21.4	7.1	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	30		1198	21.6	7.5	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	30		1026	21.6	7.5	7.5								
BATT01-00390	3.6ug/L	3.6	A	30		959	21.5	7.0	7.5								
BATT01-00390	3.6ug/L	3.6	B	30		833	21.3	7.1	7.5								
BATT01-00390	3.6ug/L	3.6	C	30		762	21.4	7.4	7.5								
BATT01-00390	3.6ug/L	3.6	D	30		841	21.6	7.6	7.6								
BATT01-00390	10.5ug/L	10.5	A	30		750	21.4	7.1	7.6								
BATT01-00390	10.5ug/L	10.5	B	30		805	21.6	7.0	7.6								
BATT01-00390	10.5ug/L	10.5	C	30		826	21.6	6.9	7.5								
BATT01-00390	10.5ug/L	10.5	D	30		988	21.4	6.7	7.5								
BATT01-00390	33ug/L	33	A	30		1047	21.5	7.2	7.5								
BATT01-00390	33ug/L	33	B	30		1231	21.6	7.3	7.6								
BATT01-00390	33ug/L	33	C	30		1764	21.5	7.5	7.6								
BATT01-00390	33ug/L	33	D	30		1362	21.7	7.6	7.6								
BATT01-00390	100ug/L	100	A	30		1035	21.5	7.1	7.6								
BATT01-00390	100ug/L	100	B	30		936	21.7	7.4	7.6								
BATT01-00390	100ug/L	100	C	30		829	21.3	7.6	7.6								
BATT01-00390	100ug/L	100	D	30		754	21.3	7.1	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	31			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	31			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	31			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	31			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	31			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	31			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	31			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	31			21.6										
BATT01-00390	3.6ug/L	3.6	A	31			21.5										
BATT01-00390	3.6ug/L	3.6	B	31			21.5										
BATT01-00390	3.6ug/L	3.6	C	31			21.6										
BATT01-00390	3.6ug/L	3.6	D	31			21.6										
BATT01-00390	10.5ug/L	10.5	A	31			21.5										
BATT01-00390	10.5ug/L	10.5	B	31			21.5										
BATT01-00390	10.5ug/L	10.5	C	31			21.5										
BATT01-00390	10.5ug/L	10.5	D	31			21.6										
BATT01-00390	33ug/L	33	A	31			21.6										
BATT01-00390	33ug/L	33	B	31			21.5										
BATT01-00390	33ug/L	33	C	31			21.5										
BATT01-00390	33ug/L	33	D	31			21.6										
BATT01-00390	100ug/L	100	A	31			21.4										
BATT01-00390	100ug/L	100	B	31			21.5										
BATT01-00390	100ug/L	100	C	31			21.5										
BATT01-00390	100ug/L	100	D	31			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	32		646	21.5	6.8	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	32		902	21.6	6.7	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	32		874	21.6	5.5	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	32		711	21.5	6.0	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	32		710	21.5	6.7	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	32		662	21.6	5.9	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	32		951	21.6	6.4	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	32		982	21.5	6.4	7.4								
BATT01-00390	3.6ug/L	3.6	A	32		781	21.5	6.5	7.4								

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DEST

BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	3.6µg/L	3.6	B	32		686	21.6	6.8	7.4								
BATT01-00390	3.6µg/L	3.6	C	32		770	21.4	7.1	7.4								
BATT01-00390	3.6µg/L	3.6	D	32		813	21.5	6.0	7.4								
BATT01-00390	10.9µg/L	10.9	A	32		705	21.5	6.5	7.5								
BATT01-00390	10.9µg/L	10.9	B	32		790	21.5	7.0	7.5								
BATT01-00390	10.9µg/L	10.9	C	32		757	21.6	6.8	7.5								
BATT01-00390	10.9µg/L	10.9	D	32		707	21.6	7.0	7.4								
BATT01-00390	33µg/L	33	A	32		864	21.5	6.9	7.4								
BATT01-00390	33µg/L	33	B	32		697	21.5	6.8	7.4								
BATT01-00390	33µg/L	33	C	32		729	21.6	6.7	7.4								
BATT01-00390	33µg/L	33	D	32		638	21.5	7.1	7.4								
BATT01-00390	100µg/L	100	A	32		655	21.5	6.9	7.4								
BATT01-00390	100µg/L	100	B	32		848	21.6	6.7	7.4								
BATT01-00390	100µg/L	100	C	32		692	21.5	6.8	7.4								
BATT01-00390	100µg/L	100	D	32		612	21.5	6.8	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	33			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	33			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	33			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	33			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	33			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	33			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	33			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	33			21.5										
BATT01-00390	3.6µg/L	3.6	A	33			21.6										
BATT01-00390	3.6µg/L	3.6	B	33			21.5										
BATT01-00390	3.6µg/L	3.6	C	33			21.6										
BATT01-00390	3.6µg/L	3.6	D	33			21.5										
BATT01-00390	10.9µg/L	10.9	A	33			21.6										
BATT01-00390	10.9µg/L	10.9	B	33			21.5										
BATT01-00390	10.9µg/L	10.9	C	33			21.5										
BATT01-00390	10.9µg/L	10.9	D	33			21.6										
BATT01-00390	33µg/L	33	A	33			21.6										
BATT01-00390	33µg/L	33	B	33			21.5										
BATT01-00390	33µg/L	33	C	33			21.5										
BATT01-00390	33µg/L	33	D	33			21.5										
BATT01-00390	100µg/L	100	A	33			21.5										
BATT01-00390	100µg/L	100	B	33			21.5										
BATT01-00390	100µg/L	100	C	33			21.6										
BATT01-00390	100µg/L	100	D	33			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	34			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	34			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	34			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	34			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	34			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	34			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	34			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	34			21.5										
BATT01-00390	3.6µg/L	3.6	A	34			21.5										
BATT01-00390	3.6µg/L	3.6	B	34			21.6										
BATT01-00390	3.6µg/L	3.6	C	34			21.6										
BATT01-00390	3.6µg/L	3.6	D	34			21.6										
BATT01-00390	10.9µg/L	10.9	A	34			21.6										
BATT01-00390	10.9µg/L	10.9	B	34			21.6										
BATT01-00390	10.9µg/L	10.9	C	34			21.5										
BATT01-00390	10.9µg/L	10.9	D	34			21.6										
BATT01-00390	33µg/L	33	A	34			21.5										
BATT01-00390	33µg/L	33	B	34			21.6										
BATT01-00390	33µg/L	33	C	34			21.6										
BATT01-00390	33µg/L	33	D	34			21.5										
BATT01-00390	100µg/L	100	A	34			21.5										
BATT01-00390	100µg/L	100	B	34			21.5										
BATT01-00390	100µg/L	100	C	34			21.6										
BATT01-00390	100µg/L	100	D	34			21.5										

DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	35		704	21.6	6.8	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	35		710	21.6	6.7	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	35		699	21.5	6.9	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	35		692	21.5	6.6	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	35	0.227	755	21.6	6.3	7.5								**Measured Treatment Concentration -** Week 3 0.0 A Original sample (288ug/L) observed as outlier. Possible contamination during analysis since duplicate sample was 0.227ug/L.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	35		762	21.6	6.5	7.5	124	32						
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	35		777	21.5	6.8	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	35		743	21.5	6.9	7.5								
BATT01-00390	3.6µg/L	3.6	A	35	8.63	689	21.6	6.6	7.4								**Measured Treatment Concentration -** Based on mean of original (11.0µg/L) and duplicate (6.25µg/L) sample
BATT01-00390	3.6µg/L	3.6	B	35		667	21.5	6.5	7.5								
BATT01-00390	3.6µg/L	3.6	C	35		724	21.6	6.7	7.5								
BATT01-00390	3.6µg/L	3.6	D	35		756	21.6	6.7	7.5								
BATT01-00390	10.5µg/L	10.9	A	35	14.0	862	21.5	6.8	7.6								
BATT01-00390	10.5µg/L	10.9	B	35		810	21.6	6.6	7.5								
BATT01-00390	10.5µg/L	10.9	C	35		763	21.6	6.5	7.5								
BATT01-00390	10.5µg/L	10.9	D	35		752	21.5	6.3	7.5								
BATT01-00390	33µg/L	33	A	35	26.9	791	21.6	6.9	7.5								
BATT01-00390	33µg/L	33	B	35		806	21.6	6.7	7.6								
BATT01-00390	33µg/L	33	C	35		854	21.5	6.7	7.6								
BATT01-00390	33µg/L	33	D	35		827	21.5	6.8	7.6								
BATT01-00390	100µg/L	100	A	35	56.3	728	21.6	6.9	7.6	132	28						**Measured Treatment Concentration -** Based on mean of original (60.4µg/L) and duplicate (72.1µg/L) sample
BATT01-00390	100µg/L	100	B	35		736	21.6	6.6	7.6								
BATT01-00390	100µg/L	100	C	35		759	21.6	6.5	7.6								
BATT01-00390	100µg/L	100	D	35		798	21.6	6.6	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	36			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	36			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	36			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	36			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	36			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	36			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	36			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	36			21.6										
BATT01-00390	3.6µg/L	3.6	A	36			21.5										
BATT01-00390	3.6µg/L	3.6	B	36			21.6										
BATT01-00390	3.6µg/L	3.6	C	36			21.6										
BATT01-00390	3.6µg/L	3.6	D	36			21.6										
BATT01-00390	10.5µg/L	10.9	A	36			21.5										
BATT01-00390	10.5µg/L	10.9	B	36			21.6										
BATT01-00390	10.5µg/L	10.9	C	36			21.6										
BATT01-00390	10.5µg/L	10.9	D	36			21.6										
BATT01-00390	33µg/L	33	A	36			21.6										
BATT01-00390	33µg/L	33	B	36			21.6										
BATT01-00390	33µg/L	33	C	36			21.6										
BATT01-00390	33µg/L	33	D	36			21.6										
BATT01-00390	100µg/L	100	A	36			21.6										
BATT01-00390	100µg/L	100	B	36			21.7										
BATT01-00390	100µg/L	100	C	36			21.6										
BATT01-00390	100µg/L	100	D	36			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	37		694	21.6	6.8	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	37		687	21.5	6.9	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	37		705	21.6	6.3	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	37		728	21.4	6.3	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	37		755	21.4	6.4	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	37		821	21.6	5.2	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	37		874	21.7	4.8	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	37		933	21.3	6.5	7.4								
BATT01-00390	3.6µg/L	3.6	A	37		902	21.3	6.7	7.4								
BATT01-00390	3.6µg/L	3.6	B	37		855	21.6	6.8	7.4								
BATT01-00390	3.6µg/L	3.6	C	37		816	21.7	6.9	7.4								

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	3.6µg/L	3.6	D	37		742	21.6	7.0	7.4								
BATT01-00390	10.3µg/L	10.9	A	37		627	21.5	6.4	7.4								
BATT01-00390	10.3µg/L	10.9	B	37		673	21.4	6.5	7.4								
BATT01-00390	10.3µg/L	10.9	C	37		744	21.4	6.6	7.4								
BATT01-00390	10.3µg/L	10.9	D	37		782	21.5	6.7	7.5								
BATT01-00390	33µg/L	33	A	37		865	21.3	6.9	7.5								
BATT01-00390	33µg/L	33	B	37		897	21.4	6.5	7.5								
BATT01-00390	33µg/L	33	C	37		906	21.6	6.2	7.4								
BATT01-00390	33µg/L	33	D	37		918	21.7	6.3	7.4								
BATT01-00390	100µg/L	100	A	37		822	21.5	6.7	7.4								
BATT01-00390	100µg/L	100	B	37		757	21.6	6.5	7.4								
BATT01-00390	100µg/L	100	C	37		716	21.4	6.6	7.4								
BATT01-00390	100µg/L	100	D	37		671	21.3	6.3	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	38			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	38			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	38			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	38			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	38			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	38			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	38			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	38			21.6										
BATT01-00390	3.6µg/L	3.6	A	38			21.6										
BATT01-00390	3.6µg/L	3.6	B	38			21.6										
BATT01-00390	3.6µg/L	3.6	C	38			21.6										
BATT01-00390	3.6µg/L	3.6	D	38			21.6										
BATT01-00390	10.3µg/L	10.9	A	38			21.5										
BATT01-00390	10.3µg/L	10.9	B	38			21.5										
BATT01-00390	10.3µg/L	10.9	C	38			21.5										
BATT01-00390	10.3µg/L	10.9	D	38			21.6										
BATT01-00390	33µg/L	33	A	38			21.5										
BATT01-00390	33µg/L	33	B	38			21.6										
BATT01-00390	33µg/L	33	C	38			21.6										
BATT01-00390	33µg/L	33	D	38			21.5										
BATT01-00390	100µg/L	100	A	38			21.6										
BATT01-00390	100µg/L	100	B	38			21.6										
BATT01-00390	100µg/L	100	C	38			21.6										
BATT01-00390	100µg/L	100	D	38			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	39		723	21.3	6.1	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	39		673	21.3	5.9	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	39		692	21.3	5.8	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	39		775	21.7	6.3	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	39		882	21.6	6.2	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	39		861	21.7	5.7	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	39		904	21.7	6.7	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	39		956	21.5	6.3	7.4								
BATT01-00390	3.6µg/L	3.6	A	39		853	21.6	7.0	7.4								
BATT01-00390	3.6µg/L	3.6	B	39		975	21.5	6.4	7.4								
BATT01-00390	3.6µg/L	3.6	C	39		722	21.4	6.8	7.4								
BATT01-00390	3.6µg/L	3.6	D	39		698	21.5	6.7	7.4								
BATT01-00390	10.3µg/L	10.9	A	39		651	21.6	6.1	7.4								
BATT01-00390	10.3µg/L	10.9	B	39		702	21.5	5.9	7.4								
BATT01-00390	10.3µg/L	10.9	C	39		737	21.3	6.3	7.4								
BATT01-00390	10.3µg/L	10.9	D	39		798	21.6	6.7	7.4								
BATT01-00390	33µg/L	33	A	39		864	21.7	6.5	7.4								
BATT01-00390	33µg/L	33	B	39		871	21.7	7.1	7.4								
BATT01-00390	33µg/L	33	C	39		900	21.4	7.0	7.4								
BATT01-00390	33µg/L	33	D	39		923	21.5	6.4	7.4								
BATT01-00390	100µg/L	100	A	39		846	21.6	6.5	7.4								
BATT01-00390	100µg/L	100	B	39		862	21.3	6.8	7.4								
BATT01-00390	100µg/L	100	C	39		736	21.4	6.3	7.4								
BATT01-00390	100µg/L	100	D	39		665	21.3	6.7	7.4								
BATT01-00390	Facility Water Chemistry			39				6.4	7.8	120	32	724	<0.03	<0.06			
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	40			21.3										

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DEST BATT01-00390 Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	40			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	40			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	40			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	40			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	40			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	40			21.7										
BATT01-00390	3.6µg/L	3.6	A	40			21.6										
BATT01-00390	3.6µg/L	3.6	B	40			21.5										
BATT01-00390	3.6µg/L	3.6	C	40			21.4										
BATT01-00390	3.6µg/L	3.6	D	40			21.3										
BATT01-00390	10.9µg/L	10.9	A	40			21.4										
BATT01-00390	10.9µg/L	10.9	B	40			21.3										
BATT01-00390	10.9µg/L	10.9	C	40			21.4										
BATT01-00390	10.9µg/L	10.9	D	40			21.4										
BATT01-00390	33µg/L	33	A	40			21.5										
BATT01-00390	33µg/L	33	B	40			21.6										
BATT01-00390	33µg/L	33	C	40			21.6										
BATT01-00390	33µg/L	33	D	40			21.7										
BATT01-00390	100µg/L	100	A	40			21.3										
BATT01-00390	100µg/L	100	B	40			21.3										
BATT01-00390	100µg/L	100	C	40			21.4										
BATT01-00390	100µg/L	100	D	40			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	41			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	41			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	41			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	41			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	41			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	41			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	41			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	41			21.5										
BATT01-00390	3.6µg/L	3.6	A	41			21.6										
BATT01-00390	3.6µg/L	3.6	B	41			21.6										
BATT01-00390	3.6µg/L	3.6	C	41			21.5										
BATT01-00390	3.6µg/L	3.6	D	41			21.6										
BATT01-00390	10.9µg/L	10.9	A	41			21.6										
BATT01-00390	10.9µg/L	10.9	B	41			21.6										
BATT01-00390	10.9µg/L	10.9	C	41			21.5										
BATT01-00390	10.9µg/L	10.9	D	41			21.5										
BATT01-00390	33µg/L	33	A	41			21.5										
BATT01-00390	33µg/L	33	B	41			21.6										
BATT01-00390	33µg/L	33	C	41			21.6										
BATT01-00390	33µg/L	33	D	41			21.6										
BATT01-00390	100µg/L	100	A	41			21.5										
BATT01-00390	100µg/L	100	B	41			21.6										
BATT01-00390	100µg/L	100	C	41			21.6										
BATT01-00390	100µg/L	100	D	41			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	42		633	21.3	6.5	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	42		694	21.5	6.9	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	42		745	21.6	6.2	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	42		726	21.6	7.3	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	42		792	21.5	5.6	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	42	0.104	831	21.6	5.9	7.5								**Measured Treatment Concentration** - Week 6 0.0µg/L F - 1.16µg/L identified as outlier as determined by Q3+1(IQR*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	42		902	21.5	7.1	7.5	128	32						
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	42		827	21.4	6.8	7.5								
BATT01-00390	3.6µg/L	3.6	A	42		864	21.5	6.3	7.5								
BATT01-00390	3.6µg/L	3.6	B	42	6.27	772	21.6	6.5	7.5								
BATT01-00390	3.6µg/L	3.6	C	42		715	21.5	6.7	7.5								
BATT01-00390	3.6µg/L	3.6	D	42		682	21.6	6.2	7.5								
BATT01-00390	10.9µg/L	10.9	A	42		637	21.3	7.0	7.5								

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	10.5ug/L	10.9	B	42	10.5	699	21.4	6.8	7.5								
BATT01-00390	10.5ug/L	10.9	C	42		720	21.6	6.3	7.5								
BATT01-00390	10.5ug/L	10.9	D	42		751	21.7	6.5	7.5								
BATT01-00390	33ug/L	33	A	42		782	21.6	6.9	7.5								
BATT01-00390	33ug/L	33	B	42	26.9	881	21.5	7.1	7.5								
BATT01-00390	33ug/L	33	C	42		876	21.6	6.7	7.5								
BATT01-00390	33ug/L	33	D	42		904	21.5	6.8	7.5								
BATT01-00390	100ug/L	100	A	42		862	21.6	6.5	7.5								
BATT01-00390	100ug/L	100	B	42	67.9	744	21.3	6.9	7.5								
BATT01-00390	100ug/L	100	C	42		716	21.4	6.1	7.5	128	32						
BATT01-00390	100ug/L	100	D	42		670	21.4	5.8	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	43			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	43			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	43			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	43			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	43			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	43			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	43			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	43			21.5										
BATT01-00390	3.6ug/L	3.6	A	43			21.6										
BATT01-00390	3.6ug/L	3.6	B	43			21.6										
BATT01-00390	3.6ug/L	3.6	C	43			21.6										
BATT01-00390	3.6ug/L	3.6	D	43			21.7										
BATT01-00390	10.5ug/L	10.9	A	43			21.6										
BATT01-00390	10.5ug/L	10.9	B	43			21.6										
BATT01-00390	10.5ug/L	10.9	C	43			21.6										
BATT01-00390	10.5ug/L	10.9	D	43			21.5										
BATT01-00390	33ug/L	33	A	43			21.6										
BATT01-00390	33ug/L	33	B	43			21.6										
BATT01-00390	33ug/L	33	C	43			21.6										
BATT01-00390	33ug/L	33	D	43			21.5										
BATT01-00390	100ug/L	100	A	43			21.6										
BATT01-00390	100ug/L	100	B	43			21.6										
BATT01-00390	100ug/L	100	C	43			21.5										
BATT01-00390	100ug/L	100	D	43			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	44		679	21.3	5.8	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	44		659	21.4	5.1	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	44		722	21.4	6.3	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	44		776	21.3	6.3	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	44		759	21.6	6.7	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	44		823	21.6	6.8	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	44		887	21.5	6.2	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	44		798	21.6	6.5	7.5								
BATT01-00390	3.6ug/L	3.6	A	44		861	21.5	6.7	7.5								
BATT01-00390	3.6ug/L	3.6	B	44		765	21.6	7.1	7.5								
BATT01-00390	3.6ug/L	3.6	C	44		794	21.5	6.3	7.5								
BATT01-00390	3.6ug/L	3.6	D	44		662	21.4	6.5	7.5								
BATT01-00390	10.5ug/L	10.9	A	44		713	21.3	6.6	7.5								
BATT01-00390	10.5ug/L	10.9	B	44		698	21.4	6.9	7.5								
BATT01-00390	10.5ug/L	10.9	C	44		694	21.6	7.1	7.5								
BATT01-00390	10.5ug/L	10.9	D	44		773	21.7	6.5	7.5								
BATT01-00390	33ug/L	33	A	44		822	21.6	6.3	7.5								
BATT01-00390	33ug/L	33	B	44		856	21.5	6.5	7.5								
BATT01-00390	33ug/L	33	C	44		931	21.3	6.9	7.5								
BATT01-00390	33ug/L	33	D	44		865	21.4	6.4	7.5								
BATT01-00390	100ug/L	100	A	44		816	21.5	6.4	7.5								
BATT01-00390	100ug/L	100	B	44		798	21.6	6.6	7.5								
BATT01-00390	100ug/L	100	C	44		754	21.3	5.7	7.5								
BATT01-00390	100ug/L	100	D	44		680	21.5	6.2	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	45			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	45			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	45			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	45			21.7										

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DEST BATT01-00390 Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	45			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	45			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	45			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	45			21.7										
BATT01-00390	3.6ug/L	3.6	A	45			21.7										
BATT01-00390	3.6ug/L	3.6	B	45			21.6										
BATT01-00390	3.6ug/L	3.6	C	45			21.6										
BATT01-00390	3.6ug/L	3.6	D	45			21.7										
BATT01-00390	10.9ug/L	10.9	A	45			21.5										
BATT01-00390	10.9ug/L	10.9	B	45			21.6										
BATT01-00390	10.9ug/L	10.9	C	45			21.6										
BATT01-00390	10.9ug/L	10.9	D	45			21.6										
BATT01-00390	33ug/L	33	A	45			21.7										
BATT01-00390	33ug/L	33	B	45			21.6										
BATT01-00390	33ug/L	33	C	45			21.6										
BATT01-00390	33ug/L	33	D	45			21.6										
BATT01-00390	100ug/L	100	A	45			21.7										
BATT01-00390	100ug/L	100	B	45			21.6										
BATT01-00390	100ug/L	100	C	45			21.6										
BATT01-00390	100ug/L	100	D	45			21.6										
BATT01-00390	Dilution Water			45												7.9	
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	46		618	21.4	5.7	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	46		704	21.5	5.3	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	46		737	21.5	6.2	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	46		822	21.3	6.4	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	46		896	21.5	6.5	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	46		945	21.6	7.0	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	46		1035	21.7	6.3	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	46		925	21.4	6.1	7.5								
BATT01-00390	3.6ug/L	3.6	A	46		876	21.7	5.8	7.5								
BATT01-00390	3.6ug/L	3.6	B	46		820	21.6	6.2	7.5								
BATT01-00390	3.6ug/L	3.6	C	46		764	21.5	6.3	7.5								
BATT01-00390	3.6ug/L	3.6	D	46		708	21.3	6.5	7.5								
BATT01-00390	10.9ug/L	10.9	A	46		716	21.4	6.7	7.5								
BATT01-00390	10.9ug/L	10.9	B	46		745	21.5	6.1	7.5								
BATT01-00390	10.9ug/L	10.9	C	46		821	21.3	5.8	7.5								
BATT01-00390	10.9ug/L	10.9	D	46		897	21.4	6.2	7.5								
BATT01-00390	33ug/L	33	A	46		931	21.5	6.3	7.5								
BATT01-00390	33ug/L	33	B	46		988	21.6	6.1	7.5								
BATT01-00390	33ug/L	33	C	46		926	21.3	5.7	7.5								
BATT01-00390	33ug/L	33	D	46		942	21.4	6.8	7.5								
BATT01-00390	100ug/L	100	A	46		816	21.5	6.9	7.5								
BATT01-00390	100ug/L	100	B	46		775	21.6	5.3	7.5								
BATT01-00390	100ug/L	100	C	46		719	21.3	6.8	7.5								
BATT01-00390	100ug/L	100	D	46		687	21.3	6.1	7.5								
BATT01-00390	Facility Water Chemistry			46				6.8	7.5	170	32	753	<0.05	<0.05			
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	47			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	47			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	47			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	47			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	47			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	47			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	47			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	47			21.6										
BATT01-00390	3.6ug/L	3.6	A	47			21.5										
BATT01-00390	3.6ug/L	3.6	B	47			21.6										
BATT01-00390	3.6ug/L	3.6	C	47			21.6										
BATT01-00390	3.6ug/L	3.6	D	47			21.5										
BATT01-00390	10.9ug/L	10.9	A	47			21.6										
BATT01-00390	10.9ug/L	10.9	B	47			21.6										
BATT01-00390	10.9ug/L	10.9	C	47			21.6										
BATT01-00390	10.9ug/L	10.9	D	47			21.5										
BATT01-00390	33ug/L	33	A	47			21.7										

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	33ug/L	33	B	47			21.6										
BATT01-00390	33ug/L	33	C	47			21.6										
BATT01-00390	33ug/L	33	D	47			21.6										
BATT01-00390	100ug/L	100	A	47			21.5										
BATT01-00390	100ug/L	100	B	47			21.6										
BATT01-00390	100ug/L	100	C	47			21.6										
BATT01-00390	100ug/L	100	D	47			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	48			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	48			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	48			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	48			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	48			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	48			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	48			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	48			21.8										
BATT01-00390	3.6ug/L	3.6	A	48			21.6										
BATT01-00390	3.6ug/L	3.6	B	48			21.6										
BATT01-00390	3.6ug/L	3.6	C	48			21.7										
BATT01-00390	3.6ug/L	3.6	D	48			21.7										
BATT01-00390	10.9ug/L	10.9	A	48			21.7										
BATT01-00390	10.9ug/L	10.9	B	48			21.7										
BATT01-00390	10.9ug/L	10.9	C	48			21.7										
BATT01-00390	10.9ug/L	10.9	D	48			21.7										
BATT01-00390	33ug/L	33	A	48			21.6										
BATT01-00390	33ug/L	33	B	48			21.6										
BATT01-00390	33ug/L	33	C	48			21.7										
BATT01-00390	33ug/L	33	D	48			21.6										
BATT01-00390	100ug/L	100	A	48			21.7										
BATT01-00390	100ug/L	100	B	48			21.7										
BATT01-00390	100ug/L	100	C	48			21.7										
BATT01-00390	100ug/L	100	D	48			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	49		750	21.6	5.3	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	49		693	21.5	5.7	7.0								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	49		825	21.6	5.6	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	49		720	21.5	6.3	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	49		732	21.5	6.5	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	49		815	21.6	6.7	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	49	0.104	685	21.6	7.1	7.3	128	28						**Measured Treatment Concentration -** Week 7 0.0ug/L G - 1.20ug/L identified as outlier as determined by Q3+1(Q3-Q1)*1.5). Duplicate sample used for analysis of mean measured concentration.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	49		673	21.6	6.5	7.4								
BATT01-00390	3.6ug/L	3.6	A	49		827	21.6	5.7	7.4								
BATT01-00390	3.6ug/L	3.6	B	49		763	21.5	6.3	7.4								
BATT01-00390	3.6ug/L	3.6	C	49	3.86	788	21.5	6.1	7.4								
BATT01-00390	3.6ug/L	3.6	D	49		801	21.6	6.5	7.3								
BATT01-00390	10.9ug/L	10.9	A	49		697	21.6	6.6	7.2								
BATT01-00390	10.9ug/L	10.9	B	49		720	21.5	6.2	7.3								
BATT01-00390	10.9ug/L	10.9	C	49	8.74	683	21.6	6.5	7.3								
BATT01-00390	10.9ug/L	10.9	D	49		743	21.5	6.4	7.4								
BATT01-00390	33ug/L	33	A	49		825	21.6	6.8	7.4								
BATT01-00390	33ug/L	33	B	49		750	21.6	6.1	7.4								
BATT01-00390	33ug/L	33	C	49	30.4	845	21.5	5.8	7.4								
BATT01-00390	33ug/L	33	D	49		830	21.5	5.6	7.4								
BATT01-00390	100ug/L	100	A	49		727	21.6	6.3	7.4								
BATT01-00390	100ug/L	100	B	49		698	21.5	5.9	7.4								
BATT01-00390	100ug/L	100	C	49	76.6	821	21.6	6.1	7.4								
BATT01-00390	100ug/L	100	D	49		754	21.5	6.3	7.4	132	32						
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	50			21.8										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	50			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	50			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	50			21.8										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	50			21.5										

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	30			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	30			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	30			21.5										
BATT01-00390	3.6µg/L	3.6	A	30			21.6										
BATT01-00390	3.6µg/L	3.6	B	30			21.8										
BATT01-00390	3.6µg/L	3.6	C	30			21.8										
BATT01-00390	3.6µg/L	3.6	D	30			21.8										
BATT01-00390	10.9µg/L	10.9	A	30			21.8										
BATT01-00390	10.9µg/L	10.9	B	30			21.8										
BATT01-00390	10.9µg/L	10.9	C	30			21.7										
BATT01-00390	10.9µg/L	10.9	D	30			21.7										
BATT01-00390	33µg/L	33	A	30			21.8										
BATT01-00390	33µg/L	33	B	30			21.8										
BATT01-00390	33µg/L	33	C	30			21.6										
BATT01-00390	33µg/L	33	D	30			21.6										
BATT01-00390	100µg/L	100	A	30			21.6										
BATT01-00390	100µg/L	100	B	30			21.7										
BATT01-00390	100µg/L	100	C	30			21.7										
BATT01-00390	100µg/L	100	D	30			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	31		888	21.7	6.2	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	31		1047	21.8	5.9	7.2								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	31		998	21.8	5.5	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	31		918	21.8	5.7	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	31		858	21.8	6.3	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	31		849	21.8	6.4	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	31		926	21.8	6.5	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	31		951	21.7	7.0	7.5								
BATT01-00390	3.6µg/L	3.6	A	31		856	21.8	5.7	7.5								
BATT01-00390	3.6µg/L	3.6	B	31		750	21.8	6.2	7.5								
BATT01-00390	3.6µg/L	3.6	C	31		832	21.8	6.1	7.5								
BATT01-00390	3.6µg/L	3.6	D	31		862	21.8	5.3	7.4								
BATT01-00390	10.9µg/L	10.9	A	31		809	21.8	5.5	7.4								
BATT01-00390	10.9µg/L	10.9	B	31		864	21.8	6.4	7.5								
BATT01-00390	10.9µg/L	10.9	C	31		786	21.8	5.7	7.5								
BATT01-00390	10.9µg/L	10.9	D	31		723	21.8	6.3	7.5								
BATT01-00390	33µg/L	33	A	31		769	21.8	6.0	7.5								
BATT01-00390	33µg/L	33	B	31		772	21.8	6.4	7.5								
BATT01-00390	33µg/L	33	C	31		769	21.8	5.4	7.4								
BATT01-00390	33µg/L	33	D	31		673	21.7	6.7	7.5								
BATT01-00390	100µg/L	100	A	31		704	21.6	6.0	7.5								
BATT01-00390	100µg/L	100	B	31		946	21.7	6.1	7.4								
BATT01-00390	100µg/L	100	C	31		817	21.8	6.7	7.5								
BATT01-00390	100µg/L	100	D	31		685	21.8	6.0	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	32			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	32			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	32			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	32			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	32			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	32			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	32			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	32			21.6										
BATT01-00390	3.6µg/L	3.6	A	32			21.7										
BATT01-00390	3.6µg/L	3.6	B	32			21.7										
BATT01-00390	3.6µg/L	3.6	C	32			21.6										
BATT01-00390	3.6µg/L	3.6	D	32			21.6										
BATT01-00390	10.9µg/L	10.9	A	32			21.7										
BATT01-00390	10.9µg/L	10.9	B	32			21.7										
BATT01-00390	10.9µg/L	10.9	C	32			21.6										
BATT01-00390	10.9µg/L	10.9	D	32			21.6										
BATT01-00390	33µg/L	33	A	32			21.7										
BATT01-00390	33µg/L	33	B	32			21.7										
BATT01-00390	33µg/L	33	C	32			21.6										
BATT01-00390	33µg/L	33	D	32			21.6										

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Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	100µg/L	100	A	52			21.7										
BATT01-00390	100µg/L	100	B	52			21.7										
BATT01-00390	100µg/L	100	C	52			21.6										
BATT01-00390	100µg/L	100	D	52			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	53		851	21.7	7.0	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	53		1119	21.8	6.9	7.0								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	53		1131	21.7	6.4	7.0								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	53		945	21.7	6.5	7.2								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	53		885	21.7	5.1	7.2								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	53		956	21.8	6.8	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	53		932	21.8	6.4	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	53		1031	21.6	6.9	7.4								
BATT01-00390	3.6µg/L	3.6	A	53		947	21.7	6.1	7.3								
BATT01-00390	3.6µg/L	3.6	B	53		909	21.8	6.3	7.3								
BATT01-00390	3.6µg/L	3.6	C	53		1053	21.8	6.2	7.3								
BATT01-00390	3.6µg/L	3.6	D	53		1043	21.8	6.5	7.3								
BATT01-00390	10.5µg/L	10.5	A	53		632	21.8	5.8	7.2								
BATT01-00390	10.5µg/L	10.5	B	53		615	21.8	6.5	7.2								
BATT01-00390	10.5µg/L	10.5	C	53		678	21.6	6.4	7.3								
BATT01-00390	10.5µg/L	10.5	D	53		634	21.6	6.3	7.3								
BATT01-00390	33µg/L	33	A	53		842	21.8	6.3	7.3								
BATT01-00390	33µg/L	33	B	53		959	21.7	6.4	7.3								
BATT01-00390	33µg/L	33	C	53		853	21.8	6.0	7.3								
BATT01-00390	33µg/L	33	D	53		656	21.7	6.8	7.3								
BATT01-00390	100µg/L	100	A	53		770	21.6	6.1	7.3								
BATT01-00390	100µg/L	100	B	53		849	21.7	6.3	7.3								
BATT01-00390	100µg/L	100	C	53		822	21.7	6.3	7.3								
BATT01-00390	100µg/L	100	D	53		684	21.7	6.3	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	54			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	54			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	54			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	54			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	54			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	54			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	54			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	54			21.6										
BATT01-00390	3.6µg/L	3.6	A	54			21.7										
BATT01-00390	3.6µg/L	3.6	B	54			21.7										
BATT01-00390	3.6µg/L	3.6	C	54			21.7										
BATT01-00390	3.6µg/L	3.6	D	54			21.6										
BATT01-00390	10.5µg/L	10.5	A	54			21.7										
BATT01-00390	10.5µg/L	10.5	B	54			21.7										
BATT01-00390	10.5µg/L	10.5	C	54			21.7										
BATT01-00390	10.5µg/L	10.5	D	54			21.7										
BATT01-00390	33µg/L	33	A	54			21.6										
BATT01-00390	33µg/L	33	B	54			21.7										
BATT01-00390	33µg/L	33	C	54			21.7										
BATT01-00390	33µg/L	33	D	54			21.6										
BATT01-00390	100µg/L	100	A	54			21.6										
BATT01-00390	100µg/L	100	B	54			21.7										
BATT01-00390	100µg/L	100	C	54			21.7										
BATT01-00390	100µg/L	100	D	54			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	55			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	55			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	55			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	55			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	55			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	55			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	55			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	55			21.6										
BATT01-00390	3.6µg/L	3.6	A	55			21.7										
BATT01-00390	3.6µg/L	3.6	B	55			21.7										
BATT01-00390	3.6µg/L	3.6	C	55			21.7										

DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	3.6ug/L	3.6	D	35			21.7										
BATT01-00390	10.9ug/L	10.9	A	35			21.6										
BATT01-00390	10.9ug/L	10.9	B	35			21.7										
BATT01-00390	10.9ug/L	10.9	C	35			21.6										
BATT01-00390	10.9ug/L	10.9	D	35			21.7										
BATT01-00390	33ug/L	33	A	35			21.7										
BATT01-00390	33ug/L	33	B	35			21.7										
BATT01-00390	33ug/L	33	C	35			21.7										
BATT01-00390	33ug/L	33	D	35			21.7										
BATT01-00390	100ug/L	100	A	35			21.7										
BATT01-00390	100ug/L	100	B	35			21.6										
BATT01-00390	100ug/L	100	C	35			21.7										
BATT01-00390	100ug/L	100	D	35			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	35		669	21.6	6.3	7.6	124	32						
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	35		750	21.6	6.3	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	35		867	21.7	3.8	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	35		953	21.7	6.4	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	35		853	21.7	6.6	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	35		856	21.6	6.7	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	35		977	21.7	5.6	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	35	0.104	922	21.7	6.7	7.3								**Measured Treatment Concentration** - MQL = 0.2984µg/L for results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	3.6ug/L	3.6	A	35		957	21.6	4.5	7.3								
BATT01-00390	3.6ug/L	3.6	B	35		848	21.7	5.6	7.3								
BATT01-00390	3.6ug/L	3.6	C	35		952	21.7	5.9	7.3								
BATT01-00390	3.6ug/L	3.6	D	35	3.49	888	21.6	5.7	6.8								
BATT01-00390	10.9ug/L	10.9	A	35		847	21.7	4.7	6.9								
BATT01-00390	10.9ug/L	10.9	B	35		923	21.7	6.0	7.1								
BATT01-00390	10.9ug/L	10.9	C	35		880	21.6	5.5	7.1								
BATT01-00390	10.9ug/L	10.9	D	35	8.47	958	21.6	5.6	7.2								
BATT01-00390	33ug/L	33	A	35		925	21.7	6.3	7.2								
BATT01-00390	33ug/L	33	B	35		934	21.7	5.7	7.2								
BATT01-00390	33ug/L	33	C	35		849	21.6	6.0	7.2								
BATT01-00390	33ug/L	33	D	35	26.4	788	21.7	6.1	7.3								
BATT01-00390	100ug/L	100	A	35		910	21.7	5.4	7.3	170	32						
BATT01-00390	100ug/L	100	B	35		916	21.7	5.7	7.3								
BATT01-00390	100ug/L	100	C	35		856	21.7	5.8	7.3								
BATT01-00390	100ug/L	100	D	35	69.5	740	21.7	5.7	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	37			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	37			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	37			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	37			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	37			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	37			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	37			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	37			21.7										
BATT01-00390	3.6ug/L	3.6	A	37			21.6										
BATT01-00390	3.6ug/L	3.6	B	37			21.7										
BATT01-00390	3.6ug/L	3.6	C	37			21.7										
BATT01-00390	3.6ug/L	3.6	D	37			21.7										
BATT01-00390	10.9ug/L	10.9	A	37			21.7										
BATT01-00390	10.9ug/L	10.9	B	37			21.7										
BATT01-00390	10.9ug/L	10.9	C	37			21.6										
BATT01-00390	10.9ug/L	10.9	D	37			21.7										
BATT01-00390	33ug/L	33	A	37			21.7										
BATT01-00390	33ug/L	33	B	37			21.7										
BATT01-00390	33ug/L	33	C	37			21.6										
BATT01-00390	33ug/L	33	D	37			21.7										
BATT01-00390	100ug/L	100	A	37			21.7										
BATT01-00390	100ug/L	100	B	37			21.6										
BATT01-00390	100ug/L	100	C	37			21.7										
BATT01-00390	100ug/L	100	D	37			21.7										

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	58		678	21.3	6.5	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	58		692	21.6	6.1	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	58		731	21.5	5.3	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	58		758	21.3	6.7	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	58		905	21.6	5.4	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	58		921	21.7	5.8	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	58		1003	21.6	5.1	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	58		1005	21.3	6.1	7.4								
BATT01-00390	3.6µg/L	3.6	A	58		957	21.4	6.3	7.4								
BATT01-00390	3.6µg/L	3.6	B	58		846	21.5	6.0	7.4								
BATT01-00390	3.6µg/L	3.6	C	58		702	21.3	5.4	7.4								
BATT01-00390	3.6µg/L	3.6	D	58		718	21.5	5.8	7.4								
BATT01-00390	10.5µg/L	10.9	A	58		645	21.3	4.7	7.4								
BATT01-00390	10.5µg/L	10.9	B	58		721	21.4	5.6	7.4								
BATT01-00390	10.5µg/L	10.9	C	58		756	21.6	4.1	7.4								
BATT01-00390	10.5µg/L	10.9	D	58		894	21.6	5.9	7.4								
BATT01-00390	33µg/L	33	A	58		927	21.7	6.3	7.4								
BATT01-00390	33µg/L	33	B	58		1015	21.6	6.1	7.4								
BATT01-00390	33µg/L	33	C	58		1075	21.5	5.2	7.4								
BATT01-00390	33µg/L	33	D	58		1003	21.3	5.6	7.4								
BATT01-00390	100µg/L	100	A	58		974	21.6	5.4	7.3								
BATT01-00390	100µg/L	100	B	58		822	21.3	5.1	7.3								
BATT01-00390	100µg/L	100	C	58		748	21.3	6.0	7.4								
BATT01-00390	100µg/L	100	D	58		713	21.3	5.7	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	59			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	59			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	59			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	59			21.5										
BATT01-00390	3.6µg/L	3.6	A	59			21.6										
BATT01-00390	3.6µg/L	3.6	B	59			21.5										
BATT01-00390	3.6µg/L	3.6	C	59			21.7										
BATT01-00390	3.6µg/L	3.6	D	59			21.6										
BATT01-00390	10.5µg/L	10.9	A	59			21.6										
BATT01-00390	10.5µg/L	10.9	B	59			21.7										
BATT01-00390	10.5µg/L	10.9	C	59			21.6										
BATT01-00390	10.5µg/L	10.9	D	59			21.5										
BATT01-00390	33µg/L	33	A	59			21.5										
BATT01-00390	33µg/L	33	B	59			21.6										
BATT01-00390	33µg/L	33	C	59			21.6										
BATT01-00390	33µg/L	33	D	59			21.5										
BATT01-00390	100µg/L	100	A	59			21.5										
BATT01-00390	100µg/L	100	B	59			21.7										
BATT01-00390	100µg/L	100	C	59			21.7										
BATT01-00390	100µg/L	100	D	59			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	60		718	21.4	6.9	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	60		794	21.4	7.2	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	60		825	21.6	7.0	7.2								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	60		887	21.3	7.0	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	60		1004	21.5	7.2	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	60		956	21.5	6.8	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	60		1034	21.6	6.5	7.2								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	60		1168	21.7	7.1	7.4								
BATT01-00390	3.6µg/L	3.6	A	60		1254	21.4	6.5	7.3								
BATT01-00390	3.6µg/L	3.6	B	60		1179	21.3	6.3	7.3								
BATT01-00390	3.6µg/L	3.6	C	60		1045	21.3	6.5	7.3								
BATT01-00390	3.6µg/L	3.6	D	60		921	21.3	6.5	7.3								
BATT01-00390	10.5µg/L	10.9	A	60		816	21.5	6.3	7.2								
BATT01-00390	10.5µg/L	10.9	B	60		885	21.6	6.9	7.2								
BATT01-00390	10.5µg/L	10.9	C	60		716	21.5	6.7	7.3								

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Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	10.5µg/L	10.5	D	60		1036	21.5	7.0	7.3								
BATT01-00390	33µg/L	33	A	60		1050	21.4	6.6	7.3								
BATT01-00390	33µg/L	33	B	60		1178	21.3	6.9	7.3								
BATT01-00390	33µg/L	33	C	60		1228	21.4	6.9	7.3								
BATT01-00390	33µg/L	33	D	60		945	21.6	7.3	7.4								
BATT01-00390	100µg/L	100	A	60		816	21.5	6.3	7.3								
BATT01-00390	100µg/L	100	B	60		897	21.6	6.8	7.3								
BATT01-00390	100µg/L	100	C	60		745	21.6	6.9	7.3								
BATT01-00390	100µg/L	100	D	60		691	21.3	7.1	7.3								
BATT01-00390	Facility Water Chemistry			60				7.6	7.0	1.6	40	765	<0.05	<0.06			
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	61			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	61			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	61			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	61			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	61			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	61			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	61			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	61			21.6										
BATT01-00390	3.6µg/L	3.6	A	61			21.4										
BATT01-00390	3.6µg/L	3.6	B	61			21.3										
BATT01-00390	3.6µg/L	3.6	C	61			21.3										
BATT01-00390	3.6µg/L	3.6	D	61			21.5										
BATT01-00390	10.5µg/L	10.5	A	61			21.3										
BATT01-00390	10.5µg/L	10.5	B	61			21.7										
BATT01-00390	10.5µg/L	10.5	C	61			21.4										
BATT01-00390	10.5µg/L	10.5	D	61			21.4										
BATT01-00390	33µg/L	33	A	61			21.5										
BATT01-00390	33µg/L	33	B	61			21.4										
BATT01-00390	33µg/L	33	C	61			21.5										
BATT01-00390	33µg/L	33	D	61			21.6										
BATT01-00390	100µg/L	100	A	61			21.7										
BATT01-00390	100µg/L	100	B	61			21.3										
BATT01-00390	100µg/L	100	C	61			21.3										
BATT01-00390	100µg/L	100	D	61			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	62			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	62			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	62			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	62			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	62			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	62			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	62			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	62			21.7										
BATT01-00390	3.6µg/L	3.6	A	62			21.3										
BATT01-00390	3.6µg/L	3.6	B	62			21.5										
BATT01-00390	3.6µg/L	3.6	C	62			21.66										
BATT01-00390	3.6µg/L	3.6	D	62			21.3										
BATT01-00390	10.5µg/L	10.5	A	62			21.5										
BATT01-00390	10.5µg/L	10.5	B	62			21.6										
BATT01-00390	10.5µg/L	10.5	C	62			21.3										
BATT01-00390	10.5µg/L	10.5	D	62			21.5										
BATT01-00390	33µg/L	33	A	62			21.7										
BATT01-00390	33µg/L	33	B	62			21.6										
BATT01-00390	33µg/L	33	C	62			21.3										
BATT01-00390	33µg/L	33	D	62			21.5										
BATT01-00390	100µg/L	100	A	62			21.5										
BATT01-00390	100µg/L	100	B	62			21.6										
BATT01-00390	100µg/L	100	C	62			21.7										
BATT01-00390	100µg/L	100	D	62			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	63	0.104	714	21.3	6.3	7.5								**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.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	63		765	21.3	6.7	7.4	132	24						
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	63		758	21.4	5.8	7.4								

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DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0us/L	0.0	D	63		913	21.5	7.1	7.4								
BATT01-00390	(Ctrl) 0.0us/L	0.0	E	63		986	21.5	6.4	7.4								
BATT01-00390	(Ctrl) 0.0us/L	0.0	F	63		1031	21.6	5.9	7.4								
BATT01-00390	(Ctrl) 0.0us/L	0.0	G	63		1035	21.7	6.0	7.2								
BATT01-00390	(Ctrl) 0.0us/L	0.0	H	63		1005	21.7	7.6	7.2								
BATT01-00390	3.6ug/L	3.6	A	63	3.23	978	21.5	7.0	7.2								
BATT01-00390	3.6ug/L	3.6	B	63		825	21.6	6.3	7.2								
BATT01-00390	3.6ug/L	3.6	C	63		798	21.5	6.5	7.2								
BATT01-00390	3.6ug/L	3.6	D	63		693	21.3	6.7	7.2								
BATT01-00390	10.5ug/L	10.9	A	63	7.93	671	21.4	6.6	7.2								
BATT01-00390	10.5ug/L	10.9	B	63		755	21.4	7.1	7.2								
BATT01-00390	10.5ug/L	10.9	C	63		816	21.5	7.2	7.2								
BATT01-00390	10.5ug/L	10.9	D	63		893	21.6	6.7	7.2								
BATT01-00390	33ug/L	33	A	63	22.9	981	21.7	6.9	7.2								
BATT01-00390	33ug/L	33	B	63		1044	21.7	7.3	7.2								
BATT01-00390	33ug/L	33	C	63		1155	21.6	6.5	7.2								
BATT01-00390	33ug/L	33	D	63		1054	21.6	6.4	7.2								
BATT01-00390	100ug/L	100	A	63	73.6	955	21.6	7.0	7.3	120	32						
BATT01-00390	100ug/L	100	B	63		813	21.3	6.3	7.3	120	32						
BATT01-00390	100ug/L	100	C	63		776	21.3	6.2	7.2								
BATT01-00390	100ug/L	100	D	63		705	21.3	6.5	7.2								
BATT01-00390	(Ctrl) 0.0us/L	0.0	A	64			21.6										
BATT01-00390	(Ctrl) 0.0us/L	0.0	B	64			21.6										
BATT01-00390	(Ctrl) 0.0us/L	0.0	C	64			21.5										
BATT01-00390	(Ctrl) 0.0us/L	0.0	D	64			21.7										
BATT01-00390	(Ctrl) 0.0us/L	0.0	E	64			21.7										
BATT01-00390	(Ctrl) 0.0us/L	0.0	F	64			21.7										
BATT01-00390	(Ctrl) 0.0us/L	0.0	G	64			21.6										
BATT01-00390	3.6ug/L	3.6	A	64			21.4										
BATT01-00390	3.6ug/L	3.6	B	64			21.6										
BATT01-00390	3.6ug/L	3.6	C	64			21.6										
BATT01-00390	3.6ug/L	3.6	D	64			21.6										
BATT01-00390	10.5ug/L	10.9	A	64			21.6										
BATT01-00390	10.5ug/L	10.9	B	64			21.7										
BATT01-00390	10.5ug/L	10.9	C	64			21.5										
BATT01-00390	10.5ug/L	10.9	D	64			21.7										
BATT01-00390	33ug/L	33	A	64			21.7										
BATT01-00390	33ug/L	33	B	64			21.7										
BATT01-00390	33ug/L	33	C	64			21.6										
BATT01-00390	33ug/L	33	D	64			21.6										
BATT01-00390	100ug/L	100	A	64			21.5										
BATT01-00390	100ug/L	100	B	64			21.5										
BATT01-00390	100ug/L	100	C	64			21.7										
BATT01-00390	100ug/L	100	D	64			21.5										
BATT01-00390	(Ctrl) 0.0us/L	0.0	A	65		679	21.6	6.9	7.4								
BATT01-00390	(Ctrl) 0.0us/L	0.0	B	65		611	21.6	7.0	7.4								
BATT01-00390	(Ctrl) 0.0us/L	0.0	C	65		865	21.6	5.7	7.4								
BATT01-00390	(Ctrl) 0.0us/L	0.0	D	65		682	21.7	6.8	7.4								
BATT01-00390	(Ctrl) 0.0us/L	0.0	E	65		828	21.7	7.0	7.4								
BATT01-00390	(Ctrl) 0.0us/L	0.0	F	65		991	21.7	6.2	7.4								
BATT01-00390	(Ctrl) 0.0us/L	0.0	G	65		1142	21.7	5.7	6.9								
BATT01-00390	(Ctrl) 0.0us/L	0.0	H	65		1047	21.6	6.8	7.2								
BATT01-00390	3.6ug/L	3.6	A	65		961	21.7	3.9	7.2								
BATT01-00390	3.6ug/L	3.6	B	65		640	21.7	6.5	7.2								
BATT01-00390	3.6ug/L	3.6	C	65		724	21.6	6.3	7.2								
BATT01-00390	3.6ug/L	3.6	D	65		755	21.7	6.3	7.2								
BATT01-00390	10.5ug/L	10.9	A	65		775	21.7	6.5	7.3								
BATT01-00390	10.5ug/L	10.9	B	65		792	21.6	5.9	7.3								
BATT01-00390	10.5ug/L	10.9	C	65		711	21.6	6.5	7.3								
BATT01-00390	10.5ug/L	10.9	D	65		776	21.5	6.8	7.4								
BATT01-00390	33ug/L	33	A	65		756	21.5	6.7	7.4								
BATT01-00390	33ug/L	33	B	65		1018	21.5	6.6	7.4								

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DEST

BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	33ug/L	33	C	65		810	21.4	6.6	7.4								
BATT01-00390	33ug/L	33	D	65		733	21.3	6.9	7.4								
BATT01-00390	100ug/L	100	A	65		846	21.4	5.3	7.4								
BATT01-00390	100ug/L	100	B	65		967	21.3	6.4	7.3								
BATT01-00390	100ug/L	100	C	65		922	21.4	6.6	7.3								
BATT01-00390	100ug/L	100	D	65		723	21.3	6.6	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	66			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	66			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	66			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	66			21.4										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	66			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	66			21.3										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	66			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	66			21.4										
BATT01-00390	3.6ug/L	3.6	A	66			21.7										
BATT01-00390	3.6ug/L	3.6	B	66			21.7										
BATT01-00390	3.6ug/L	3.6	C	66			21.7										
BATT01-00390	3.6ug/L	3.6	D	66			21.7										
BATT01-00390	10.5ug/L	10.5	A	66			21.7										
BATT01-00390	10.5ug/L	10.5	B	66			21.7										
BATT01-00390	10.5ug/L	10.5	C	66			21.7										
BATT01-00390	10.5ug/L	10.5	D	66			21.6										
BATT01-00390	33ug/L	33	A	66			21.6										
BATT01-00390	33ug/L	33	B	66			21.7										
BATT01-00390	33ug/L	33	C	66			21.7										
BATT01-00390	33ug/L	33	D	66			21.6										
BATT01-00390	100ug/L	100	A	66			21.4										
BATT01-00390	100ug/L	100	B	66			21.5										
BATT01-00390	100ug/L	100	C	66			21.6										
BATT01-00390	100ug/L	100	D	66			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	67		723	21.6	7.4	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	67		711	21.6	7.2	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	67		753	21.5	6.1	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	67		758	21.7	6.4	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	67		845	21.4	7.2	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	67		1200	21.6	6.3	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	67		987	21.6	5.9	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	67		1145	21.5	7.3	7.5								
BATT01-00390	3.6ug/L	3.6	A	67		1041	21.3	6.1	6.5								
BATT01-00390	3.6ug/L	3.6	B	67		972	21.6	6.3	6.5								
BATT01-00390	3.6ug/L	3.6	C	67		967	21.5	6.5	7.5								
BATT01-00390	3.6ug/L	3.6	D	67		945	21.6	6.7	7.5								
BATT01-00390	10.5ug/L	10.5	A	67		823	21.3	6.5	7.4								
BATT01-00390	10.5ug/L	10.5	B	67		747	21.7	6.1	7.4								
BATT01-00390	10.5ug/L	10.5	C	67		686	21.6	6.4	7.5								
BATT01-00390	10.5ug/L	10.5	D	67		693	21.5	6.7	7.5								
BATT01-00390	33ug/L	33	A	67		809	21.3	6.8	7.4								
BATT01-00390	33ug/L	33	B	67		954	21.4	6.7	7.4								
BATT01-00390	33ug/L	33	C	67		871	21.6	6.6	7.4								
BATT01-00390	33ug/L	33	D	67		673	21.6	6.6	7.5								
BATT01-00390	100ug/L	100	A	67		821	21.7	5.9	7.5								
BATT01-00390	100ug/L	100	B	67		835	21.7	6.3	7.5								
BATT01-00390	100ug/L	100	C	67		899	21.3	6.4	7.5								
BATT01-00390	100ug/L	100	D	67		943	21.4	6.4	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	68			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	68			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	68			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	68			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	68			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	68			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	68			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	68			21.6										
BATT01-00390	3.6ug/L	3.6	A	68			21.7										

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	3.6µg/L	3.6	B	68			21.7										
BATT01-00390	3.6µg/L	3.6	C	68			21.7										
BATT01-00390	3.6µg/L	3.6	D	68			21.6										
BATT01-00390	10.9µg/L	10.9	A	68			21.6										
BATT01-00390	10.9µg/L	10.9	B	68			21.7										
BATT01-00390	10.9µg/L	10.9	C	68			21.7										
BATT01-00390	10.9µg/L	10.9	D	68			21.7										
BATT01-00390	33µg/L	33	A	68			21.6										
BATT01-00390	33µg/L	33	B	68			21.7										
BATT01-00390	33µg/L	33	C	68			21.7										
BATT01-00390	33µg/L	33	D	68			21.6										
BATT01-00390	100µg/L	100	A	68			21.7										
BATT01-00390	100µg/L	100	B	68			21.7										
BATT01-00390	100µg/L	100	C	68			21.7										
BATT01-00390	100µg/L	100	D	68			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	69			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	69			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	69			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	69			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	69			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	69			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	69			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	69			21.8										
BATT01-00390	3.6µg/L	3.6	A	69			21.7										
BATT01-00390	3.6µg/L	3.6	B	69			21.8										
BATT01-00390	3.6µg/L	3.6	C	69			21.7										
BATT01-00390	3.6µg/L	3.6	D	69			21.6										
BATT01-00390	10.9µg/L	10.9	A	69			21.6										
BATT01-00390	10.9µg/L	10.9	B	69			21.7										
BATT01-00390	10.9µg/L	10.9	C	69			21.7										
BATT01-00390	10.9µg/L	10.9	D	69			21.8										
BATT01-00390	33µg/L	33	A	69			21.7										
BATT01-00390	33µg/L	33	B	69			21.8										
BATT01-00390	33µg/L	33	C	69			21.8										
BATT01-00390	33µg/L	33	D	69			21.8										
BATT01-00390	100µg/L	100	A	69			21.7										
BATT01-00390	100µg/L	100	B	69			21.6										
BATT01-00390	100µg/L	100	C	69			21.7										
BATT01-00390	100µg/L	100	D	69			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	70		812	21.6	6.9	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	70		725	21.6	7.0	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	70		780	21.7	6.9	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	70		830	21.7	6.8	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	70		815	21.7	6.8	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	70		823	21.6	6.7	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	70		916	21.7	6.8	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	70		921	21.7	6.5	7.5								
BATT01-00390	3.6µg/L	3.6	A	70		900	21.7	7.0	7.5								
BATT01-00390	3.6µg/L	3.6	B	70		874	21.6	6.8	7.5								
BATT01-00390	3.6µg/L	3.6	C	70		1298	21.7	6.8	7.5								
BATT01-00390	3.6µg/L	3.6	D	70		1005	21.7	6.9	7.5								
BATT01-00390	10.9µg/L	10.9	A	70		823	21.7	6.7	7.4								
BATT01-00390	10.9µg/L	10.9	B	70		857	21.7	6.8	7.4								
BATT01-00390	10.9µg/L	10.9	C	70		951	21.6	6.8	7.4								
BATT01-00390	10.9µg/L	10.9	D	70		1018	21.7	6.8	7.5								
BATT01-00390	33µg/L	33	A	70		912	21.7	6.6	7.5								
BATT01-00390	33µg/L	33	B	70		975	21.6	6.6	7.5								
BATT01-00390	33µg/L	33	C	70		906	21.6	6.7	7.5								
BATT01-00390	33µg/L	33	D	70		900	21.7	6.8	7.4								
BATT01-00390	100µg/L	100	A	70		855	21.7	6.9	7.5								
BATT01-00390	100µg/L	100	B	70		1012	21.7	6.8	7.5								
BATT01-00390	100µg/L	100	C	70		1007	21.6	6.6	7.5								
BATT01-00390	100µg/L	100	D	70		873	21.7	7.0	7.5								

DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	71			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	71			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	71			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	71			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	71			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	71			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	71			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	71			21.7										
BATT01-00390	3.6µg/L	3.6	A	71			21.6										
BATT01-00390	3.6µg/L	3.6	B	71			21.5										
BATT01-00390	3.6µg/L	3.6	C	71			21.6										
BATT01-00390	3.6µg/L	3.6	D	71			21.3										
BATT01-00390	10.9µg/L	10.9	A	71			21.5										
BATT01-00390	10.9µg/L	10.9	B	71			21.6										
BATT01-00390	10.9µg/L	10.9	C	71			21.4										
BATT01-00390	10.9µg/L	10.9	D	71			21.6										
BATT01-00390	33µg/L	33	A	71			21.5										
BATT01-00390	33µg/L	33	B	71			21.6										
BATT01-00390	33µg/L	33	C	71			21.3										
BATT01-00390	33µg/L	33	D	71			21.7										
BATT01-00390	100µg/L	100	A	71			21.7										
BATT01-00390	100µg/L	100	B	71			21.6										
BATT01-00390	100µg/L	100	C	71			21.5										
BATT01-00390	100µg/L	100	D	71			21.5										
BATT01-00390	[Ctrl] 0.0µg/L	0.0	A	72	0.104		21.6			128	32						**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.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	72			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	72			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	72			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	72			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	72			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	72			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	72			21.6										
BATT01-00390	3.6µg/L	3.6	A	72			21.6										
BATT01-00390	3.6µg/L	3.6	B	72	7.51		21.5										**Measured Treatment Concentration** - Based on mean of original 9.33µg/L) and duplicate (3.69µg/L) sample
BATT01-00390	3.6µg/L	3.6	C	72			21.6										
BATT01-00390	3.6µg/L	3.6	D	72			21.7										
BATT01-00390	10.9µg/L	10.9	A	72	18.0		21.6										
BATT01-00390	10.9µg/L	10.9	B	72			21.7										
BATT01-00390	10.9µg/L	10.9	C	72			21.6										
BATT01-00390	10.9µg/L	10.9	D	72			21.5										
BATT01-00390	33µg/L	33	A	72			21.6										
BATT01-00390	33µg/L	33	B	72	33.3		21.6										
BATT01-00390	33µg/L	33	C	72			21.5										
BATT01-00390	33µg/L	33	D	72			21.7										
BATT01-00390	100µg/L	100	A	72			21.7										
BATT01-00390	100µg/L	100	B	72	64.4		21.6			124	24						**Measured Treatment Concentration** - Based on mean of original 52.6µg/L) and duplicate (76.1µg/L) sample
BATT01-00390	100µg/L	100	C	72			21.6										
BATT01-00390	100µg/L	100	D	72			21.7										
BATT01-00390	[Ctrl] 0.0µg/L	0.0	A	73		751	21.7	7.0	7.4								
BATT01-00390	[Ctrl] 0.0µg/L	0.0	B	73		740	21.6	6.6	7.5								
BATT01-00390	[Ctrl] 0.0µg/L	0.0	C	73		812	21.7	6.8	7.5								
BATT01-00390	[Ctrl] 0.0µg/L	0.0	D	73		900	21.7	6.4	7.5								
BATT01-00390	[Ctrl] 0.0µg/L	0.0	E	73		916	21.7	7.0	7.5								
BATT01-00390	[Ctrl] 0.0µg/L	0.0	F	73		788	21.6	7.1	7.5								
BATT01-00390	[Ctrl] 0.0µg/L	0.0	G	73		793	21.7	6.9	7.5								
BATT01-00390	[Ctrl] 0.0µg/L	0.0	H	73		712	21.7	6.6	7.5								
BATT01-00390	3.6µg/L	3.6	A	73		861	21.6	6.3	7.5								
BATT01-00390	3.6µg/L	3.6	B	73		852	21.7	6.4	7.5								
BATT01-00390	3.6µg/L	3.6	C	73		891	21.7	6.6	7.6								

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	3.6µg/L	3.6	D	73		752	21.6	6.5	7.6								
BATT01-00390	10.9µg/L	10.9	A	73		699	21.6	6.7	7.5								
BATT01-00390	10.9µg/L	10.9	B	73		726	21.6	6.5	7.5								
BATT01-00390	10.9µg/L	10.9	C	73		843	21.7	6.8	7.6								
BATT01-00390	10.9µg/L	10.9	D	73		982	21.7	6.7	7.5								
BATT01-00390	33µg/L	33	A	73		798	21.6	6.2	7.6								
BATT01-00390	33µg/L	33	B	73		816	21.7	6.0	7.5								
BATT01-00390	33µg/L	33	C	73		859	21.7	6.7	7.5								
BATT01-00390	33µg/L	33	D	73		924	21.7	6.6	7.6								
BATT01-00390	100µg/L	100	A	73		852	21.6	6.6	7.5								
BATT01-00390	100µg/L	100	B	73		961	21.6	6.8	7.6								
BATT01-00390	100µg/L	100	C	73		908	21.7	6.9	7.6								
BATT01-00390	100µg/L	100	D	73		924	21.7	6.7	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	74		823	21.7	7.0	7.5						54%		
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	74		792	21.7	7.0	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	74		812	21.6	7.1	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	74		941	21.6	7.2	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	74		859	21.7	6.9	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	74		873	21.7	6.6	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	74		912	21.7	6.8	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	74		926	21.7	6.6	7.6								
BATT01-00390	3.6µg/L	3.6	A	74		944	21.6	7.0	7.5								
BATT01-00390	3.6µg/L	3.6	B	74		963	21.7	6.9	7.5								
BATT01-00390	3.6µg/L	3.6	C	74		992	21.7	6.7	7.5								
BATT01-00390	3.6µg/L	3.6	D	74		873	21.6	6.7	7.6								
BATT01-00390	10.9µg/L	10.9	A	74		759	21.7	6.8	7.6								
BATT01-00390	10.9µg/L	10.9	B	74		987	21.7	6.6	7.6								
BATT01-00390	10.9µg/L	10.9	C	74		866	21.7	6.7	7.6								
BATT01-00390	10.9µg/L	10.9	D	74		710	21.6	6.7	7.6								
BATT01-00390	33µg/L	33	A	74		943	21.7	6.8	7.6								
BATT01-00390	33µg/L	33	B	74		981	21.7	6.8	7.6								
BATT01-00390	33µg/L	33	C	74		876	21.6	6.7	7.6								
BATT01-00390	33µg/L	33	D	74		812	21.6	6.5	7.7								
BATT01-00390	100µg/L	100	A	74		755	21.7	6.2	7.7								
BATT01-00390	100µg/L	100	B	74		853	21.7	6.3	7.7								
BATT01-00390	100µg/L	100	C	74		912	21.6	6.5	7.7								
BATT01-00390	100µg/L	100	D	74		944	21.7	6.6	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	75			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	75			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	75			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	75			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	75			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	75			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	75			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	75			21.6										
BATT01-00390	3.6µg/L	3.6	A	75			21.7										
BATT01-00390	3.6µg/L	3.6	B	75			21.7										
BATT01-00390	3.6µg/L	3.6	C	75			21.7										
BATT01-00390	3.6µg/L	3.6	D	75			21.6										
BATT01-00390	10.9µg/L	10.9	A	75			21.7										
BATT01-00390	10.9µg/L	10.9	B	75			21.7										
BATT01-00390	10.9µg/L	10.9	C	75			21.7										
BATT01-00390	10.9µg/L	10.9	D	75			21.7										
BATT01-00390	33µg/L	33	A	75			21.7										
BATT01-00390	33µg/L	33	B	75			21.7										
BATT01-00390	33µg/L	33	C	75			21.7										
BATT01-00390	33µg/L	33	D	75			21.6										
BATT01-00390	100µg/L	100	A	75			21.7										
BATT01-00390	100µg/L	100	B	75			21.7										
BATT01-00390	100µg/L	100	C	75			21.6										
BATT01-00390	100µg/L	100	D	75			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	76			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	76			21.6										

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	7			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	7			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	7			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	7			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	7			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	7			21.7										
BATT01-00390	3.6µg/L	3.6	A	7			21.7										
BATT01-00390	3.6µg/L	3.6	B	7			21.7										
BATT01-00390	3.6µg/L	3.6	C	7			21.6										
BATT01-00390	3.6µg/L	3.6	D	7			21.6										
BATT01-00390	10.9µg/L	10.9	A	7			21.7										
BATT01-00390	10.9µg/L	10.9	B	7			21.7										
BATT01-00390	10.9µg/L	10.9	C	7			21.6										
BATT01-00390	10.9µg/L	10.9	D	7			21.6										
BATT01-00390	33µg/L	33	A	7			21.7										
BATT01-00390	33µg/L	33	B	7			21.7										
BATT01-00390	33µg/L	33	C	7			21.7										
BATT01-00390	33µg/L	33	D	7			21.6										
BATT01-00390	100µg/L	100	A	7			21.7										
BATT01-00390	100µg/L	100	B	7			21.6										
BATT01-00390	100µg/L	100	C	7			21.7										
BATT01-00390	100µg/L	100	D	7			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	77		821	21.3	6.7	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	77		916	21.7	6.3	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	77	0.218	924	21.6	6.2	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	77		731	21.7	5.9	7.1	108	32						
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	77		1045	21.6	6.7	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	77		1162	21.5	6.5	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	77		1254	21.6	6.3	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	77		1361	21.5	6.4	7.1								
BATT01-00390	3.6µg/L	3.6	A	77		1128	21.7	6.1	7.1								
BATT01-00390	3.6µg/L	3.6	B	77		1035	21.7	6.8	7.1								
BATT01-00390	3.6µg/L	3.6	C	77	5.34	928	21.6	5.8	7.1								
BATT01-00390	3.6µg/L	3.6	D	77		840	21.5	5.2	7.1								
BATT01-00390	10.9µg/L	10.9	A	77		727	21.4	6.8	7.1								
BATT01-00390	10.9µg/L	10.9	B	77		865	21.6	6.7	7.1								
BATT01-00390	10.9µg/L	10.9	C	77	10.1	856	21.5	7.2	7.1								
BATT01-00390	10.9µg/L	10.9	D	77		903	21.6	6.1	7.1								
BATT01-00390	33µg/L	33	A	77		1093	21.7	5.7	7.1								
BATT01-00390	33µg/L	33	B	77		1137	21.4	6.3	7.2								
BATT01-00390	33µg/L	33	C	77	30.4	1284	21.4	6.1	7.2								
BATT01-00390	33µg/L	33	D	77		1276	21.4	5.8	7.2								
BATT01-00390	100µg/L	100	A	77		1040	21.3	6.7	7.3								
BATT01-00390	100µg/L	100	B	77		981	21.5	6.8	7.3								
BATT01-00390	100µg/L	100	C	77	86.7	893	21.6	6.3	7.3	92	28						
BATT01-00390	100µg/L	100	D	77		765	21.7	6.2	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	78			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	78			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	78			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	78			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	78			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	78			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	78			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	78			21.7										
BATT01-00390	3.6µg/L	3.6	A	78			21.5										
BATT01-00390	3.6µg/L	3.6	B	78			21.7										
BATT01-00390	3.6µg/L	3.6	C	78			21.7										
BATT01-00390	3.6µg/L	3.6	D	78			21.8										
BATT01-00390	10.9µg/L	10.9	A	78			21.6										
BATT01-00390	10.9µg/L	10.9	B	78			21.8										
BATT01-00390	10.9µg/L	10.9	C	78			21.8										
BATT01-00390	10.9µg/L	10.9	D	78			21.8										
BATT01-00390	33µg/L	33	A	78			21.6										

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DEST

BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	33ug/L	33	B	78			21.7										
BATT01-00390	33ug/L	33	C	78			21.6										
BATT01-00390	33ug/L	33	D	78			21.8										
BATT01-00390	100ug/L	100	A	78			21.7										
BATT01-00390	100ug/L	100	B	78			21.8										
BATT01-00390	100ug/L	100	C	78			21.7										
BATT01-00390	100ug/L	100	D	78			21.8										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	79		731	21.6	6.4	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	79		762	21.6	6.6	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	79		891	21.7	4.9	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	79		945	21.7	6.2	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	79		1003	21.6	6.1	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	79		1162	21.7	6.5	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	79		1174	21.6	6.1	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	79		1045	21.6	6.6	7.4								
BATT01-00390	3.6ug/L	3.6	A	79		998	21.7	5.8	7.4								
BATT01-00390	3.6ug/L	3.6	B	79		864	21.6	5.7	7.4								
BATT01-00390	3.6ug/L	3.6	C	79		731	21.7	6.3	7.4								
BATT01-00390	3.6ug/L	3.6	D	79		694	21.6	5.2	7.4								
BATT01-00390	10.5ug/L	10.5	A	79		662	21.6	6.1	7.3								
BATT01-00390	10.5ug/L	10.5	B	79		778	21.7	6.2	7.4								
BATT01-00390	10.5ug/L	10.5	C	79		831	21.7	6.4	7.4								
BATT01-00390	10.5ug/L	10.5	D	79		957	21.7	6.1	7.4								
BATT01-00390	33ug/L	33	A	79		1039	21.6	6.4	7.4								
BATT01-00390	33ug/L	33	B	79		1162	21.7	5.9	7.3								
BATT01-00390	33ug/L	33	C	79		1557	21.6	5.8	7.3								
BATT01-00390	33ug/L	33	D	79		1275	21.6	6.7	7.4								
BATT01-00390	100ug/L	100	A	79		1008	21.7	6.6	7.4								
BATT01-00390	100ug/L	100	B	79		951	21.6	6.5	7.5								
BATT01-00390	100ug/L	100	C	79		732	21.6	6.6	7.5								
BATT01-00390	100ug/L	100	D	79		816	21.6	6.4	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	80			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	80			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	80			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	80			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	80			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	80			21.8										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	80			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	80			21.8										
BATT01-00390	3.6ug/L	3.6	A	80			21.6										
BATT01-00390	3.6ug/L	3.6	B	80			21.6										
BATT01-00390	3.6ug/L	3.6	C	80			21.6										
BATT01-00390	3.6ug/L	3.6	D	80			21.6										
BATT01-00390	10.5ug/L	10.5	A	80			21.6										
BATT01-00390	10.5ug/L	10.5	B	80			21.7										
BATT01-00390	10.5ug/L	10.5	C	80			21.6										
BATT01-00390	10.5ug/L	10.5	D	80			21.6										
BATT01-00390	33ug/L	33	A	80			21.6										
BATT01-00390	33ug/L	33	B	80			21.7										
BATT01-00390	33ug/L	33	C	80			21.8										
BATT01-00390	33ug/L	33	D	80			21.6										
BATT01-00390	100ug/L	100	A	80			21.6										
BATT01-00390	100ug/L	100	B	80			21.7										
BATT01-00390	100ug/L	100	C	80			21.6										
BATT01-00390	100ug/L	100	D	80			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	81		626	21.6	5.1	7.0								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	81		758	21.7	5.5	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	81		810	21.7	4.6	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	81		743	21.6	5.2	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	81		674	21.7	5.6	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	81		702	21.7	5.1	7.3								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	81		812	21.7	4.2	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	81		801	21.6	5.5	7.3								

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DEST

BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	3.6µg/L	3.6	A	81		686	21.6	5.2	7.4								
BATT01-00390	3.6µg/L	3.6	B	81		750	21.6	5.3	7.4								
BATT01-00390	3.6µg/L	3.6	C	81		767	21.6	5.2	7.4								
BATT01-00390	3.6µg/L	3.6	D	81		716	21.7	5.1	7.4								
BATT01-00390	10.9µg/L	10.9	A	81		860	21.6	5.3	7.4								
BATT01-00390	10.9µg/L	10.9	B	81		994	21.7	5.2	7.5								
BATT01-00390	10.9µg/L	10.9	C	81		938	21.7	5.3	7.5								
BATT01-00390	10.9µg/L	10.9	D	81		887	21.7	5.2	7.5								
BATT01-00390	33µg/L	33	A	81		927	21.6	5.5	7.5								
BATT01-00390	33µg/L	33	B	81		980	21.7	5.2	7.5								
BATT01-00390	33µg/L	33	C	81		871	21.6	5.3	7.5								
BATT01-00390	33µg/L	33	D	81		755	21.7	5.5	7.5								
BATT01-00390	100µg/L	100	A	81		782	21.6	5.4	7.5								
BATT01-00390	100µg/L	100	B	81		816	21.6	5.5	7.6								
BATT01-00390	100µg/L	100	C	81		850	21.7	5.5	7.6								
BATT01-00390	100µg/L	100	D	81		683	21.7	5.5	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	82			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	82			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	82			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	82			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	82			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	82			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	82			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	82			21.6										
BATT01-00390	3.6µg/L	3.6	A	82			21.7										
BATT01-00390	3.6µg/L	3.6	B	82			21.7										
BATT01-00390	3.6µg/L	3.6	C	82			21.7										
BATT01-00390	3.6µg/L	3.6	D	82			21.7										
BATT01-00390	10.9µg/L	10.9	A	82			21.6										
BATT01-00390	10.9µg/L	10.9	B	82			21.7										
BATT01-00390	10.9µg/L	10.9	C	82			21.7										
BATT01-00390	10.9µg/L	10.9	D	82			21.7										
BATT01-00390	33µg/L	33	A	82			21.7										
BATT01-00390	33µg/L	33	B	82			21.7										
BATT01-00390	33µg/L	33	C	82			21.6										
BATT01-00390	33µg/L	33	D	82			21.7										
BATT01-00390	100µg/L	100	A	82			21.6										
BATT01-00390	100µg/L	100	B	82			21.7										
BATT01-00390	100µg/L	100	C	82			21.7										
BATT01-00390	100µg/L	100	D	82			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	83			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	83			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	83			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	83			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	83			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	83			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	83			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	83			21.7										
BATT01-00390	3.6µg/L	3.6	A	83			21.6										
BATT01-00390	3.6µg/L	3.6	B	83			21.7										
BATT01-00390	3.6µg/L	3.6	C	83			21.7										
BATT01-00390	3.6µg/L	3.6	D	83			21.7										
BATT01-00390	10.9µg/L	10.9	A	83			21.6										
BATT01-00390	10.9µg/L	10.9	B	83			21.7										
BATT01-00390	10.9µg/L	10.9	C	83			21.7										
BATT01-00390	10.9µg/L	10.9	D	83			21.6										
BATT01-00390	33µg/L	33	A	83			21.7										
BATT01-00390	33µg/L	33	B	83			21.7										
BATT01-00390	33µg/L	33	C	83			21.7										
BATT01-00390	33µg/L	33	D	83			21.6										
BATT01-00390	100µg/L	100	A	83			21.7										
BATT01-00390	100µg/L	100	B	83			21.7										
BATT01-00390	100µg/L	100	C	83			21.7										

DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	100ug/L	100	D	83			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	84		687	21.6	5.9	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	84		781	21.6	5.5	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	84		750	21.6	5.4	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	84	0.104	696	21.7	5.4	7.4								**Measured Treatment Concentration** - MQL = 0.208ug/L; For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	84		682	21.7	5.5	7.5	1.6	36						
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	84		803	21.7	5.7	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	84		824	21.7	5.7	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	84		808	21.7	5.3	7.6								
BATT01-00390	3.6ug/L	3.6	A	84		729	21.7	5.1	7.6								
BATT01-00390	3.6ug/L	3.6	B	84		736	21.7	5.2	7.6								
BATT01-00390	3.6ug/L	3.6	C	84		743	21.7	5.3	7.6								
BATT01-00390	3.6ug/L	3.6	D	84	2.72	760	21.7	5.2	7.5								
BATT01-00390	10.9ug/L	10.9	A	84		864	21.7	5.4	7.6								
BATT01-00390	10.9ug/L	10.9	B	84		957	21.7	5.6	7.6								
BATT01-00390	10.9ug/L	10.9	C	84		945	21.7	5.5	7.6								
BATT01-00390	10.9ug/L	10.9	D	84	7.76	882	21.7	5.8	7.6								
BATT01-00390	33ug/L	33	A	84		904	21.6	5.9	7.6								
BATT01-00390	33ug/L	33	B	84		943	21.7	5.4	7.6								
BATT01-00390	33ug/L	33	C	84		855	21.7	5.1	7.6								
BATT01-00390	33ug/L	33	D	84	19.7	756	21.7	5.3	7.6								
BATT01-00390	100ug/L	100	A	84		750	21.5	5.4	7.7	1.2	36						
BATT01-00390	100ug/L	100	B	84		851	21.5	5.5	7.7								
BATT01-00390	100ug/L	100	C	84		834	21.5	5.3	7.6								
BATT01-00390	100ug/L	100	D	84	149	747	21.5	5.1	7.6								**Measured Treatment Concentration** - Based on mean of original (33.4ug/L) and duplicate (263ug/L) sample. Both original sample and duplicate sample valued as outliers, resulted in averaging.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	85			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	85			21.8										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	85			21.8										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	85			21.8										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	85			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	85			21.8										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	85			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	85			21.6										
BATT01-00390	3.6ug/L	3.6	A	85			21.7										
BATT01-00390	3.6ug/L	3.6	B	85			21.6										
BATT01-00390	3.6ug/L	3.6	C	85			21.8										
BATT01-00390	3.6ug/L	3.6	D	85			21.8										
BATT01-00390	10.9ug/L	10.9	A	85			21.8										
BATT01-00390	10.9ug/L	10.9	B	85			21.6										
BATT01-00390	10.9ug/L	10.9	C	85			21.8										
BATT01-00390	10.9ug/L	10.9	D	85			21.7										
BATT01-00390	33ug/L	33	A	85			21.7										
BATT01-00390	33ug/L	33	B	85			21.6										
BATT01-00390	33ug/L	33	C	85			21.8										
BATT01-00390	33ug/L	33	D	85			21.8										
BATT01-00390	100ug/L	100	A	85			21.8										
BATT01-00390	100ug/L	100	B	85			21.8										
BATT01-00390	100ug/L	100	C	85			21.8										
BATT01-00390	100ug/L	100	D	85			21.7										
BATT01-00390	Facility Water Chemistry			85				5.5	7.4	128	44	339	<0.03	<0.05			
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	86		803	21.8	5.2	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	86		954	21.6	5.6	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	86		905	21.5	5.2	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	86		937	21.7	5.2	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	86		803	21.7	5.5	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	86		886	21.8	5.0	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	86		978	21.8	5.2	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	86		1095	21.8	5.7	7.5								
BATT01-00390	3.6ug/L	3.6	A	86		857	21.6	5.3	7.5								

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	3.6µg/L	3.6	B	86		953	21.9	5.4	7.5								
BATT01-00390	3.6µg/L	3.6	C	86		899	21.7	5.3	7.5								
BATT01-00390	3.6µg/L	3.6	D	86		933	21.7	5.3	7.5								
BATT01-00390	10.9µg/L	10.9	A	86		670	21.8	5.5	7.5								
BATT01-00390	10.9µg/L	10.9	B	86		857	21.8	5.3	7.6								
BATT01-00390	10.9µg/L	10.9	C	86		703	21.8	5.3	7.6								
BATT01-00390	10.9µg/L	10.9	D	86		633	21.9	5.2	7.6								
BATT01-00390	33µg/L	33	A	86		654	21.9	5.4	7.6								
BATT01-00390	33µg/L	33	B	86		709	21.7	5.5	7.6								
BATT01-00390	33µg/L	33	C	86		716	21.7	5.4	7.6								
BATT01-00390	33µg/L	33	D	86		628	21.8	5.6	7.6								
BATT01-00390	100µg/L	100	A	86		681	21.6	5.6	7.6								
BATT01-00390	100µg/L	100	B	86		773	21.8	5.6	7.6								
BATT01-00390	100µg/L	100	C	86		626	21.8	5.3	7.6								
BATT01-00390	100µg/L	100	D	86		652	21.7	5.4	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	87			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	87			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	87			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	87			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	87			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	87			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	87			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	87			21.8										
BATT01-00390	3.6µg/L	3.6	A	87			21.6										
BATT01-00390	3.6µg/L	3.6	B	87			21.7										
BATT01-00390	3.6µg/L	3.6	C	87			21.7										
BATT01-00390	3.6µg/L	3.6	D	87			21.5										
BATT01-00390	10.9µg/L	10.9	A	87			21.6										
BATT01-00390	10.9µg/L	10.9	C	87			21.8										
BATT01-00390	10.9µg/L	10.9	D	87			21.8										
BATT01-00390	33µg/L	33	A	87			21.8										
BATT01-00390	33µg/L	33	B	87			21.7										
BATT01-00390	33µg/L	33	C	87			21.8										
BATT01-00390	33µg/L	33	D	87			21.6										
BATT01-00390	100µg/L	100	A	87			21.5										
BATT01-00390	100µg/L	100	B	87			21.5										
BATT01-00390	100µg/L	100	C	87			21.6										
BATT01-00390	100µg/L	100	D	87			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	88		735	21.7	5.2	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	88		1008	21.8	5.6	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	88		1053	21.8	4.6	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	88		932	21.8	5.4	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	88		774	21.7	5.5	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	88		760	21.7	5.1	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	88		906	21.6	4.5	7.0								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	88		936	21.8	5.5	7.1								
BATT01-00390	3.6µg/L	3.6	A	88		713	21.9	5.3	7.2								
BATT01-00390	3.6µg/L	3.6	B	88		628	21.7	5.5	7.3								
BATT01-00390	3.6µg/L	3.6	C	88		805	21.7	5.4	7.3								
BATT01-00390	3.6µg/L	3.6	D	88		894	21.6	5.4	7.3								
BATT01-00390	10.9µg/L	10.9	A	88		745	21.7	5.7	7.6								
BATT01-00390	10.9µg/L	10.9	B	88		725	21.7	5.5	7.6								
BATT01-00390	10.9µg/L	10.9	C	88		621	21.6	5.4	7.6								
BATT01-00390	10.9µg/L	10.9	D	88		652	21.8	5.2	7.6								
BATT01-00390	33µg/L	33	A	88		790	21.8	5.6	7.6								
BATT01-00390	33µg/L	33	B	88		988	21.6	5.4	7.6								
BATT01-00390	33µg/L	33	C	88		725	21.7	5.4	7.6								
BATT01-00390	33µg/L	33	D	88		603	21.6	5.5	7.6								
BATT01-00390	100µg/L	100	A	88		735	21.7	5.6	7.6								
BATT01-00390	100µg/L	100	B	88		843	21.8	5.5	7.6								
BATT01-00390	100µg/L	100	C	88		622	21.6	5.7	7.3								
BATT01-00390	100µg/L	100	D	88		613	21.8	5.4	7.4								

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	Facility Water Chemistry			88				5.9	7.7	1:5	24	369	<0.05	<0.06			
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	89			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	89			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	89			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	89			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	89			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	89			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	89			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	89			21.7										
BATT01-00390	3.6µg/L	3.6	A	89			21.7										
BATT01-00390	3.6µg/L	3.6	B	89			21.6										
BATT01-00390	3.6µg/L	3.6	C	89			21.7										
BATT01-00390	3.6µg/L	3.6	D	89			21.7										
BATT01-00390	10.5µg/L	10.5	A	89			21.6										
BATT01-00390	10.5µg/L	10.5	B	89			21.7										
BATT01-00390	10.5µg/L	10.5	C	89			21.7										
BATT01-00390	10.5µg/L	10.5	D	89			21.6										
BATT01-00390	33µg/L	33	A	89			21.7										
BATT01-00390	33µg/L	33	B	89			21.7										
BATT01-00390	33µg/L	33	C	89			21.7										
BATT01-00390	33µg/L	33	D	89			21.7										
BATT01-00390	100µg/L	100	A	89			21.6										
BATT01-00390	100µg/L	100	B	89			21.7										
BATT01-00390	100µg/L	100	C	89			21.7										
BATT01-00390	100µg/L	100	D	89			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	90			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	90			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	90			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	90			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	90			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	90			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	90			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	90			21.7										
BATT01-00390	3.6µg/L	3.6	A	90			21.7										
BATT01-00390	3.6µg/L	3.6	B	90			21.6										
BATT01-00390	3.6µg/L	3.6	C	90			21.7										
BATT01-00390	3.6µg/L	3.6	D	90			21.7										
BATT01-00390	10.5µg/L	10.5	A	90			21.7										
BATT01-00390	10.5µg/L	10.5	B	90			21.6										
BATT01-00390	10.5µg/L	10.5	C	90			21.7										
BATT01-00390	10.5µg/L	10.5	D	90			21.7										
BATT01-00390	33µg/L	33	A	90			21.7										
BATT01-00390	33µg/L	33	B	90			21.7										
BATT01-00390	33µg/L	33	C	90			21.7										
BATT01-00390	33µg/L	33	D	90			21.7										
BATT01-00390	100µg/L	100	A	90			21.6										
BATT01-00390	100µg/L	100	B	90			21.7										
BATT01-00390	100µg/L	100	C	90			21.7										
BATT01-00390	100µg/L	100	D	90			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	91		845	21.7	6.2	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	91		712	21.6	6.1	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	91		1005	21.7	5.9	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	91		981	21.5	6.0	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	91	0.104	741	21.6	6.1	7.5								**Measured Treatment Concentration** - $MQL = 0.208 \mu g/L$; for results $<MQL$, $1/2 MQL$ is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	91		863	21.7	6.3	7.6	1:2	32						
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	91		852	21.5	6.2	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	91		679	21.5	6.4	7.6								
BATT01-00390	3.6µg/L	3.6	A	91	3.61	1034	21.7	5.9	7.6								
BATT01-00390	3.6µg/L	3.6	B	91		1118	21.7	5.8	7.6								
BATT01-00390	3.6µg/L	3.6	C	91		943	21.6	6.0	7.6								
BATT01-00390	3.6µg/L	3.6	D	91		857	21.6	6.1	7.6								
BATT01-00390	10.5µg/L	10.5	A	91	8.60	718	21.7	6.1	7.7								

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Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	10.5ug/L	10.5	B	91		928	21.6	6.4	7.6								
BATT01-00390	10.5ug/L	10.5	C	91		871	21.5	6.4	7.6								
BATT01-00390	10.5ug/L	10.5	D	91		906	21.5	6.3	7.5								
BATT01-00390	33ug/L	33	A	91	18.7	1003	21.5	6.0	7.6								**Measured Treatment Concentration** - Week 13 33µg/L A - 237µg/L identified as outlier as determined by Q3+1(IQR * 1.5). Original sample used for analysis of mean measured concentration.
BATT01-00390	33ug/L	33	B	91		1025	21.6	6.1	7.6								
BATT01-00390	33ug/L	33	C	91		694	21.7	5.8	7.6								
BATT01-00390	33ug/L	33	D	91		678	21.7	6.2	7.7								
BATT01-00390	100ug/L	100	A	91	48.1	732	21.6	6.4	7.7	1.2	36						**Measured Treatment Concentration** - Week 13 100µg/L A - 268µg/L identified as outlier as determined by Q3 &(IQR * 1.5). Original sample used for analysis of mean measured concentration.
BATT01-00390	100ug/L	100	B	91		853	21.7	6.5	7.7								
BATT01-00390	100ug/L	100	C	91		849	21.6	6.1	7.7								
BATT01-00390	100ug/L	100	D	91		759	21.7	6.3	7.6								
BATT01-00390	100ug/L	100	D	91			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	92			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	92			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	92			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	92			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	92			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	92			21.5										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	92			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	92			21.7										
BATT01-00390	3.6ug/L	3.6	A	92			21.6										
BATT01-00390	3.6ug/L	3.6	B	92			21.6										
BATT01-00390	3.6ug/L	3.6	C	92			21.5										
BATT01-00390	3.6ug/L	3.6	D	92			21.6										
BATT01-00390	10.5ug/L	10.5	A	92			21.7										
BATT01-00390	10.5ug/L	10.5	B	92			21.7										
BATT01-00390	10.5ug/L	10.5	C	92			21.6										
BATT01-00390	10.5ug/L	10.5	D	92			21.6										
BATT01-00390	33ug/L	33	A	92			21.5										
BATT01-00390	33ug/L	33	B	92			21.6										
BATT01-00390	33ug/L	33	C	92			21.5										
BATT01-00390	33ug/L	33	D	92			21.7										
BATT01-00390	100ug/L	100	A	92			21.6										
BATT01-00390	100ug/L	100	B	92			21.7										
BATT01-00390	100ug/L	100	C	92			21.7										
BATT01-00390	100ug/L	100	D	92			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	93		678	21.8	5.5	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	93		731	21.8	5.3	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	93		842	21.8	5.2	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	93		691	21.7	5.3	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	93		1045	21.7	5.4	7.5								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	93		1118	21.8	5.5	7.6								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	93		823	21.6	5.5	7.4								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	93		942	21.8	5.4	7.6								
BATT01-00390	3.6ug/L	3.6	A	93		938	21.8	5.3	7.7								
BATT01-00390	3.6ug/L	3.6	B	93		774	21.7	5.3	7.7								
BATT01-00390	3.6ug/L	3.6	C	93		688	21.7	5.6	7.6								
BATT01-00390	3.6ug/L	3.6	D	93		725	21.6	5.4	7.6								
BATT01-00390	10.5ug/L	10.5	A	93		651	21.6	5.4	7.7								
BATT01-00390	10.5ug/L	10.5	B	93		1066	21.7	5.5	7.6								
BATT01-00390	10.5ug/L	10.5	C	93		992	21.8	5.6	7.6								
BATT01-00390	10.5ug/L	10.5	D	93		1012	21.6	5.7	7.6								
BATT01-00390	33ug/L	33	A	93		880	21.8	5.5	7.6								
BATT01-00390	33ug/L	33	B	93		827	21.7	5.2	7.6								
BATT01-00390	33ug/L	33	C	93		783	21.7	5.3	7.6								
BATT01-00390	33ug/L	33	D	93		635	21.7	5.4	7.6								
BATT01-00390	100ug/L	100	A	93		751	21.6	5.4	7.6								

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	100µg/L	100	B	93		934	21.6	5.3	7.7								
BATT01-00390	100µg/L	100	C	93		1204	21.7	5.4	7.6								
BATT01-00390	100µg/L	100	D	93		1133	21.8	5.5	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	94			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	94			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	94			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	94			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	94			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	94			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	94			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	94			21.7										
BATT01-00390	3.6µg/L	3.6	A	94			21.7										
BATT01-00390	3.6µg/L	3.6	B	94			21.7										
BATT01-00390	3.6µg/L	3.6	C	94			21.6										
BATT01-00390	3.6µg/L	3.6	D	94			21.8										
BATT01-00390	10.5µg/L	10.5	A	94			21.8										
BATT01-00390	10.5µg/L	10.5	B	94			21.6										
BATT01-00390	10.5µg/L	10.5	C	94			21.6										
BATT01-00390	10.5µg/L	10.5	D	94			21.7										
BATT01-00390	33µg/L	33	A	94			21.7										
BATT01-00390	33µg/L	33	B	94			21.8										
BATT01-00390	33µg/L	33	C	94			21.6										
BATT01-00390	33µg/L	33	D	94			21.6										
BATT01-00390	100µg/L	100	A	94			21.8										
BATT01-00390	100µg/L	100	B	94			21.7										
BATT01-00390	100µg/L	100	C	94			21.8										
BATT01-00390	100µg/L	100	D	94			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	95		918	21.7	5.1	7.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	95		1203	21.6	5.5	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	95		1042	21.7	5.3	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	95		1008	21.5	5.2	7.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	95		754	21.7	4.8	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	95		813	21.8	5.0	7.2								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	95		858	21.8	4.8	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	95		754	21.6	5.4	7.2								
BATT01-00390	3.6µg/L	3.6	A	95		698	21.5	5.5	7.2								
BATT01-00390	3.6µg/L	3.6	B	95		810	21.5	5.2	7.2								
BATT01-00390	3.6µg/L	3.6	C	95		795	21.6	5.6	7.2								
BATT01-00390	3.6µg/L	3.6	D	95		791	21.7	5.7	7.2								
BATT01-00390	10.5µg/L	10.5	A	95		1011	21.8	5.4	7.4								
BATT01-00390	10.5µg/L	10.5	B	95		815	21.7	5.0	7.4								
BATT01-00390	10.5µg/L	10.5	C	95		938	21.8	5.4	7.3								
BATT01-00390	10.5µg/L	10.5	D	95		1046	21.6	4.9	7.2								
BATT01-00390	33µg/L	33	A	95		979	21.6	5.5	7.3								
BATT01-00390	33µg/L	33	B	95		850	21.7	5.3	7.4								
BATT01-00390	33µg/L	33	C	95		691	21.7	5.3	7.4								
BATT01-00390	33µg/L	33	D	95		762	21.8	5.4	7.5								
BATT01-00390	100µg/L	100	A	95		814	21.7	5.5	7.4								
BATT01-00390	100µg/L	100	B	95		893	21.8	5.4	7.4								
BATT01-00390	100µg/L	100	C	95		1098	21.8	5.5	7.4								
BATT01-00390	100µg/L	100	D	95		927	21.6	5.4	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	96			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	96			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	96			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	96			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	96			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	96			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	96			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	96			21.7										
BATT01-00390	3.6µg/L	3.6	A	96			21.7										
BATT01-00390	3.6µg/L	3.6	B	96			21.7										
BATT01-00390	3.6µg/L	3.6	C	96			21.6										
BATT01-00390	3.6µg/L	3.6	D	96			21.7										

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DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	10.9µg/L	10.9	A	96			21.6										
BATT01-00390	10.9µg/L	10.9	B	96			21.6										
BATT01-00390	10.9µg/L	10.9	C	96			21.7										
BATT01-00390	10.9µg/L	10.9	D	96			21.7										
BATT01-00390	33µg/L	33	A	96			21.7										
BATT01-00390	33µg/L	33	B	96			21.7										
BATT01-00390	33µg/L	33	C	96			21.7										
BATT01-00390	33µg/L	33	D	96			21.7										
BATT01-00390	100µg/L	100	A	96			21.7										
BATT01-00390	100µg/L	100	B	96			21.7										
BATT01-00390	100µg/L	100	C	96			21.7										
BATT01-00390	100µg/L	100	D	96			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	97			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	97			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	97			21.7										
BATT01-00390	3.6µg/L	3.6	A	97			21.6										
BATT01-00390	3.6µg/L	3.6	B	97			21.6										
BATT01-00390	3.6µg/L	3.6	C	97			21.7										
BATT01-00390	3.6µg/L	3.6	D	97			21.7										
BATT01-00390	10.9µg/L	10.9	A	97			21.7										
BATT01-00390	10.9µg/L	10.9	B	97			21.7										
BATT01-00390	10.9µg/L	10.9	C	97			21.6										
BATT01-00390	10.9µg/L	10.9	D	97			21.7										
BATT01-00390	33µg/L	33	A	97			21.6										
BATT01-00390	33µg/L	33	B	97			21.7										
BATT01-00390	33µg/L	33	C	97			21.7										
BATT01-00390	33µg/L	33	D	97			21.7										
BATT01-00390	100µg/L	100	A	97			21.6										
BATT01-00390	100µg/L	100	B	97			21.7										
BATT01-00390	100µg/L	100	C	97			21.7										
BATT01-00390	100µg/L	100	D	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	97			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	98		680	21.6	5.2	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	98		826	21.7	5.5	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	98		822	21.5	4.9	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	98		730	21.5	5.0	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	98		692	21.4	4.6	6.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	98	0.104	808	21.4	5.0	6.9								**Measured Treatment Concentration** - MQL = 0.2968µg/L: For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	98		875	21.4	4.7	6.6	1.2	32						
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	98		796	21.7	5.5	6.9								
BATT01-00390	3.6µg/L	3.6	A	98		723	21.7	5.0	7.0								
BATT01-00390	3.6µg/L	3.6	B	98	11.3	793	21.6	5.2	7.0								
BATT01-00390	3.6µg/L	3.6	C	98		835	21.7	5.2	7.1								
BATT01-00390	3.6µg/L	3.6	D	98		780	21.7	5.1	7.1								
BATT01-00390	10.9µg/L	10.9	A	98		724	21.5	5.4	7.2								
BATT01-00390	10.9µg/L	10.9	B	98	16.2	919	21.6	4.6	7.2								
BATT01-00390	10.9µg/L	10.9	C	98		967	21.6	5.3	7.2								
BATT01-00390	10.9µg/L	10.9	D	98		887	21.6	4.6	7.2								
BATT01-00390	33µg/L	33	A	98		936	21.4	5.4	7.2								
BATT01-00390	33µg/L	33	B	98	38.0	927	21.4	4.9	7.1								
BATT01-00390	33µg/L	33	C	98		754	21.4	5.1	7.2								
BATT01-00390	33µg/L	33	D	98		697	21.4	5.3	7.2								
BATT01-00390	100µg/L	100	A	98		791	21.4	5.4	7.2								**Measured Treatment Concentration** - Duplicate value available since value was within 20% of nominal concentration reported as measured.
BATT01-00390	100µg/L	100	B	98	99.5	824	21.4	5.3	7.2								
BATT01-00390	100µg/L	100	C	98		751	21.4	5.3	7.3	108	28						

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DEST BATT01-00390 Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	100µg/L	100	D	98		694	21.4	5.3	7.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	99			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	99			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	99			21.4										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	99			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	99			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	99			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	99			21.3										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	99			21.3										
BATT01-00390	3.6µg/L	3.6	A	99			21.5										
BATT01-00390	3.6µg/L	3.6	B	99			21.5										
BATT01-00390	3.6µg/L	3.6	C	99			21.5										
BATT01-00390	3.6µg/L	3.6	D	99			21.5										
BATT01-00390	10.5µg/L	10.9	A	99			21.3										
BATT01-00390	10.5µg/L	10.9	B	99			21.4										
BATT01-00390	10.5µg/L	10.9	C	99			21.5										
BATT01-00390	10.5µg/L	10.9	D	99			21.6										
BATT01-00390	33µg/L	33	A	99			21.4										
BATT01-00390	33µg/L	33	B	99			21.3										
BATT01-00390	33µg/L	33	C	99			21.3										
BATT01-00390	33µg/L	33	D	99			21.3										
BATT01-00390	100µg/L	100	A	99			21.4										
BATT01-00390	100µg/L	100	B	99			21.4										
BATT01-00390	100µg/L	100	C	99			21.5										
BATT01-00390	100µg/L	100	D	99			21.5										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	100	736	741	21.6	6.0	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	100	762	762	21.6	6.3	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	100	758	758	21.8	5.9	7.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	100	741	741	21.6	5.8	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	100	764	764	21.8	6.0	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	100	838	838	21.7	5.8	6.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	100	890	890	21.6	5.7	6.3								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	100	824	824	21.8	6.1	7.3								
BATT01-00390	3.6µg/L	3.6	A	100	764	764	21.7	5.8	7.3								
BATT01-00390	3.6µg/L	3.6	B	100	742	742	21.6	5.9	7.4								
BATT01-00390	3.6µg/L	3.6	C	100	836	836	21.8	5.7	7.4								
BATT01-00390	3.6µg/L	3.6	D	100	819	819	21.8	5.8	7.4								
BATT01-00390	10.5µg/L	10.9	A	100	803	803	21.6	5.9	7.4								
BATT01-00390	10.5µg/L	10.9	B	100	831	831	21.7	6.2	7.5								
BATT01-00390	10.5µg/L	10.9	C	100	880	880	21.7	5.8	7.4								
BATT01-00390	10.5µg/L	10.9	D	100	935	935	21.6	6.1	7.4								
BATT01-00390	33µg/L	33	A	100	867	867	21.8	6.0	7.4								
BATT01-00390	33µg/L	33	B	100	865	865	21.8	5.6	7.4								
BATT01-00390	33µg/L	33	C	100	759	759	21.8	5.6	7.4								
BATT01-00390	33µg/L	33	D	100	663	663	21.7	5.8	7.4								
BATT01-00390	100µg/L	100	A	100	777	777	21.7	5.9	7.4								
BATT01-00390	100µg/L	100	B	100	802	802	21.8	5.7	7.4								
BATT01-00390	100µg/L	100	C	100	767	767	21.6	5.8	7.4								
BATT01-00390	100µg/L	100	D	100	655	655	21.8	5.6	7.4								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	101			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	101			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	101			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	101			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	101			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	101			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	101			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	101			21.7										
BATT01-00390	3.6µg/L	3.6	A	101			21.7										
BATT01-00390	3.6µg/L	3.6	B	101			21.7										
BATT01-00390	3.6µg/L	3.6	C	101			21.7										
BATT01-00390	3.6µg/L	3.6	D	101			21.7										
BATT01-00390	10.5µg/L	10.9	A	101			21.6										
BATT01-00390	10.5µg/L	10.9	B	101			21.7										

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DEST BATT01-00390 Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	10.5ug/L	10.9	C	101			21.7										
BATT01-00390	10.5ug/L	10.9	D	101			21.7										
BATT01-00390	33ug/L	33	A	101			21.5										
BATT01-00390	33ug/L	33	B	101			21.4										
BATT01-00390	33ug/L	33	C	101			21.5										
BATT01-00390	33ug/L	33	D	101			21.6										
BATT01-00390	100ug/L	100	A	101			21.7										
BATT01-00390	100ug/L	100	B	101			21.7										
BATT01-00390	100ug/L	100	C	101			21.7										
BATT01-00390	100ug/L	100	D	101			21.7								40%		
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	102		723	21.5	5.2	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	102		827	21.4	5.3	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	102		899	21.4	5.4	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	102		762	21.4	5.3	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	102		715	21.5	5.0	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	102		812	21.6	5.2	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	102		979	21.3	5.5	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	102		758	21.6	5.6	7.1								
BATT01-00390	3.6ug/L	3.6	A	102		699	21.5	5.1	7.1								
BATT01-00390	3.6ug/L	3.6	B	102		779	21.5	5.8	7.1								
BATT01-00390	3.6ug/L	3.6	C	102		837	21.5	5.6	7.2								
BATT01-00390	3.6ug/L	3.6	D	102		853	21.4	5.2	7.2								
BATT01-00390	10.5ug/L	10.9	A	102		798	21.3	5.1	7.0								
BATT01-00390	10.5ug/L	10.9	B	102		827	21.3	5.4	7.1								
BATT01-00390	10.5ug/L	10.9	C	102		694	21.3	5.3	7.1								
BATT01-00390	10.5ug/L	10.9	D	102		693	21.4	5.1	7.1								
BATT01-00390	33ug/L	33	A	102		657	21.3	5.6	7.2								
BATT01-00390	33ug/L	33	B	102		652	21.3	5.5	7.2								
BATT01-00390	33ug/L	33	C	102		600	21.3	5.0	7.2								
BATT01-00390	33ug/L	33	D	102		606	21.4	5.2	7.2								
BATT01-00390	100ug/L	100	A	102		810	21.3	5.2	7.2								
BATT01-00390	100ug/L	100	B	102		901	21.4	5.4	7.2								
BATT01-00390	100ug/L	100	C	102		834	21.4	5.3	7.2								
BATT01-00390	100ug/L	100	D	102		784	21.4	5.5	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	103			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	103			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	103			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	103			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	103			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	103			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	103			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	103			21.7										
BATT01-00390	3.6ug/L	3.6	A	103			21.6										
BATT01-00390	3.6ug/L	3.6	B	103			21.6										
BATT01-00390	3.6ug/L	3.6	C	103			21.6										
BATT01-00390	3.6ug/L	3.6	D	103			21.7										
BATT01-00390	10.5ug/L	10.9	A	103			21.7										
BATT01-00390	10.5ug/L	10.9	B	103			21.7										
BATT01-00390	10.5ug/L	10.9	C	103			21.7										
BATT01-00390	10.5ug/L	10.9	D	103			21.6										
BATT01-00390	33ug/L	33	A	103			21.7										
BATT01-00390	33ug/L	33	B	103			21.7										
BATT01-00390	33ug/L	33	C	103			21.6										
BATT01-00390	33ug/L	33	D	103			21.6										
BATT01-00390	100ug/L	100	A	103			21.7										
BATT01-00390	100ug/L	100	B	103			21.7										
BATT01-00390	100ug/L	100	C	103			21.6										
BATT01-00390	100ug/L	100	D	103			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	104			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	104			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	104			21.7										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	104			21.6										
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	104			21.7										

DEST

Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	104			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	104			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	104			21.7										
BATT01-00390	3.6µg/L	3.6	A	104			21.6										
BATT01-00390	3.6µg/L	3.6	B	104			21.7										
BATT01-00390	3.6µg/L	3.6	C	104			21.7										
BATT01-00390	3.6µg/L	3.6	D	104			21.7										
BATT01-00390	10.5µg/L	10.5	A	104			21.6										
BATT01-00390	10.5µg/L	10.5	B	104			21.7										
BATT01-00390	10.5µg/L	10.5	C	104			21.7										
BATT01-00390	10.5µg/L	10.5	D	104			21.7										
BATT01-00390	33µg/L	33	A	104			21.7										
BATT01-00390	33µg/L	33	B	104			21.7										
BATT01-00390	33µg/L	33	C	104			21.6										
BATT01-00390	33µg/L	33	D	104			21.7										
BATT01-00390	100µg/L	100	A	104			21.6										
BATT01-00390	100µg/L	100	B	104			21.7										
BATT01-00390	100µg/L	100	C	104			21.7										
BATT01-00390	100µg/L	100	D	104			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	105			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	105			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	105			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	105			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	105			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	105			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	105	0.104		21.7										**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.
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	105			21.7										
BATT01-00390	3.6µg/L	3.6	A	105			21.7										
BATT01-00390	3.6µg/L	3.6	B	105			21.7										
BATT01-00390	3.6µg/L	3.6	C	105	4.24		21.7										
BATT01-00390	3.6µg/L	3.6	D	105			21.6										
BATT01-00390	10.5µg/L	10.5	A	105			21.7										
BATT01-00390	10.5µg/L	10.5	B	105			21.7										
BATT01-00390	10.5µg/L	10.5	C	105	8.46		21.7										
BATT01-00390	10.5µg/L	10.5	D	105			21.6										
BATT01-00390	33µg/L	33	A	105			21.7										
BATT01-00390	33µg/L	33	B	105			21.7										
BATT01-00390	33µg/L	33	C	105	23.8		21.7										
BATT01-00390	33µg/L	33	D	105			21.7										
BATT01-00390	100µg/L	100	A	105			21.7										
BATT01-00390	100µg/L	100	B	105			21.6										
BATT01-00390	100µg/L	100	C	105	111		21.7										**Measured Treatment Concentration** - Outlier, no duplicate value available since value was within 20% of nominal concentration reported as measured.
BATT01-00390	100µg/L	100	D	105			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	106			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	106			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	106			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	106			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	106			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	106			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	106			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	106			21.7			108	28						
BATT01-00390	3.6µg/L	3.6	A	106			21.6										
BATT01-00390	3.6µg/L	3.6	B	106			21.7										
BATT01-00390	3.6µg/L	3.6	C	106			21.7										
BATT01-00390	3.6µg/L	3.6	D	106			21.8										
BATT01-00390	10.5µg/L	10.5	A	106			21.6										
BATT01-00390	10.5µg/L	10.5	B	106			21.7										
BATT01-00390	10.5µg/L	10.5	C	106			21.8										
BATT01-00390	10.5µg/L	10.5	D	106			21.8										

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	33ug/L	33	A	106			21.7										
BATT01-00390	33ug/L	33	B	106			21.8										
BATT01-00390	33ug/L	33	C	106			21.9										
BATT01-00390	33ug/L	33	D	106			21.6										
BATT01-00390	100ug/L	100	A	106			21.7										
BATT01-00390	100ug/L	100	B	106			21.7										
BATT01-00390	100ug/L	100	C	106			21.6										
BATT01-00390	100ug/L	100	D	106			21.8			104	28						
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	107		735	21.6	5.3	6.8								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	107		904	21.6	5.5	6.9								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	107		730	21.6	5.1	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	107		754	21.6	4.7	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	107		731	21.5	4.8	7.0								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	107		853	21.5	5.2	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	107		876	21.4	4.9	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	107		861	21.3	5.2	7.0								
BATT01-00390	3.6ug/L	3.6	A	107		765	21.3	5.1	7.1								
BATT01-00390	3.6ug/L	3.6	B	107		817	21.3	5.2	7.1								
BATT01-00390	3.6ug/L	3.6	C	107		872	21.4	5.1	7.1								
BATT01-00390	3.6ug/L	3.6	D	107		762	21.3	4.9	7.1								
BATT01-00390	10.3ug/L	10.3	A	107		859	21.3	4.6	6.5								
BATT01-00390	10.3ug/L	10.3	B	107		925	21.4	4.7	6.7								
BATT01-00390	10.3ug/L	10.3	C	107		887	21.3	5.2	6.8								
BATT01-00390	10.3ug/L	10.3	D	107		924	21.4	4.5	6.8								
BATT01-00390	33ug/L	33	A	107		1037	21.4	5.4	7.0								
BATT01-00390	33ug/L	33	B	107		930	21.4	4.9	7.1								
BATT01-00390	33ug/L	33	C	107		797	21.4	4.7	7.1								
BATT01-00390	33ug/L	33	D	107		756	21.4	5.0	7.0								
BATT01-00390	100ug/L	100	A	107		841	21.5	5.2	7.0								
BATT01-00390	100ug/L	100	B	107		857	21.5	4.7	7.0								
BATT01-00390	100ug/L	100	C	107		802	21.5	5.3	7.1								
BATT01-00390	100ug/L	100	D	107		632	21.5	5.2	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	108		687	21.4	5.5	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	108		642	21.5	5.4	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	108		740	21.6	5.3	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	108		608	21.6	4.8	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	108		787	21.6	4.9	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	108		1202	21.6	5.0	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	108		1518	21.6	4.6	7.2								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	108		1184	21.6	5.0	6.8								
BATT01-00390	3.6ug/L	3.6	A	108		770	21.7	5.1	7.0								
BATT01-00390	3.6ug/L	3.6	B	108		1063	21.7	5.1	7.0								
BATT01-00390	3.6ug/L	3.6	C	108		799	21.7	5.2	7.1								
BATT01-00390	3.6ug/L	3.6	D	108		637	21.7	5.2	7.2								
BATT01-00390	10.3ug/L	10.3	A	108		947	21.7	4.5	6.5								
BATT01-00390	10.3ug/L	10.3	B	108		1135	21.7	4.2	6.5								
BATT01-00390	10.3ug/L	10.3	C	108		631	21.6	5.3	6.9								
BATT01-00390	10.3ug/L	10.3	D	108		611	21.7	4.8	6.9								
BATT01-00390	33ug/L	33	A	108		1260	21.7	5.4	7.0								
BATT01-00390	33ug/L	33	B	108		1661	21.7	5.1	7.1								
BATT01-00390	33ug/L	33	C	108		1479	21.7	5.0	7.2								
BATT01-00390	33ug/L	33	D	108		856	21.6	5.1	6.7								
BATT01-00390	100ug/L	100	A	108		885	21.7	5.3	7.0								
BATT01-00390	100ug/L	100	B	108		867	21.7	5.1	7.1								
BATT01-00390	100ug/L	100	C	108		952	21.6	5.4	7.1								
BATT01-00390	100ug/L	100	D	108		1070	21.5	5.1	7.1								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	109		754	21.7	5.4	7.0								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	109		819	21.6	5.4	7.0								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	109		774	21.6	5.0	6.9								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	109		729	21.6	4.7	6.8								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	109		680	21.7	4.8	6.8								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	109		818	21.7	4.6	6.9								
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	109		825	21.5	5.1	6.9								

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BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	109		719	21.6	4.9	6.6								
BATT01-00390	3.6µg/L	3.6	A	109		823	21.5	5.1	6.7								
BATT01-00390	3.6µg/L	3.6	B	109		787	21.5	5.1	6.8								
BATT01-00390	3.6µg/L	3.6	C	109		782	21.5	5.1	6.8								
BATT01-00390	3.6µg/L	3.6	D	109		798	21.4	5.0	6.9								
BATT01-00390	10.9µg/L	10.9	A	109		803	21.5	5.3	6.6								
BATT01-00390	10.9µg/L	10.9	B	109		805	21.4	4.9	6.6								
BATT01-00390	10.9µg/L	10.9	C	109		861	21.4	5.0	6.7								
BATT01-00390	10.9µg/L	10.9	D	109		818	21.4	4.9	6.7								
BATT01-00390	33µg/L	33	A	109		836	21.5	5.4	6.8								
BATT01-00390	33µg/L	33	B	109		931	21.5	5.4	6.8								
BATT01-00390	33µg/L	33	C	109		931	21.5	5.0	6.8								
BATT01-00390	33µg/L	33	D	109		877	21.5	5.1	6.7								
BATT01-00390	100µg/L	100	A	109		829	21.6	5.2	6.7								
BATT01-00390	100µg/L	100	B	109		916	21.7	5.1	6.7								
BATT01-00390	100µg/L	100	C	109		928	21.7	5.3	6.8								
BATT01-00390	100µg/L	100	D	109		737	21.7	5.2	6.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	110			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	110			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	110			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	110			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	110			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	110			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	110			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	110			21.7										
BATT01-00390	3.6µg/L	3.6	A	110			21.7										
BATT01-00390	3.6µg/L	3.6	B	110			21.7										
BATT01-00390	3.6µg/L	3.6	C	110			21.7										
BATT01-00390	3.6µg/L	3.6	D	110			21.7										
BATT01-00390	10.9µg/L	10.9	A	110			21.6										
BATT01-00390	10.9µg/L	10.9	B	110			21.7										
BATT01-00390	10.9µg/L	10.9	C	110			21.7										
BATT01-00390	10.9µg/L	10.9	D	110			21.7										
BATT01-00390	33µg/L	33	A	110			21.6										
BATT01-00390	33µg/L	33	B	110			21.7										
BATT01-00390	33µg/L	33	C	110			21.7										
BATT01-00390	33µg/L	33	D	110			21.6										
BATT01-00390	100µg/L	100	A	110			21.6										
BATT01-00390	100µg/L	100	B	110			21.7										
BATT01-00390	100µg/L	100	C	110			21.6										
BATT01-00390	100µg/L	100	D	110			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	111			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	111			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	111			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	111			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	111			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	111			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	111			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	111			21.7										
BATT01-00390	3.6µg/L	3.6	A	111			21.7										
BATT01-00390	3.6µg/L	3.6	B	111			21.7										
BATT01-00390	3.6µg/L	3.6	C	111			21.6										
BATT01-00390	3.6µg/L	3.6	D	111			21.6										
BATT01-00390	10.9µg/L	10.9	A	111			21.7										
BATT01-00390	10.9µg/L	10.9	B	111			21.7										
BATT01-00390	10.9µg/L	10.9	C	111			21.7										
BATT01-00390	10.9µg/L	10.9	D	111			21.7										
BATT01-00390	33µg/L	33	A	111			21.6										
BATT01-00390	33µg/L	33	B	111			21.6										
BATT01-00390	33µg/L	33	C	111			21.6										
BATT01-00390	33µg/L	33	D	111			21.7										
BATT01-00390	100µg/L	100	A	111			21.7										
BATT01-00390	100µg/L	100	B	111			21.7										

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Analytical Water Quality

BATT01-00390

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	100µg/L	100	C	111			21.7										
BATT01-00390	100µg/L	100	D	111			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	112		668	21.6	5.3	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	112		826	21.7	5.5	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	112		823	21.7	5.4	6.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	112		718	21.6	5.2	6.9								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	112		798	21.7	5.4	7.0								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	112		883	21.4	5.3	6.9								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	112		946	21.3	5.0	6.7								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	112		782	21.3	5.1	6.9								
BATT01-00390	3.6µg/L	3.6	A	112		704	21.4	5.7	6.9								
BATT01-00390	3.6µg/L	3.6	B	112		737	21.4	5.6	6.9								
BATT01-00390	3.6µg/L	3.6	C	112		723	21.4	5.1	6.9								
BATT01-00390	3.6µg/L	3.6	D	112		756	21.3	5.4	6.9								
BATT01-00390	10.5µg/L	10.5	A	112		908	21.3	5.3	7.2								
BATT01-00390	10.5µg/L	10.5	B	112		920	21.3	5.5	6.8								
BATT01-00390	10.5µg/L	10.5	C	112		935	21.3	5.6	6.9								
BATT01-00390	10.5µg/L	10.5	D	112		796	21.4	5.3	7.0								
BATT01-00390	33µg/L	33	A	112		846	21.7	5.2	7.0								
BATT01-00390	33µg/L	33	B	112		737	21.7	5.0	7.0								
BATT01-00390	33µg/L	33	C	112		759	21.7	5.3	6.9								
BATT01-00390	33µg/L	33	D	112		779	21.6	5.4	7.2								
BATT01-00390	100µg/L	100	A	112		876	21.4	5.1	6.8								
BATT01-00390	100µg/L	100	B	112		897	21.5	5.3	6.9								
BATT01-00390	100µg/L	100	C	112		851	21.6	5.5	7.0								
BATT01-00390	100µg/L	100	D	112		621	21.7	5.2	7.0								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	113			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	113			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	113			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	113			21.7										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	113			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	113			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	113			21.6										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	113			21.8										
BATT01-00390	3.6µg/L	3.6	A	113			21.8										
BATT01-00390	3.6µg/L	3.6	B	113			21.9										
BATT01-00390	3.6µg/L	3.6	C	113			21.7										
BATT01-00390	3.6µg/L	3.6	D	113			21.8										
BATT01-00390	10.5µg/L	10.5	A	113			21.9										
BATT01-00390	10.5µg/L	10.5	B	113			21.9										
BATT01-00390	10.5µg/L	10.5	C	113			21.6										
BATT01-00390	10.5µg/L	10.5	D	113			21.8										
BATT01-00390	33µg/L	33	A	113			21.6										
BATT01-00390	33µg/L	33	B	113			21.7										
BATT01-00390	33µg/L	33	C	113			21.7										
BATT01-00390	33µg/L	33	D	113			21.9										
BATT01-00390	100µg/L	100	A	113			21.9										
BATT01-00390	100µg/L	100	B	113			21.8										
BATT01-00390	100µg/L	100	C	113			21.7										
BATT01-00390	100µg/L	100	D	113			21.8										
BATT01-00390	(Ctrl) 0.0µg/L	0.0	A	114		708	21.7	5.5	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	B	114		779	21.7	5.5	7.1								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	C	114		758	21.7	5.2	6.6								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	D	114		663	21.6	4.1	6.9								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	E	114		680	21.6	4.6	6.5								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	F	114		855	21.6	5.3	6.9								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	G	114		827	21.4	4.5	6.8								
BATT01-00390	(Ctrl) 0.0µg/L	0.0	H	114		796	21.4	4.9	6.5								
BATT01-00390	3.6µg/L	3.6	A	114		703	21.4	5.1	6.9								
BATT01-00390	3.6µg/L	3.6	B	114		692	21.4	5.0	6.9								
BATT01-00390	3.6µg/L	3.6	C	114		702	21.5	5.1	7.0								
BATT01-00390	3.6µg/L	3.6	D	114		678	21.4	4.9	7.0								
BATT01-00390	10.5µg/L	10.5	A	114		843	21.3	5.4	6.5								

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DEST

BATT01-00390

Analytical Water Quality

Study ID	Name of Treatment Group	Nominal Treatment Concentration (µg/L)	Replicate ID	Test 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 $CaCO_3$)	Water Conductivity (µS/cm)	Total Residual Chlorine (mg/L)	Ammonia-N (mg/L)	Relative Humidity (%)	Iodide (µg/L)	Comments
BATT01-00390	10.3ug/L	10.3	B	114		883	21.3	5.2	6.8								
BATT01-00390	10.3ug/L	10.3	C	114		835	21.3	4.7	6.9								
BATT01-00390	10.3ug/L	10.3	D	114		874	21.5	5.2	7.0								
BATT01-00390	33ug/L	33	A	114		939	21.5	5.5	7.1								
BATT01-00390	33ug/L	33	B	114		973	21.3	5.3	7.2								
BATT01-00390	33ug/L	33	C	114		743	21.4	4.6	6.9								
BATT01-00390	33ug/L	33	D	114		754	21.5	5.2	6.7								
BATT01-00390	100ug/L	100	A	114		810	21.7	5.2	7.0								
BATT01-00390	100ug/L	100	B	114		845	21.5	5.1	7.0								
BATT01-00390	100ug/L	100	C	114		783	21.6	5.3	7.1								
BATT01-00390	100ug/L	100	D	114		625	21.6	5.3	7.2								
BATT01-00390	Facility Water Chemistry			114				5.8	7.5	95	40	378	<0.03	<0.06			
BATT01-00390	(Ctrl) 0.0ug/L	0.0	A	115	0.104	716	21.7	5.7	7.0	108	32						**Measured Treatment Concentration** - MQL = 0.208ug/L: For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	B	115	0.104	656	21.7	5.7	7.1								**Measured Treatment Concentration** - MQL = 0.208ug/L: For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	C	115	0.104	652	21.7	5.4	6.6								**Measured Treatment Concentration** - MQL = 0.208ug/L: For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	D	115	0.104	623	21.7	4.7	6.8								**Measured Treatment Concentration** - MQL = 0.208ug/L: For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	E	115	0.104	728	21.7	5.0	6.5								**Measured Treatment Concentration** - MQL = 0.208ug/L: For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	F	115	0.104	738	21.7	5.6	7.1								**Measured Treatment Concentration** - MQL = 0.208ug/L: For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	G	115	0.104	857	21.6	4.9	7.0								**Measured Treatment Concentration** - MQL = 0.208ug/L: For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	(Ctrl) 0.0ug/L	0.0	H	115	0.104	812	21.4	5.0	6.5								**Measured Treatment Concentration** - MQL = 0.208ug/L: For results <MQL, 1/2 MQL is reported to facilitate calculation of mean measured concentrations for control and each treatment.
BATT01-00390	3.6ug/L	3.6	A	115	7.52	719	21.4	5.0	6.7								
BATT01-00390	3.6ug/L	3.6	B	115	6.96	737	21.4	5.1	7.0								
BATT01-00390	3.6ug/L	3.6	C	115	6.49	754	21.4	5.2	7.1								
BATT01-00390	3.6ug/L	3.6	D	115	7.95	740	21.4	5.0	7.2								
BATT01-00390	10.3ug/L	10.3	A	115	13.4	916	21.3	5.4	7.1								
BATT01-00390	10.3ug/L	10.3	B	115	13.3	918	21.3	5.2	7.3								
BATT01-00390	10.3ug/L	10.3	C	115	14.5	835	21.3	5.0	7.3								
BATT01-00390	10.3ug/L	10.3	D	115	13.4	806	21.4	5.2	7.3								
BATT01-00390	33ug/L	33	A	115	30.5	948	21.5	5.4	7.4								
BATT01-00390	33ug/L	33	B	115	33.3	967	21.5	5.1	7.4								
BATT01-00390	33ug/L	33	C	115	31.1	931	21.5	4.9	7.4								
BATT01-00390	33ug/L	33	D	115	36.4	754	21.6	5.3	7.4								
BATT01-00390	100ug/L	100	A	115	67.2	853	21.7	5.1	7.4								
BATT01-00390	100ug/L	100	B	115	68.0	847	21.7	5.2	7.4								
BATT01-00390	100ug/L	100	C	115	67.8	739	21.7	5.3	7.4								
BATT01-00390	100ug/L	100	D	115	65.6	639	21.7	5.3	7.4	108	36						

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DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	0	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	0	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	0	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	0	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	0	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	0	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	0	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	0	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	0	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	0	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	0	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	0	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	0	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	0	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	0	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	0	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	0	33µg/L	A	None	N/A	N/A	None
BATT01-00390	0	33µg/L	B	None	N/A	N/A	None
BATT01-00390	0	33µg/L	C	None	N/A	N/A	None
BATT01-00390	0	33µg/L	D	None	N/A	N/A	None
BATT01-00390	0	100µg/L	A	None	N/A	N/A	None
BATT01-00390	0	100µg/L	B	None	N/A	N/A	None
BATT01-00390	0	100µg/L	C	None	N/A	N/A	None
BATT01-00390	0	100µg/L	D	None	N/A	N/A	None
BATT01-00390	1	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	1	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	1	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	1	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	1	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	1	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	1	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	1	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	1	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	1	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	1	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	1	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	1	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	1	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	1	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	1	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	1	33µg/L	A	None	N/A	N/A	None
BATT01-00390	1	33µg/L	B	None	N/A	N/A	None
BATT01-00390	1	33µg/L	C	None	N/A	N/A	None
BATT01-00390	1	33µg/L	D	None	N/A	N/A	None
BATT01-00390	1	100µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	1	100µg/L	B	None	N/A	N/A	None
BATT01-00390	1	100µg/L	C	None	N/A	N/A	None
BATT01-00390	1	100µg/L	D	None	N/A	N/A	None
BATT01-00390	2	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	2	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	2	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	2	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	2	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	2	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	2	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	2	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	2	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	2	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	2	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	2	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	2	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	2	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	2	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	2	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	2	33µg/L	A	None	N/A	N/A	None
BATT01-00390	2	33µg/L	B	None	N/A	N/A	None
BATT01-00390	2	33µg/L	C	None	N/A	N/A	None
BATT01-00390	2	33µg/L	D	None	N/A	N/A	None
BATT01-00390	2	100µg/L	A	None	N/A	N/A	None
BATT01-00390	2	100µg/L	B	None	N/A	N/A	None
BATT01-00390	2	100µg/L	C	None	N/A	N/A	None
BATT01-00390	2	100µg/L	D	None	N/A	N/A	None
BATT01-00390	3	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	3	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	3	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	3	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	3	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	3	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	3	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	3	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	3	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	3	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	3	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	3	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	3	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	3	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	3	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	3	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	3	33µg/L	A	None	N/A	N/A	None
BATT01-00390	3	33µg/L	B	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	3	33µg/L	C	None	N/A	N/A	None
BATT01-00390	3	33µg/L	D	None	N/A	N/A	None
BATT01-00390	3	100µg/L	A	None	N/A	N/A	None
BATT01-00390	3	100µg/L	B	None	N/A	N/A	None
BATT01-00390	3	100µg/L	C	None	N/A	N/A	None
BATT01-00390	3	100µg/L	D	None	N/A	N/A	None
BATT01-00390	4	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	4	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	4	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	4	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	4	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	4	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	4	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	4	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	4	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	4	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	4	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	4	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	4	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	4	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	4	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	4	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	4	33µg/L	A	None	N/A	N/A	None
BATT01-00390	4	33µg/L	B	None	N/A	N/A	None
BATT01-00390	4	33µg/L	C	None	N/A	N/A	None
BATT01-00390	4	33µg/L	D	None	N/A	N/A	None
BATT01-00390	4	100µg/L	A	None	N/A	N/A	None
BATT01-00390	4	100µg/L	B	None	N/A	N/A	None
BATT01-00390	4	100µg/L	C	None	N/A	N/A	None
BATT01-00390	4	100µg/L	D	None	N/A	N/A	None
BATT01-00390	5	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	5	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	5	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	5	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	5	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	5	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	5	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	5	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	5	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	5	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	5	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	5	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	5	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	5	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	5	10.9µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	5	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	5	33µg/L	A	None	N/A	N/A	None
BATT01-00390	5	33µg/L	B	None	N/A	N/A	None
BATT01-00390	5	33µg/L	C	None	N/A	N/A	None
BATT01-00390	5	33µg/L	D	None	N/A	N/A	None
BATT01-00390	5	100µg/L	A	None	N/A	N/A	None
BATT01-00390	5	100µg/L	B	None	N/A	N/A	None
BATT01-00390	5	100µg/L	C	None	N/A	N/A	None
BATT01-00390	5	100µg/L	D	None	N/A	N/A	None
BATT01-00390	6	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	6	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	6	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	6	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	6	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	6	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	6	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	6	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	6	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	6	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	6	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	6	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	6	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	6	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	6	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	6	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	6	33µg/L	A	None	N/A	N/A	None
BATT01-00390	6	33µg/L	B	None	N/A	N/A	None
BATT01-00390	6	33µg/L	C	None	N/A	N/A	None
BATT01-00390	6	33µg/L	D	None	N/A	N/A	None
BATT01-00390	6	100µg/L	A	None	N/A	N/A	None
BATT01-00390	6	100µg/L	B	None	N/A	N/A	None
BATT01-00390	6	100µg/L	C	None	N/A	N/A	None
BATT01-00390	6	100µg/L	D	None	N/A	N/A	None
BATT01-00390	7	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	7	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	7	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	7	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	7	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	7	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	7	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	7	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	7	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	7	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	7	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	7	3.6µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	7	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	7	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	7	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	7	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	7	33µg/L	A	None	N/A	N/A	None
BATT01-00390	7	33µg/L	B	None	N/A	N/A	None
BATT01-00390	7	33µg/L	C	None	N/A	N/A	None
BATT01-00390	7	33µg/L	D	None	N/A	N/A	None
BATT01-00390	7	100µg/L	A	None	N/A	N/A	None
BATT01-00390	7	100µg/L	B	None	N/A	N/A	None
BATT01-00390	7	100µg/L	C	None	N/A	N/A	None
BATT01-00390	7	100µg/L	D	None	N/A	N/A	None
BATT01-00390	8	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	8	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	8	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	8	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	8	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	8	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	8	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	8	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	8	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	8	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	8	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	8	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	8	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	8	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	8	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	8	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	8	33µg/L	A	None	N/A	N/A	None
BATT01-00390	8	33µg/L	B	None	N/A	N/A	None
BATT01-00390	8	33µg/L	C	None	N/A	N/A	None
BATT01-00390	8	33µg/L	D	None	N/A	N/A	None
BATT01-00390	8	100µg/L	A	None	N/A	N/A	None
BATT01-00390	8	100µg/L	B	None	N/A	N/A	None
BATT01-00390	8	100µg/L	C	None	N/A	N/A	None
BATT01-00390	8	100µg/L	D	None	N/A	N/A	None
BATT01-00390	9	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	9	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	9	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	9	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	9	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	9	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	9	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	9	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	9	3.6µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	9	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	9	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	9	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	9	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	9	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	9	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	9	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	9	33µg/L	A	None	N/A	N/A	None
BATT01-00390	9	33µg/L	B	None	N/A	N/A	None
BATT01-00390	9	33µg/L	C	None	N/A	N/A	None
BATT01-00390	9	33µg/L	D	None	N/A	N/A	None
BATT01-00390	9	100µg/L	A	None	N/A	N/A	None
BATT01-00390	9	100µg/L	B	None	N/A	N/A	None
BATT01-00390	9	100µg/L	C	None	N/A	N/A	None
BATT01-00390	9	100µg/L	D	None	N/A	N/A	None
BATT01-00390	10	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	10	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	10	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	10	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	10	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	10	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	10	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	10	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	10	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	10	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	10	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	10	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	10	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	10	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	10	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	10	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	10	33µg/L	A	None	N/A	N/A	None
BATT01-00390	10	33µg/L	B	None	N/A	N/A	None
BATT01-00390	10	33µg/L	C	None	N/A	N/A	None
BATT01-00390	10	33µg/L	D	None	N/A	N/A	None
BATT01-00390	10	100µg/L	A	None	N/A	N/A	None
BATT01-00390	10	100µg/L	B	None	N/A	N/A	None
BATT01-00390	10	100µg/L	C	None	N/A	N/A	None
BATT01-00390	10	100µg/L	D	None	N/A	N/A	None
BATT01-00390	11	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	11	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	11	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	11	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	11	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	11	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	11	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	11	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	11	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	11	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	11	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	11	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	11	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	11	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	11	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	11	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	11	33µg/L	A	None	N/A	N/A	None
BATT01-00390	11	33µg/L	B	None	N/A	N/A	None
BATT01-00390	11	33µg/L	C	None	N/A	N/A	None
BATT01-00390	11	33µg/L	D	None	N/A	N/A	None
BATT01-00390	11	100µg/L	A	None	N/A	N/A	None
BATT01-00390	11	100µg/L	B	None	N/A	N/A	None
BATT01-00390	11	100µg/L	C	None	N/A	N/A	None
BATT01-00390	11	100µg/L	D	None	N/A	N/A	None
BATT01-00390	12	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	12	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	12	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	12	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	12	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	12	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	12	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	12	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	12	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	12	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	12	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	12	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	12	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	12	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	12	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	12	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	12	33µg/L	A	None	N/A	N/A	None
BATT01-00390	12	33µg/L	B	None	N/A	N/A	None
BATT01-00390	12	33µg/L	C	None	N/A	N/A	None
BATT01-00390	12	33µg/L	D	None	N/A	N/A	None
BATT01-00390	12	100µg/L	A	None	N/A	N/A	None
BATT01-00390	12	100µg/L	B	None	N/A	N/A	None
BATT01-00390	12	100µg/L	C	None	N/A	N/A	None
BATT01-00390	12	100µg/L	D	None	N/A	N/A	None
BATT01-00390	13	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	13	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	13	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	13	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	13	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	13	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	13	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	13	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	13	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	13	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	13	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	13	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	13	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	13	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	13	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	13	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	13	33µg/L	A	None	N/A	N/A	None
BATT01-00390	13	33µg/L	B	None	N/A	N/A	None
BATT01-00390	13	33µg/L	C	None	N/A	N/A	None
BATT01-00390	13	33µg/L	D	None	N/A	N/A	None
BATT01-00390	13	100µg/L	A	None	N/A	N/A	None
BATT01-00390	13	100µg/L	B	None	N/A	N/A	None
BATT01-00390	13	100µg/L	C	None	N/A	N/A	None
BATT01-00390	13	100µg/L	D	None	N/A	N/A	None
BATT01-00390	14	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	14	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	14	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	14	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	14	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	14	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	14	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	14	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	14	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	14	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	14	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	14	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	14	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	14	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	14	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	14	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	14	33µg/L	A	None	N/A	N/A	None
BATT01-00390	14	33µg/L	B	None	N/A	N/A	None
BATT01-00390	14	33µg/L	C	None	N/A	N/A	None
BATT01-00390	14	33µg/L	D	None	N/A	N/A	None
BATT01-00390	14	100µg/L	A	None	N/A	N/A	None
BATT01-00390	14	100µg/L	B	None	N/A	N/A	None
BATT01-00390	14	100µg/L	C	None	N/A	N/A	None
BATT01-00390	14	100µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	15	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	15	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	15	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	15	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	15	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	15	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	15	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	15	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	15	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	15	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	15	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	15	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	15	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	15	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	15	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	15	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	15	33µg/L	A	None	N/A	N/A	None
BATT01-00390	15	33µg/L	B	None	N/A	N/A	None
BATT01-00390	15	33µg/L	C	None	N/A	N/A	None
BATT01-00390	15	33µg/L	D	None	N/A	N/A	None
BATT01-00390	15	100µg/L	A	None	N/A	N/A	None
BATT01-00390	15	100µg/L	B	None	N/A	N/A	None
BATT01-00390	15	100µg/L	C	None	N/A	N/A	None
BATT01-00390	15	100µg/L	D	None	N/A	N/A	None
BATT01-00390	16	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	16	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	16	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	16	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	16	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	16	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	16	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	16	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	16	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	16	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	16	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	16	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	16	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	16	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	16	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	16	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	16	33µg/L	A	None	N/A	N/A	None
BATT01-00390	16	33µg/L	B	None	N/A	N/A	None
BATT01-00390	16	33µg/L	C	None	N/A	N/A	None
BATT01-00390	16	33µg/L	D	None	N/A	N/A	None
BATT01-00390	16	100µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	16	100µg/L	B	None	N/A	N/A	None
BATT01-00390	16	100µg/L	C	None	N/A	N/A	None
BATT01-00390	16	100µg/L	D	None	N/A	N/A	None
BATT01-00390	17	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	17	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	17	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	17	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	17	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	17	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	17	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	17	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	17	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	17	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	17	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	17	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	17	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	17	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	17	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	17	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	17	33µg/L	A	None	N/A	N/A	None
BATT01-00390	17	33µg/L	B	None	N/A	N/A	None
BATT01-00390	17	33µg/L	C	None	N/A	N/A	None
BATT01-00390	17	33µg/L	D	None	N/A	N/A	None
BATT01-00390	17	100µg/L	A	None	N/A	N/A	None
BATT01-00390	17	100µg/L	B	None	N/A	N/A	None
BATT01-00390	17	100µg/L	C	None	N/A	N/A	None
BATT01-00390	17	100µg/L	D	None	N/A	N/A	None
BATT01-00390	18	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	18	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	18	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	18	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	18	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	18	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	18	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	18	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	18	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	18	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	18	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	18	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	18	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	18	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	18	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	18	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	18	33µg/L	A	None	N/A	N/A	None
BATT01-00390	18	33µg/L	B	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	18	33µg/L	C	None	N/A	N/A	None
BATT01-00390	18	33µg/L	D	None	N/A	N/A	None
BATT01-00390	18	100µg/L	A	None	N/A	N/A	None
BATT01-00390	18	100µg/L	B	None	N/A	N/A	None
BATT01-00390	18	100µg/L	C	None	N/A	N/A	None
BATT01-00390	18	100µg/L	D	None	N/A	N/A	None
BATT01-00390	19	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	19	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	19	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	19	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	19	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	19	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	19	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	19	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	19	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	19	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	19	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	19	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	19	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	19	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	19	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	19	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	19	33µg/L	A	None	N/A	N/A	None
BATT01-00390	19	33µg/L	B	None	N/A	N/A	None
BATT01-00390	19	33µg/L	C	None	N/A	N/A	None
BATT01-00390	19	33µg/L	D	None	N/A	N/A	None
BATT01-00390	19	100µg/L	A	None	N/A	N/A	None
BATT01-00390	19	100µg/L	B	None	N/A	N/A	None
BATT01-00390	19	100µg/L	C	None	N/A	N/A	None
BATT01-00390	19	100µg/L	D	None	N/A	N/A	None
BATT01-00390	20	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	20	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	20	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	20	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	20	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	20	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	20	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	20	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	20	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	20	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	20	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	20	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	20	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	20	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	20	10.9µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	20	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	20	33µg/L	A	None	N/A	N/A	None
BATT01-00390	20	33µg/L	B	None	N/A	N/A	None
BATT01-00390	20	33µg/L	C	None	N/A	N/A	None
BATT01-00390	20	33µg/L	D	None	N/A	N/A	None
BATT01-00390	20	100µg/L	A	None	N/A	N/A	None
BATT01-00390	20	100µg/L	B	None	N/A	N/A	None
BATT01-00390	20	100µg/L	C	None	N/A	N/A	None
BATT01-00390	20	100µg/L	D	None	N/A	N/A	None
BATT01-00390	21	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	21	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	21	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	21	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	21	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	21	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	21	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	21	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	21	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	21	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	21	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	21	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	21	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	21	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	21	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	21	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	21	33µg/L	A	None	N/A	N/A	None
BATT01-00390	21	33µg/L	B	None	N/A	N/A	None
BATT01-00390	21	33µg/L	C	None	N/A	N/A	None
BATT01-00390	21	33µg/L	D	None	N/A	N/A	None
BATT01-00390	21	100µg/L	A	None	N/A	N/A	None
BATT01-00390	21	100µg/L	B	None	N/A	N/A	None
BATT01-00390	21	100µg/L	C	None	N/A	N/A	None
BATT01-00390	21	100µg/L	D	None	N/A	N/A	None
BATT01-00390	22	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	22	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	22	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	22	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	22	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	22	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	22	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	22	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	22	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	22	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	22	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	22	3.6µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	22	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	22	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	22	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	22	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	22	33µg/L	A	None	N/A	N/A	None
BATT01-00390	22	33µg/L	B	None	N/A	N/A	None
BATT01-00390	22	33µg/L	C	None	N/A	N/A	None
BATT01-00390	22	33µg/L	D	None	N/A	N/A	None
BATT01-00390	22	100µg/L	A	None	N/A	N/A	None
BATT01-00390	22	100µg/L	B	None	N/A	N/A	None
BATT01-00390	22	100µg/L	C	None	N/A	N/A	None
BATT01-00390	22	100µg/L	D	None	N/A	N/A	None
BATT01-00390	23	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	23	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	23	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	23	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	23	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	23	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	23	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	23	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	23	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	23	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	23	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	23	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	23	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	23	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	23	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	23	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	23	33µg/L	A	None	N/A	N/A	None
BATT01-00390	23	33µg/L	B	None	N/A	N/A	None
BATT01-00390	23	33µg/L	C	None	N/A	N/A	None
BATT01-00390	23	33µg/L	D	None	N/A	N/A	None
BATT01-00390	23	100µg/L	A	None	N/A	N/A	None
BATT01-00390	23	100µg/L	B	None	N/A	N/A	None
BATT01-00390	23	100µg/L	C	None	N/A	N/A	None
BATT01-00390	23	100µg/L	D	None	N/A	N/A	None
BATT01-00390	24	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	24	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	24	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	24	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	24	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	24	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	24	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	24	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	24	3.6µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	24	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	24	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	24	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	24	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	24	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	24	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	24	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	24	33µg/L	A	None	N/A	N/A	None
BATT01-00390	24	33µg/L	B	None	N/A	N/A	None
BATT01-00390	24	33µg/L	C	None	N/A	N/A	None
BATT01-00390	24	33µg/L	D	None	N/A	N/A	None
BATT01-00390	24	100µg/L	A	None	N/A	N/A	None
BATT01-00390	24	100µg/L	B	None	N/A	N/A	None
BATT01-00390	24	100µg/L	C	None	N/A	N/A	None
BATT01-00390	24	100µg/L	D	None	N/A	N/A	None
BATT01-00390	25	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	25	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	25	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	25	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	25	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	25	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	25	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	25	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	25	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	25	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	25	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	25	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	25	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	25	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	25	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	25	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	25	33µg/L	A	None	N/A	N/A	None
BATT01-00390	25	33µg/L	B	None	N/A	N/A	None
BATT01-00390	25	33µg/L	C	None	N/A	N/A	None
BATT01-00390	25	33µg/L	D	None	N/A	N/A	None
BATT01-00390	25	100µg/L	A	None	N/A	N/A	None
BATT01-00390	25	100µg/L	B	None	N/A	N/A	None
BATT01-00390	25	100µg/L	C	None	N/A	N/A	None
BATT01-00390	25	100µg/L	D	None	N/A	N/A	None
BATT01-00390	26	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	26	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	26	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	26	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	26	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	26	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	26	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	26	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	26	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	26	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	26	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	26	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	26	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	26	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	26	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	26	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	26	33µg/L	A	None	N/A	N/A	None
BATT01-00390	26	33µg/L	B	None	N/A	N/A	None
BATT01-00390	26	33µg/L	C	None	N/A	N/A	None
BATT01-00390	26	33µg/L	D	None	N/A	N/A	None
BATT01-00390	26	100µg/L	A	None	N/A	N/A	None
BATT01-00390	26	100µg/L	B	None	N/A	N/A	None
BATT01-00390	26	100µg/L	C	None	N/A	N/A	None
BATT01-00390	26	100µg/L	D	None	N/A	N/A	None
BATT01-00390	27	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	27	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	27	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	27	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	27	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	27	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	27	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	27	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	27	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	27	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	27	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	27	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	27	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	27	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	27	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	27	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	27	33µg/L	A	None	N/A	N/A	None
BATT01-00390	27	33µg/L	B	None	N/A	N/A	None
BATT01-00390	27	33µg/L	C	None	N/A	N/A	None
BATT01-00390	27	33µg/L	D	None	N/A	N/A	None
BATT01-00390	27	100µg/L	A	None	N/A	N/A	None
BATT01-00390	27	100µg/L	B	None	N/A	N/A	None
BATT01-00390	27	100µg/L	C	None	N/A	N/A	None
BATT01-00390	27	100µg/L	D	None	N/A	N/A	None
BATT01-00390	28	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	28	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	28	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	28	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	28	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	28	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	28	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	28	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	28	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	28	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	28	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	28	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	28	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	28	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	28	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	28	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	28	33µg/L	A	None	N/A	N/A	None
BATT01-00390	28	33µg/L	B	None	N/A	N/A	None
BATT01-00390	28	33µg/L	C	None	N/A	N/A	None
BATT01-00390	28	33µg/L	D	None	N/A	N/A	None
BATT01-00390	28	100µg/L	A	None	N/A	N/A	None
BATT01-00390	28	100µg/L	B	None	N/A	N/A	None
BATT01-00390	28	100µg/L	C	None	N/A	N/A	None
BATT01-00390	28	100µg/L	D	None	N/A	N/A	None
BATT01-00390	29	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	29	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	29	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	29	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	29	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	29	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	29	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	29	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	29	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	29	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	29	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	29	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	29	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	29	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	29	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	29	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	29	33µg/L	A	None	N/A	N/A	None
BATT01-00390	29	33µg/L	B	None	N/A	N/A	None
BATT01-00390	29	33µg/L	C	None	N/A	N/A	None
BATT01-00390	29	33µg/L	D	None	N/A	N/A	None
BATT01-00390	29	100µg/L	A	None	N/A	N/A	None
BATT01-00390	29	100µg/L	B	None	N/A	N/A	None
BATT01-00390	29	100µg/L	C	None	N/A	N/A	None
BATT01-00390	29	100µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	30	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	30	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	30	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	30	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	30	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	30	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	30	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	30	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	30	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	30	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	30	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	30	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	30	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	30	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	30	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	30	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	30	33µg/L	A	None	N/A	N/A	None
BATT01-00390	30	33µg/L	B	None	N/A	N/A	None
BATT01-00390	30	33µg/L	C	None	N/A	N/A	None
BATT01-00390	30	33µg/L	D	None	N/A	N/A	None
BATT01-00390	30	100µg/L	A	None	N/A	N/A	None
BATT01-00390	30	100µg/L	B	None	N/A	N/A	None
BATT01-00390	30	100µg/L	C	None	N/A	N/A	None
BATT01-00390	30	100µg/L	D	None	N/A	N/A	None
BATT01-00390	31	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	31	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	31	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	31	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	31	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	31	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	31	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	31	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	31	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	31	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	31	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	31	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	31	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	31	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	31	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	31	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	31	33µg/L	A	None	N/A	N/A	None
BATT01-00390	31	33µg/L	B	None	N/A	N/A	None
BATT01-00390	31	33µg/L	C	None	N/A	N/A	None
BATT01-00390	31	33µg/L	D	None	N/A	N/A	None
BATT01-00390	31	100µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	31	100µg/L	B	None	N/A	N/A	None
BATT01-00390	31	100µg/L	C	None	N/A	N/A	None
BATT01-00390	31	100µg/L	D	None	N/A	N/A	None
BATT01-00390	32	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	32	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	32	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	32	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	32	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	32	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	32	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	32	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	32	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	32	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	32	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	32	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	32	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	32	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	32	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	32	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	32	33µg/L	A	None	N/A	N/A	None
BATT01-00390	32	33µg/L	B	None	N/A	N/A	None
BATT01-00390	32	33µg/L	C	None	N/A	N/A	None
BATT01-00390	32	33µg/L	D	None	N/A	N/A	None
BATT01-00390	32	100µg/L	A	None	N/A	N/A	None
BATT01-00390	32	100µg/L	B	None	N/A	N/A	None
BATT01-00390	32	100µg/L	C	None	N/A	N/A	None
BATT01-00390	32	100µg/L	D	None	N/A	N/A	None
BATT01-00390	33	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	33	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	33	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	33	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	33	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	33	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	33	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	33	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	33	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	33	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	33	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	33	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	33	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	33	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	33	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	33	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	33	33µg/L	A	None	N/A	N/A	None
BATT01-00390	33	33µg/L	B	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	33	33µg/L	C	None	N/A	N/A	None
BATT01-00390	33	33µg/L	D	None	N/A	N/A	None
BATT01-00390	33	100µg/L	A	None	N/A	N/A	None
BATT01-00390	33	100µg/L	B	None	N/A	N/A	None
BATT01-00390	33	100µg/L	C	None	N/A	N/A	None
BATT01-00390	33	100µg/L	D	None	N/A	N/A	None
BATT01-00390	34	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	34	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	34	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	34	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	34	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	34	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	34	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	34	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	34	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	34	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	34	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	34	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	34	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	34	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	34	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	34	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	34	33µg/L	A	None	N/A	N/A	None
BATT01-00390	34	33µg/L	B	None	N/A	N/A	None
BATT01-00390	34	33µg/L	C	None	N/A	N/A	None
BATT01-00390	34	33µg/L	D	None	N/A	N/A	None
BATT01-00390	34	100µg/L	A	None	N/A	N/A	None
BATT01-00390	34	100µg/L	B	None	N/A	N/A	None
BATT01-00390	34	100µg/L	C	None	N/A	N/A	None
BATT01-00390	34	100µg/L	D	None	N/A	N/A	None
BATT01-00390	35	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	35	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	35	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	35	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	35	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	35	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	35	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	35	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	35	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	35	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	35	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	35	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	35	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	35	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	35	10.9µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	35	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	35	33µg/L	A	None	N/A	N/A	None
BATT01-00390	35	33µg/L	B	None	N/A	N/A	None
BATT01-00390	35	33µg/L	C	None	N/A	N/A	None
BATT01-00390	35	33µg/L	D	None	N/A	N/A	None
BATT01-00390	35	100µg/L	A	None	N/A	N/A	None
BATT01-00390	35	100µg/L	B	None	N/A	N/A	None
BATT01-00390	35	100µg/L	C	None	N/A	N/A	None
BATT01-00390	35	100µg/L	D	None	N/A	N/A	None
BATT01-00390	36	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	36	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	36	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	36	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	36	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	36	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	36	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	36	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	36	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	36	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	36	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	36	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	36	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	36	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	36	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	36	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	36	33µg/L	A	None	N/A	N/A	None
BATT01-00390	36	33µg/L	B	None	N/A	N/A	None
BATT01-00390	36	33µg/L	C	None	N/A	N/A	None
BATT01-00390	36	33µg/L	D	None	N/A	N/A	None
BATT01-00390	36	100µg/L	A	None	N/A	N/A	None
BATT01-00390	36	100µg/L	B	None	N/A	N/A	None
BATT01-00390	36	100µg/L	C	None	N/A	N/A	None
BATT01-00390	36	100µg/L	D	None	N/A	N/A	None
BATT01-00390	37	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	37	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	37	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	37	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	37	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	37	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	37	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	37	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	37	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	37	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	37	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	37	3.6µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	37	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	37	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	37	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	37	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	37	33µg/L	A	None	N/A	N/A	None
BATT01-00390	37	33µg/L	B	None	N/A	N/A	None
BATT01-00390	37	33µg/L	C	None	N/A	N/A	None
BATT01-00390	37	33µg/L	D	None	N/A	N/A	None
BATT01-00390	37	100µg/L	A	None	N/A	N/A	None
BATT01-00390	37	100µg/L	B	None	N/A	N/A	None
BATT01-00390	37	100µg/L	C	None	N/A	N/A	None
BATT01-00390	37	100µg/L	D	None	N/A	N/A	None
BATT01-00390	38	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	38	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	38	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	38	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	38	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	38	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	38	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	38	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	38	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	38	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	38	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	38	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	38	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	38	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	38	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	38	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	38	33µg/L	A	None	N/A	N/A	None
BATT01-00390	38	33µg/L	B	None	N/A	N/A	None
BATT01-00390	38	33µg/L	C	None	N/A	N/A	None
BATT01-00390	38	33µg/L	D	None	N/A	N/A	None
BATT01-00390	38	100µg/L	A	None	N/A	N/A	None
BATT01-00390	38	100µg/L	B	None	N/A	N/A	None
BATT01-00390	38	100µg/L	C	None	N/A	N/A	None
BATT01-00390	38	100µg/L	D	None	N/A	N/A	None
BATT01-00390	39	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	39	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	39	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	39	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	39	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	39	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	39	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	39	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	39	3.6µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	39	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	39	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	39	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	39	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	39	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	39	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	39	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	39	33µg/L	A	None	N/A	N/A	None
BATT01-00390	39	33µg/L	B	None	N/A	N/A	None
BATT01-00390	39	33µg/L	C	None	N/A	N/A	None
BATT01-00390	39	33µg/L	D	None	N/A	N/A	None
BATT01-00390	39	100µg/L	A	None	N/A	N/A	None
BATT01-00390	39	100µg/L	B	None	N/A	N/A	None
BATT01-00390	39	100µg/L	C	None	N/A	N/A	None
BATT01-00390	39	100µg/L	D	None	N/A	N/A	None
BATT01-00390	40	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	40	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	40	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	40	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	40	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	40	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	40	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	40	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	40	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	40	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	40	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	40	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	40	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	40	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	40	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	40	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	40	33µg/L	A	None	N/A	N/A	None
BATT01-00390	40	33µg/L	B	None	N/A	N/A	None
BATT01-00390	40	33µg/L	C	None	N/A	N/A	None
BATT01-00390	40	33µg/L	D	None	N/A	N/A	None
BATT01-00390	40	100µg/L	A	None	N/A	N/A	None
BATT01-00390	40	100µg/L	B	None	N/A	N/A	None
BATT01-00390	40	100µg/L	C	None	N/A	N/A	None
BATT01-00390	40	100µg/L	D	None	N/A	N/A	None
BATT01-00390	41	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	41	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	41	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	41	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	41	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	41	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	41	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	41	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	41	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	41	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	41	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	41	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	41	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	41	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	41	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	41	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	41	33µg/L	A	None	N/A	N/A	None
BATT01-00390	41	33µg/L	B	None	N/A	N/A	None
BATT01-00390	41	33µg/L	C	None	N/A	N/A	None
BATT01-00390	41	33µg/L	D	None	N/A	N/A	None
BATT01-00390	41	100µg/L	A	None	N/A	N/A	None
BATT01-00390	41	100µg/L	B	None	N/A	N/A	None
BATT01-00390	41	100µg/L	C	None	N/A	N/A	None
BATT01-00390	41	100µg/L	D	None	N/A	N/A	None
BATT01-00390	42	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	42	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	42	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	42	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	42	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	42	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	42	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	42	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	42	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	42	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	42	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	42	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	42	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	42	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	42	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	42	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	42	33µg/L	A	None	N/A	N/A	None
BATT01-00390	42	33µg/L	B	None	N/A	N/A	None
BATT01-00390	42	33µg/L	C	None	N/A	N/A	None
BATT01-00390	42	33µg/L	D	None	N/A	N/A	None
BATT01-00390	42	100µg/L	A	None	N/A	N/A	None
BATT01-00390	42	100µg/L	B	None	N/A	N/A	None
BATT01-00390	42	100µg/L	C	None	N/A	N/A	None
BATT01-00390	42	100µg/L	D	None	N/A	N/A	None
BATT01-00390	43	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	43	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	43	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	43	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	43	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	43	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	43	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	43	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	43	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	43	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	43	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	43	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	43	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	43	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	43	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	43	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	43	33µg/L	A	None	N/A	N/A	None
BATT01-00390	43	33µg/L	B	None	N/A	N/A	None
BATT01-00390	43	33µg/L	C	None	N/A	N/A	None
BATT01-00390	43	33µg/L	D	None	N/A	N/A	None
BATT01-00390	43	100µg/L	A	None	N/A	N/A	None
BATT01-00390	43	100µg/L	B	None	N/A	N/A	None
BATT01-00390	43	100µg/L	C	None	N/A	N/A	None
BATT01-00390	43	100µg/L	D	None	N/A	N/A	None
BATT01-00390	44	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	44	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	44	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	44	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	44	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	44	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	44	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	44	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	44	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	44	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	44	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	44	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	44	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	44	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	44	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	44	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	44	33µg/L	A	None	N/A	N/A	None
BATT01-00390	44	33µg/L	B	None	N/A	N/A	None
BATT01-00390	44	33µg/L	C	None	N/A	N/A	None
BATT01-00390	44	33µg/L	D	None	N/A	N/A	None
BATT01-00390	44	100µg/L	A	None	N/A	N/A	None
BATT01-00390	44	100µg/L	B	None	N/A	N/A	None
BATT01-00390	44	100µg/L	C	None	N/A	N/A	None
BATT01-00390	44	100µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	45	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	45	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	45	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	45	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	45	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	45	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	45	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	45	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	45	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	45	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	45	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	45	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	45	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	45	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	45	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	45	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	45	33µg/L	A	None	N/A	N/A	None
BATT01-00390	45	33µg/L	B	None	N/A	N/A	None
BATT01-00390	45	33µg/L	C	None	N/A	N/A	None
BATT01-00390	45	33µg/L	D	None	N/A	N/A	None
BATT01-00390	45	100µg/L	A	None	N/A	N/A	None
BATT01-00390	45	100µg/L	B	None	N/A	N/A	None
BATT01-00390	45	100µg/L	C	None	N/A	N/A	None
BATT01-00390	45	100µg/L	D	None	N/A	N/A	None
BATT01-00390	46	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	46	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	46	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	46	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	46	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	46	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	46	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	46	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	46	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	46	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	46	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	46	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	46	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	46	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	46	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	46	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	46	33µg/L	A	None	N/A	N/A	None
BATT01-00390	46	33µg/L	B	None	N/A	N/A	None
BATT01-00390	46	33µg/L	C	None	N/A	N/A	None
BATT01-00390	46	33µg/L	D	None	N/A	N/A	None
BATT01-00390	46	100µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	46	100µg/L	B	None	N/A	N/A	None
BATT01-00390	46	100µg/L	C	None	N/A	N/A	None
BATT01-00390	46	100µg/L	D	None	N/A	N/A	None
BATT01-00390	47	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	47	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	47	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	47	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	47	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	47	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	47	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	47	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	47	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	47	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	47	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	47	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	47	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	47	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	47	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	47	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	47	33µg/L	A	None	N/A	N/A	None
BATT01-00390	47	33µg/L	B	None	N/A	N/A	None
BATT01-00390	47	33µg/L	C	None	N/A	N/A	None
BATT01-00390	47	33µg/L	D	None	N/A	N/A	None
BATT01-00390	47	100µg/L	A	None	N/A	N/A	None
BATT01-00390	47	100µg/L	B	None	N/A	N/A	None
BATT01-00390	47	100µg/L	C	None	N/A	N/A	None
BATT01-00390	47	100µg/L	D	None	N/A	N/A	None
BATT01-00390	48	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	48	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	48	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	48	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	48	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	48	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	48	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	48	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	48	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	48	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	48	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	48	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	48	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	48	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	48	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	48	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	48	33µg/L	A	None	N/A	N/A	None
BATT01-00390	48	33µg/L	B	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	48	33µg/L	C	None	N/A	N/A	None
BATT01-00390	48	33µg/L	D	None	N/A	N/A	None
BATT01-00390	48	100µg/L	A	None	N/A	N/A	None
BATT01-00390	48	100µg/L	B	None	N/A	N/A	None
BATT01-00390	48	100µg/L	C	None	N/A	N/A	None
BATT01-00390	48	100µg/L	D	None	N/A	N/A	None
BATT01-00390	49	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	49	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	49	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	49	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	49	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	49	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	49	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	49	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	49	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	49	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	49	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	49	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	49	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	49	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	49	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	49	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	49	33µg/L	A	None	N/A	N/A	None
BATT01-00390	49	33µg/L	B	None	N/A	N/A	None
BATT01-00390	49	33µg/L	C	None	N/A	N/A	None
BATT01-00390	49	33µg/L	D	None	N/A	N/A	None
BATT01-00390	49	100µg/L	A	None	N/A	N/A	None
BATT01-00390	49	100µg/L	B	None	N/A	N/A	None
BATT01-00390	49	100µg/L	C	None	N/A	N/A	None
BATT01-00390	49	100µg/L	D	None	N/A	N/A	None
BATT01-00390	50	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	50	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	50	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	50	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	50	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	50	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	50	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	50	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	50	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	50	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	50	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	50	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	50	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	50	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	50	10.9µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	50	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	50	33µg/L	A	None	N/A	N/A	None
BATT01-00390	50	33µg/L	B	None	N/A	N/A	None
BATT01-00390	50	33µg/L	C	None	N/A	N/A	None
BATT01-00390	50	33µg/L	D	None	N/A	N/A	None
BATT01-00390	50	100µg/L	A	None	N/A	N/A	None
BATT01-00390	50	100µg/L	B	None	N/A	N/A	None
BATT01-00390	50	100µg/L	C	None	N/A	N/A	None
BATT01-00390	50	100µg/L	D	None	N/A	N/A	None
BATT01-00390	51	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	51	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	51	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	51	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	51	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	51	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	51	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	51	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	51	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	51	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	51	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	51	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	51	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	51	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	51	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	51	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	51	33µg/L	A	None	N/A	N/A	None
BATT01-00390	51	33µg/L	B	None	N/A	N/A	None
BATT01-00390	51	33µg/L	C	None	N/A	N/A	None
BATT01-00390	51	33µg/L	D	None	N/A	N/A	None
BATT01-00390	51	100µg/L	A	None	N/A	N/A	None
BATT01-00390	51	100µg/L	B	None	N/A	N/A	None
BATT01-00390	51	100µg/L	C	None	N/A	N/A	None
BATT01-00390	51	100µg/L	D	None	N/A	N/A	None
BATT01-00390	52	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	52	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	52	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	52	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	52	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	52	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	52	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	52	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	52	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	52	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	52	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	52	3.6µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	52	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	52	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	52	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	52	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	52	33µg/L	A	None	N/A	N/A	None
BATT01-00390	52	33µg/L	B	None	N/A	N/A	None
BATT01-00390	52	33µg/L	C	None	N/A	N/A	None
BATT01-00390	52	33µg/L	D	None	N/A	N/A	None
BATT01-00390	52	100µg/L	A	None	N/A	N/A	None
BATT01-00390	52	100µg/L	B	None	N/A	N/A	None
BATT01-00390	52	100µg/L	C	None	N/A	N/A	None
BATT01-00390	52	100µg/L	D	None	N/A	N/A	None
BATT01-00390	53	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	53	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	53	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	53	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	53	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	53	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	53	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	53	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	53	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	53	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	53	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	53	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	53	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	53	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	53	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	53	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	53	33µg/L	A	None	N/A	N/A	None
BATT01-00390	53	33µg/L	B	None	N/A	N/A	None
BATT01-00390	53	33µg/L	C	None	N/A	N/A	None
BATT01-00390	53	33µg/L	D	None	N/A	N/A	None
BATT01-00390	53	100µg/L	A	None	N/A	N/A	None
BATT01-00390	53	100µg/L	B	None	N/A	N/A	None
BATT01-00390	53	100µg/L	C	None	N/A	N/A	None
BATT01-00390	53	100µg/L	D	None	N/A	N/A	None
BATT01-00390	54	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	54	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	54	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	54	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	54	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	54	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	54	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	54	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	54	3.6µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	54	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	54	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	54	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	54	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	54	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	54	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	54	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	54	33µg/L	A	None	N/A	N/A	None
BATT01-00390	54	33µg/L	B	None	N/A	N/A	None
BATT01-00390	54	33µg/L	C	None	N/A	N/A	None
BATT01-00390	54	33µg/L	D	None	N/A	N/A	None
BATT01-00390	54	100µg/L	A	None	N/A	N/A	None
BATT01-00390	54	100µg/L	B	None	N/A	N/A	None
BATT01-00390	54	100µg/L	C	None	N/A	N/A	None
BATT01-00390	54	100µg/L	D	None	N/A	N/A	None
BATT01-00390	55	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	55	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	55	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	55	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	55	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	55	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	55	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	55	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	55	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	55	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	55	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	55	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	55	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	55	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	55	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	55	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	55	33µg/L	A	None	N/A	N/A	None
BATT01-00390	55	33µg/L	B	None	N/A	N/A	None
BATT01-00390	55	33µg/L	C	None	N/A	N/A	None
BATT01-00390	55	33µg/L	D	None	N/A	N/A	None
BATT01-00390	55	100µg/L	A	None	N/A	N/A	None
BATT01-00390	55	100µg/L	B	None	N/A	N/A	None
BATT01-00390	55	100µg/L	C	None	N/A	N/A	None
BATT01-00390	55	100µg/L	D	None	N/A	N/A	None
BATT01-00390	56	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	56	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	56	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	56	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	56	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	56	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	56	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	56	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	56	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	56	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	56	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	56	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	56	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	56	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	56	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	56	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	56	33µg/L	A	None	N/A	N/A	None
BATT01-00390	56	33µg/L	B	None	N/A	N/A	None
BATT01-00390	56	33µg/L	C	None	N/A	N/A	None
BATT01-00390	56	33µg/L	D	None	N/A	N/A	None
BATT01-00390	56	100µg/L	A	None	N/A	N/A	None
BATT01-00390	56	100µg/L	B	None	N/A	N/A	None
BATT01-00390	56	100µg/L	C	None	N/A	N/A	None
BATT01-00390	56	100µg/L	D	None	N/A	N/A	None
BATT01-00390	57	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	57	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	57	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	57	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	57	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	57	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	57	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	57	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	57	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	57	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	57	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	57	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	57	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	57	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	57	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	57	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	57	33µg/L	A	None	N/A	N/A	None
BATT01-00390	57	33µg/L	B	None	N/A	N/A	None
BATT01-00390	57	33µg/L	C	None	N/A	N/A	None
BATT01-00390	57	33µg/L	D	None	N/A	N/A	None
BATT01-00390	57	100µg/L	A	None	N/A	N/A	None
BATT01-00390	57	100µg/L	B	None	N/A	N/A	None
BATT01-00390	57	100µg/L	C	None	N/A	N/A	None
BATT01-00390	57	100µg/L	D	None	N/A	N/A	None
BATT01-00390	58	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	58	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	58	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	58	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	58	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	58	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	58	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	58	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	58	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	58	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	58	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	58	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	58	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	58	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	58	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	58	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	58	33µg/L	A	None	N/A	N/A	None
BATT01-00390	58	33µg/L	B	None	N/A	N/A	None
BATT01-00390	58	33µg/L	C	None	N/A	N/A	None
BATT01-00390	58	33µg/L	D	None	N/A	N/A	None
BATT01-00390	58	100µg/L	A	None	N/A	N/A	None
BATT01-00390	58	100µg/L	B	None	N/A	N/A	None
BATT01-00390	58	100µg/L	C	None	N/A	N/A	None
BATT01-00390	58	100µg/L	D	None	N/A	N/A	None
BATT01-00390	59	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	59	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	59	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	59	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	59	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	59	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	59	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	59	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	59	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	59	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	59	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	59	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	59	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	59	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	59	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	59	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	59	33µg/L	A	None	N/A	N/A	None
BATT01-00390	59	33µg/L	B	None	N/A	N/A	None
BATT01-00390	59	33µg/L	C	None	N/A	N/A	None
BATT01-00390	59	33µg/L	D	None	N/A	N/A	None
BATT01-00390	59	100µg/L	A	None	N/A	N/A	None
BATT01-00390	59	100µg/L	B	None	N/A	N/A	None
BATT01-00390	59	100µg/L	C	None	N/A	N/A	None
BATT01-00390	59	100µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	60	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	60	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	60	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	60	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	60	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	60	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	60	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	60	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	60	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	60	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	60	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	60	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	60	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	60	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	60	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	60	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	60	33µg/L	A	None	N/A	N/A	None
BATT01-00390	60	33µg/L	B	None	N/A	N/A	None
BATT01-00390	60	33µg/L	C	None	N/A	N/A	None
BATT01-00390	60	33µg/L	D	None	N/A	N/A	None
BATT01-00390	60	100µg/L	A	None	N/A	N/A	None
BATT01-00390	60	100µg/L	B	None	N/A	N/A	None
BATT01-00390	60	100µg/L	C	None	N/A	N/A	None
BATT01-00390	60	100µg/L	D	None	N/A	N/A	None
BATT01-00390	61	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	61	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	61	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	61	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	61	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	61	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	61	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	61	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	61	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	61	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	61	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	61	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	61	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	61	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	61	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	61	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	61	33µg/L	A	None	N/A	N/A	None
BATT01-00390	61	33µg/L	B	None	N/A	N/A	None
BATT01-00390	61	33µg/L	C	None	N/A	N/A	None
BATT01-00390	61	33µg/L	D	None	N/A	N/A	None
BATT01-00390	61	100µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	61	100µg/L	B	None	N/A	N/A	None
BATT01-00390	61	100µg/L	C	None	N/A	N/A	None
BATT01-00390	61	100µg/L	D	None	N/A	N/A	None
BATT01-00390	62	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	62	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	62	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	62	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	62	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	62	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	62	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	62	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	62	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	62	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	62	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	62	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	62	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	62	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	62	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	62	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	62	33µg/L	A	None	N/A	N/A	None
BATT01-00390	62	33µg/L	B	None	N/A	N/A	None
BATT01-00390	62	33µg/L	C	None	N/A	N/A	None
BATT01-00390	62	33µg/L	D	None	N/A	N/A	None
BATT01-00390	62	100µg/L	A	None	N/A	N/A	None
BATT01-00390	62	100µg/L	B	None	N/A	N/A	None
BATT01-00390	62	100µg/L	C	None	N/A	N/A	None
BATT01-00390	62	100µg/L	D	None	N/A	N/A	None
BATT01-00390	63	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	63	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	63	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	63	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	63	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	63	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	63	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	63	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	63	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	63	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	63	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	63	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	63	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	63	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	63	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	63	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	63	33µg/L	A	None	N/A	N/A	None
BATT01-00390	63	33µg/L	B	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	63	33µg/L	C	None	N/A	N/A	None
BATT01-00390	63	33µg/L	D	None	N/A	N/A	None
BATT01-00390	63	100µg/L	A	None	N/A	N/A	None
BATT01-00390	63	100µg/L	B	None	N/A	N/A	None
BATT01-00390	63	100µg/L	C	None	N/A	N/A	None
BATT01-00390	63	100µg/L	D	None	N/A	N/A	None
BATT01-00390	64	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	64	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	64	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	64	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	64	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	64	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	64	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	64	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	64	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	64	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	64	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	64	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	64	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	64	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	64	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	64	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	64	33µg/L	A	None	N/A	N/A	None
BATT01-00390	64	33µg/L	B	None	N/A	N/A	None
BATT01-00390	64	33µg/L	C	None	N/A	N/A	None
BATT01-00390	64	33µg/L	D	None	N/A	N/A	None
BATT01-00390	64	100µg/L	A	None	N/A	N/A	None
BATT01-00390	64	100µg/L	B	None	N/A	N/A	None
BATT01-00390	64	100µg/L	C	None	N/A	N/A	None
BATT01-00390	64	100µg/L	D	None	N/A	N/A	None
BATT01-00390	65	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	65	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	65	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	65	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	65	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	65	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	65	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	65	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	65	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	65	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	65	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	65	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	65	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	65	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	65	10.9µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	65	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	65	33µg/L	A	None	N/A	N/A	None
BATT01-00390	65	33µg/L	B	None	N/A	N/A	None
BATT01-00390	65	33µg/L	C	None	N/A	N/A	None
BATT01-00390	65	33µg/L	D	None	N/A	N/A	None
BATT01-00390	65	100µg/L	A	None	N/A	N/A	None
BATT01-00390	65	100µg/L	B	None	N/A	N/A	None
BATT01-00390	65	100µg/L	C	None	N/A	N/A	None
BATT01-00390	65	100µg/L	D	None	N/A	N/A	None
BATT01-00390	66	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	66	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	66	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	66	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	66	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	66	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	66	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	66	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	66	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	66	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	66	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	66	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	66	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	66	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	66	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	66	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	66	33µg/L	A	None	N/A	N/A	None
BATT01-00390	66	33µg/L	B	None	N/A	N/A	None
BATT01-00390	66	33µg/L	C	None	N/A	N/A	None
BATT01-00390	66	33µg/L	D	None	N/A	N/A	None
BATT01-00390	66	100µg/L	A	None	N/A	N/A	None
BATT01-00390	66	100µg/L	B	None	N/A	N/A	None
BATT01-00390	66	100µg/L	C	None	N/A	N/A	None
BATT01-00390	66	100µg/L	D	None	N/A	N/A	None
BATT01-00390	67	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	67	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	67	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	67	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	67	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	67	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	67	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	67	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	67	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	67	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	67	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	67	3.6µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	67	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	67	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	67	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	67	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	67	33µg/L	A	None	N/A	N/A	None
BATT01-00390	67	33µg/L	B	None	N/A	N/A	None
BATT01-00390	67	33µg/L	C	None	N/A	N/A	None
BATT01-00390	67	33µg/L	D	None	N/A	N/A	None
BATT01-00390	67	100µg/L	A	None	N/A	N/A	None
BATT01-00390	67	100µg/L	B	None	N/A	N/A	None
BATT01-00390	67	100µg/L	C	None	N/A	N/A	None
BATT01-00390	67	100µg/L	D	None	N/A	N/A	None
BATT01-00390	68	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	68	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	68	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	68	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	68	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	68	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	68	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	68	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	68	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	68	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	68	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	68	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	68	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	68	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	68	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	68	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	68	33µg/L	A	None	N/A	N/A	None
BATT01-00390	68	33µg/L	B	None	N/A	N/A	None
BATT01-00390	68	33µg/L	C	None	N/A	N/A	None
BATT01-00390	68	33µg/L	D	None	N/A	N/A	None
BATT01-00390	68	100µg/L	A	None	N/A	N/A	None
BATT01-00390	68	100µg/L	B	None	N/A	N/A	None
BATT01-00390	68	100µg/L	C	None	N/A	N/A	None
BATT01-00390	68	100µg/L	D	None	N/A	N/A	None
BATT01-00390	69	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	69	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	69	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	69	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	69	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	69	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	69	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	69	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	69	3.6µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	69	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	69	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	69	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	69	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	69	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	69	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	69	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	69	33µg/L	A	None	N/A	N/A	None
BATT01-00390	69	33µg/L	B	None	N/A	N/A	None
BATT01-00390	69	33µg/L	C	None	N/A	N/A	None
BATT01-00390	69	33µg/L	D	None	N/A	N/A	None
BATT01-00390	69	100µg/L	A	None	N/A	N/A	None
BATT01-00390	69	100µg/L	B	None	N/A	N/A	None
BATT01-00390	69	100µg/L	C	None	N/A	N/A	None
BATT01-00390	69	100µg/L	D	None	N/A	N/A	None
BATT01-00390	70	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	70	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	70	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	70	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	70	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	70	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	70	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	70	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	70	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	70	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	70	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	70	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	70	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	70	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	70	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	70	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	70	33µg/L	A	None	N/A	N/A	None
BATT01-00390	70	33µg/L	B	None	N/A	N/A	None
BATT01-00390	70	33µg/L	C	None	N/A	N/A	None
BATT01-00390	70	33µg/L	D	None	N/A	N/A	None
BATT01-00390	70	100µg/L	A	None	N/A	N/A	None
BATT01-00390	70	100µg/L	B	None	N/A	N/A	None
BATT01-00390	70	100µg/L	C	None	N/A	N/A	None
BATT01-00390	70	100µg/L	D	None	N/A	N/A	None
BATT01-00390	71	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	71	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	71	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	71	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	71	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	71	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	71	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	71	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	71	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	71	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	71	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	71	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	71	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	71	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	71	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	71	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	71	33µg/L	A	None	N/A	N/A	None
BATT01-00390	71	33µg/L	B	None	N/A	N/A	None
BATT01-00390	71	33µg/L	C	None	N/A	N/A	None
BATT01-00390	71	33µg/L	D	None	N/A	N/A	None
BATT01-00390	71	100µg/L	A	None	N/A	N/A	None
BATT01-00390	71	100µg/L	B	None	N/A	N/A	None
BATT01-00390	71	100µg/L	C	None	N/A	N/A	None
BATT01-00390	71	100µg/L	D	None	N/A	N/A	None
BATT01-00390	72	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	72	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	72	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	72	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	72	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	72	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	72	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	72	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	72	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	72	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	72	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	72	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	72	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	72	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	72	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	72	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	72	33µg/L	A	None	N/A	N/A	None
BATT01-00390	72	33µg/L	B	None	N/A	N/A	None
BATT01-00390	72	33µg/L	C	None	N/A	N/A	None
BATT01-00390	72	33µg/L	D	None	N/A	N/A	None
BATT01-00390	72	100µg/L	A	None	N/A	N/A	None
BATT01-00390	72	100µg/L	B	None	N/A	N/A	None
BATT01-00390	72	100µg/L	C	None	N/A	N/A	None
BATT01-00390	72	100µg/L	D	None	N/A	N/A	None
BATT01-00390	73	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	73	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	73	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	73	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	73	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	73	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	73	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	73	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	73	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	73	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	73	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	73	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	73	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	73	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	73	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	73	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	73	33µg/L	A	None	N/A	N/A	None
BATT01-00390	73	33µg/L	B	None	N/A	N/A	None
BATT01-00390	73	33µg/L	C	None	N/A	N/A	None
BATT01-00390	73	33µg/L	D	None	N/A	N/A	None
BATT01-00390	73	100µg/L	A	None	N/A	N/A	None
BATT01-00390	73	100µg/L	B	None	N/A	N/A	None
BATT01-00390	73	100µg/L	C	None	N/A	N/A	None
BATT01-00390	73	100µg/L	D	None	N/A	N/A	None
BATT01-00390	74	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	74	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	74	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	74	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	74	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	74	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	74	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	74	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	74	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	74	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	74	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	74	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	74	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	74	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	74	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	74	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	74	33µg/L	A	None	N/A	N/A	None
BATT01-00390	74	33µg/L	B	None	N/A	N/A	None
BATT01-00390	74	33µg/L	C	None	N/A	N/A	None
BATT01-00390	74	33µg/L	D	None	N/A	N/A	None
BATT01-00390	74	100µg/L	A	None	N/A	N/A	None
BATT01-00390	74	100µg/L	B	None	N/A	N/A	None
BATT01-00390	74	100µg/L	C	None	N/A	N/A	None
BATT01-00390	74	100µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	75	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	75	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	75	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	75	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	75	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	75	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	75	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	75	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	75	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	75	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	75	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	75	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	75	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	75	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	75	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	75	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	75	33µg/L	A	None	N/A	N/A	None
BATT01-00390	75	33µg/L	B	None	N/A	N/A	None
BATT01-00390	75	33µg/L	C	None	N/A	N/A	None
BATT01-00390	75	33µg/L	D	None	N/A	N/A	None
BATT01-00390	75	100µg/L	A	None	N/A	N/A	None
BATT01-00390	75	100µg/L	B	None	N/A	N/A	None
BATT01-00390	75	100µg/L	C	None	N/A	N/A	None
BATT01-00390	75	100µg/L	D	None	N/A	N/A	None
BATT01-00390	76	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	76	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	76	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	76	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	76	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	76	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	76	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	76	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	76	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	76	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	76	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	76	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	76	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	76	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	76	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	76	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	76	33µg/L	A	None	N/A	N/A	None
BATT01-00390	76	33µg/L	B	None	N/A	N/A	None
BATT01-00390	76	33µg/L	C	None	N/A	N/A	None
BATT01-00390	76	33µg/L	D	None	N/A	N/A	None
BATT01-00390	76	100µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	76	100µg/L	B	None	N/A	N/A	None
BATT01-00390	76	100µg/L	C	None	N/A	N/A	None
BATT01-00390	76	100µg/L	D	None	N/A	N/A	None
BATT01-00390	77	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	77	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	77	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	77	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	77	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	77	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	77	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	77	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	77	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	77	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	77	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	77	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	77	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	77	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	77	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	77	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	77	33µg/L	A	None	N/A	N/A	None
BATT01-00390	77	33µg/L	B	None	N/A	N/A	None
BATT01-00390	77	33µg/L	C	None	N/A	N/A	None
BATT01-00390	77	33µg/L	D	None	N/A	N/A	None
BATT01-00390	77	100µg/L	A	None	N/A	N/A	None
BATT01-00390	77	100µg/L	B	None	N/A	N/A	None
BATT01-00390	77	100µg/L	C	None	N/A	N/A	None
BATT01-00390	77	100µg/L	D	None	N/A	N/A	None
BATT01-00390	78	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	78	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	78	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	78	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	78	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	78	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	78	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	78	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	78	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	78	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	78	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	78	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	78	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	78	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	78	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	78	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	78	33µg/L	A	None	N/A	N/A	None
BATT01-00390	78	33µg/L	B	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	78	33µg/L	C	None	N/A	N/A	None
BATT01-00390	78	33µg/L	D	None	N/A	N/A	None
BATT01-00390	78	100µg/L	A	None	N/A	N/A	None
BATT01-00390	78	100µg/L	B	None	N/A	N/A	None
BATT01-00390	78	100µg/L	C	None	N/A	N/A	None
BATT01-00390	78	100µg/L	D	None	N/A	N/A	None
BATT01-00390	79	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	79	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	79	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	79	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	79	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	79	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	79	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	79	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	79	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	79	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	79	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	79	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	79	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	79	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	79	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	79	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	79	33µg/L	A	None	N/A	N/A	None
BATT01-00390	79	33µg/L	B	None	N/A	N/A	None
BATT01-00390	79	33µg/L	C	None	N/A	N/A	None
BATT01-00390	79	33µg/L	D	None	N/A	N/A	None
BATT01-00390	79	100µg/L	A	None	N/A	N/A	None
BATT01-00390	79	100µg/L	B	None	N/A	N/A	None
BATT01-00390	79	100µg/L	C	None	N/A	N/A	None
BATT01-00390	79	100µg/L	D	None	N/A	N/A	None
BATT01-00390	80	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	80	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	80	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	80	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	80	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	80	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	80	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	80	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	80	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	80	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	80	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	80	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	80	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	80	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	80	10.9µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	80	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	80	33µg/L	A	None	N/A	N/A	None
BATT01-00390	80	33µg/L	B	None	N/A	N/A	None
BATT01-00390	80	33µg/L	C	None	N/A	N/A	None
BATT01-00390	80	33µg/L	D	None	N/A	N/A	None
BATT01-00390	80	100µg/L	A	None	N/A	N/A	None
BATT01-00390	80	100µg/L	B	None	N/A	N/A	None
BATT01-00390	80	100µg/L	C	None	N/A	N/A	None
BATT01-00390	80	100µg/L	D	None	N/A	N/A	None
BATT01-00390	81	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	81	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	81	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	81	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	81	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	81	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	81	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	81	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	81	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	81	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	81	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	81	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	81	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	81	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	81	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	81	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	81	33µg/L	A	None	N/A	N/A	None
BATT01-00390	81	33µg/L	B	None	N/A	N/A	None
BATT01-00390	81	33µg/L	C	None	N/A	N/A	None
BATT01-00390	81	33µg/L	D	None	N/A	N/A	None
BATT01-00390	81	100µg/L	A	None	N/A	N/A	None
BATT01-00390	81	100µg/L	B	None	N/A	N/A	None
BATT01-00390	81	100µg/L	C	None	N/A	N/A	None
BATT01-00390	81	100µg/L	D	None	N/A	N/A	None
BATT01-00390	82	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	82	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	82	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	82	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	82	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	82	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	82	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	82	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	82	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	82	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	82	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	82	3.6µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	82	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	82	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	82	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	82	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	82	33µg/L	A	None	N/A	N/A	None
BATT01-00390	82	33µg/L	B	None	N/A	N/A	None
BATT01-00390	82	33µg/L	C	None	N/A	N/A	None
BATT01-00390	82	33µg/L	D	None	N/A	N/A	None
BATT01-00390	82	100µg/L	A	None	N/A	N/A	None
BATT01-00390	82	100µg/L	B	None	N/A	N/A	None
BATT01-00390	82	100µg/L	C	None	N/A	N/A	None
BATT01-00390	82	100µg/L	D	None	N/A	N/A	None
BATT01-00390	83	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	83	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	83	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	83	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	83	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	83	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	83	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	83	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	83	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	83	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	83	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	83	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	83	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	83	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	83	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	83	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	83	33µg/L	A	None	N/A	N/A	None
BATT01-00390	83	33µg/L	B	None	N/A	N/A	None
BATT01-00390	83	33µg/L	C	None	N/A	N/A	None
BATT01-00390	83	33µg/L	D	None	N/A	N/A	None
BATT01-00390	83	100µg/L	A	None	N/A	N/A	None
BATT01-00390	83	100µg/L	B	None	N/A	N/A	None
BATT01-00390	83	100µg/L	C	None	N/A	N/A	None
BATT01-00390	83	100µg/L	D	None	N/A	N/A	None
BATT01-00390	84	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	84	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	84	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	84	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	84	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	84	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	84	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	84	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	84	3.6µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	84	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	84	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	84	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	84	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	84	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	84	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	84	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	84	33µg/L	A	None	N/A	N/A	None
BATT01-00390	84	33µg/L	B	None	N/A	N/A	None
BATT01-00390	84	33µg/L	C	None	N/A	N/A	None
BATT01-00390	84	33µg/L	D	None	N/A	N/A	None
BATT01-00390	84	100µg/L	A	None	N/A	N/A	None
BATT01-00390	84	100µg/L	B	None	N/A	N/A	None
BATT01-00390	84	100µg/L	C	None	N/A	N/A	None
BATT01-00390	84	100µg/L	D	None	N/A	N/A	None
BATT01-00390	85	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	85	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	85	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	85	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	85	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	85	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	85	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	85	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	85	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	85	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	85	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	85	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	85	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	85	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	85	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	85	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	85	33µg/L	A	None	N/A	N/A	None
BATT01-00390	85	33µg/L	B	None	N/A	N/A	None
BATT01-00390	85	33µg/L	C	None	N/A	N/A	None
BATT01-00390	85	33µg/L	D	None	N/A	N/A	None
BATT01-00390	85	100µg/L	A	None	N/A	N/A	None
BATT01-00390	85	100µg/L	B	None	N/A	N/A	None
BATT01-00390	85	100µg/L	C	None	N/A	N/A	None
BATT01-00390	85	100µg/L	D	None	N/A	N/A	None
BATT01-00390	86	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	86	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	86	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	86	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	86	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	86	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	86	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	86	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	86	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	86	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	86	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	86	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	86	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	86	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	86	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	86	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	86	33µg/L	A	None	N/A	N/A	None
BATT01-00390	86	33µg/L	B	None	N/A	N/A	None
BATT01-00390	86	33µg/L	C	None	N/A	N/A	None
BATT01-00390	86	33µg/L	D	None	N/A	N/A	None
BATT01-00390	86	100µg/L	A	None	N/A	N/A	None
BATT01-00390	86	100µg/L	B	None	N/A	N/A	None
BATT01-00390	86	100µg/L	C	None	N/A	N/A	None
BATT01-00390	86	100µg/L	D	None	N/A	N/A	None
BATT01-00390	87	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	87	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	87	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	87	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	87	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	87	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	87	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	87	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	87	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	87	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	87	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	87	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	87	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	87	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	87	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	87	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	87	33µg/L	A	None	N/A	N/A	None
BATT01-00390	87	33µg/L	B	None	N/A	N/A	None
BATT01-00390	87	33µg/L	C	None	N/A	N/A	None
BATT01-00390	87	33µg/L	D	None	N/A	N/A	None
BATT01-00390	87	100µg/L	A	None	N/A	N/A	None
BATT01-00390	87	100µg/L	B	None	N/A	N/A	None
BATT01-00390	87	100µg/L	C	None	N/A	N/A	None
BATT01-00390	87	100µg/L	D	None	N/A	N/A	None
BATT01-00390	88	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	88	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	88	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	88	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	88	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	88	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	88	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	88	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	88	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	88	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	88	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	88	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	88	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	88	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	88	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	88	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	88	33µg/L	A	None	N/A	N/A	None
BATT01-00390	88	33µg/L	B	None	N/A	N/A	None
BATT01-00390	88	33µg/L	C	None	N/A	N/A	None
BATT01-00390	88	33µg/L	D	None	N/A	N/A	None
BATT01-00390	88	100µg/L	A	None	N/A	N/A	None
BATT01-00390	88	100µg/L	B	None	N/A	N/A	None
BATT01-00390	88	100µg/L	C	None	N/A	N/A	None
BATT01-00390	88	100µg/L	D	None	N/A	N/A	None
BATT01-00390	89	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	89	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	89	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	89	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	89	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	89	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	89	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	89	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	89	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	89	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	89	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	89	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	89	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	89	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	89	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	89	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	89	33µg/L	A	None	N/A	N/A	None
BATT01-00390	89	33µg/L	B	None	N/A	N/A	None
BATT01-00390	89	33µg/L	C	None	N/A	N/A	None
BATT01-00390	89	33µg/L	D	None	N/A	N/A	None
BATT01-00390	89	100µg/L	A	None	N/A	N/A	None
BATT01-00390	89	100µg/L	B	None	N/A	N/A	None
BATT01-00390	89	100µg/L	C	None	N/A	N/A	None
BATT01-00390	89	100µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	90	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	90	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	90	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	90	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	90	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	90	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	90	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	90	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	90	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	90	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	90	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	90	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	90	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	90	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	90	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	90	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	90	33µg/L	A	None	N/A	N/A	None
BATT01-00390	90	33µg/L	B	None	N/A	N/A	None
BATT01-00390	90	33µg/L	C	None	N/A	N/A	None
BATT01-00390	90	33µg/L	D	None	N/A	N/A	None
BATT01-00390	90	100µg/L	A	None	N/A	N/A	None
BATT01-00390	90	100µg/L	B	None	N/A	N/A	None
BATT01-00390	90	100µg/L	C	None	N/A	N/A	None
BATT01-00390	90	100µg/L	D	None	N/A	N/A	None
BATT01-00390	91	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	91	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	91	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	91	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	91	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	91	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	91	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	91	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	91	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	91	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	91	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	91	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	91	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	91	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	91	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	91	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	91	33µg/L	A	None	N/A	N/A	None
BATT01-00390	91	33µg/L	B	None	N/A	N/A	None
BATT01-00390	91	33µg/L	C	None	N/A	N/A	None
BATT01-00390	91	33µg/L	D	None	N/A	N/A	None
BATT01-00390	91	100µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	91	100µg/L	B	None	N/A	N/A	None
BATT01-00390	91	100µg/L	C	None	N/A	N/A	None
BATT01-00390	91	100µg/L	D	None	N/A	N/A	None
BATT01-00390	92	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	92	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	92	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	92	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	92	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	92	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	92	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	92	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	92	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	92	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	92	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	92	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	92	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	92	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	92	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	92	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	92	33µg/L	A	None	N/A	N/A	None
BATT01-00390	92	33µg/L	B	None	N/A	N/A	None
BATT01-00390	92	33µg/L	C	None	N/A	N/A	None
BATT01-00390	92	33µg/L	D	None	N/A	N/A	None
BATT01-00390	92	100µg/L	A	None	N/A	N/A	None
BATT01-00390	92	100µg/L	B	None	N/A	N/A	None
BATT01-00390	92	100µg/L	C	None	N/A	N/A	None
BATT01-00390	92	100µg/L	D	None	N/A	N/A	None
BATT01-00390	93	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	93	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	93	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	93	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	93	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	93	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	93	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	93	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	93	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	93	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	93	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	93	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	93	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	93	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	93	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	93	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	93	33µg/L	A	None	N/A	N/A	None
BATT01-00390	93	33µg/L	B	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	93	33µg/L	C	None	N/A	N/A	None
BATT01-00390	93	33µg/L	D	None	N/A	N/A	None
BATT01-00390	93	100µg/L	A	None	N/A	N/A	None
BATT01-00390	93	100µg/L	B	None	N/A	N/A	None
BATT01-00390	93	100µg/L	C	None	N/A	N/A	None
BATT01-00390	93	100µg/L	D	None	N/A	N/A	None
BATT01-00390	94	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	94	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	94	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	94	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	94	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	94	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	94	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	94	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	94	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	94	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	94	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	94	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	94	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	94	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	94	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	94	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	94	33µg/L	A	None	N/A	N/A	None
BATT01-00390	94	33µg/L	B	None	N/A	N/A	None
BATT01-00390	94	33µg/L	C	None	N/A	N/A	None
BATT01-00390	94	33µg/L	D	None	N/A	N/A	None
BATT01-00390	94	100µg/L	A	None	N/A	N/A	None
BATT01-00390	94	100µg/L	B	None	N/A	N/A	None
BATT01-00390	94	100µg/L	C	None	N/A	N/A	None
BATT01-00390	94	100µg/L	D	None	N/A	N/A	None
BATT01-00390	95	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	95	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	95	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	95	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	95	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	95	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	95	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	95	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	95	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	95	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	95	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	95	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	95	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	95	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	95	10.9µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	95	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	95	33µg/L	A	None	N/A	N/A	None
BATT01-00390	95	33µg/L	B	None	N/A	N/A	None
BATT01-00390	95	33µg/L	C	None	N/A	N/A	None
BATT01-00390	95	33µg/L	D	None	N/A	N/A	None
BATT01-00390	95	100µg/L	A	None	N/A	N/A	None
BATT01-00390	95	100µg/L	B	None	N/A	N/A	None
BATT01-00390	95	100µg/L	C	None	N/A	N/A	None
BATT01-00390	95	100µg/L	D	None	N/A	N/A	None
BATT01-00390	96	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	96	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	96	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	96	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	96	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	96	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	96	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	96	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	96	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	96	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	96	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	96	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	96	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	96	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	96	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	96	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	96	33µg/L	A	None	N/A	N/A	None
BATT01-00390	96	33µg/L	B	None	N/A	N/A	None
BATT01-00390	96	33µg/L	C	None	N/A	N/A	None
BATT01-00390	96	33µg/L	D	None	N/A	N/A	None
BATT01-00390	96	100µg/L	A	None	N/A	N/A	None
BATT01-00390	96	100µg/L	B	None	N/A	N/A	None
BATT01-00390	96	100µg/L	C	None	N/A	N/A	None
BATT01-00390	96	100µg/L	D	None	N/A	N/A	None
BATT01-00390	97	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	97	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	97	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	97	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	97	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	97	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	97	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	97	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	97	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	97	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	97	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	97	3.6µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	97	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	97	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	97	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	97	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	97	33µg/L	A	None	N/A	N/A	None
BATT01-00390	97	33µg/L	B	None	N/A	N/A	None
BATT01-00390	97	33µg/L	C	None	N/A	N/A	None
BATT01-00390	97	33µg/L	D	None	N/A	N/A	None
BATT01-00390	97	100µg/L	A	None	N/A	N/A	None
BATT01-00390	97	100µg/L	B	None	N/A	N/A	None
BATT01-00390	97	100µg/L	C	None	N/A	N/A	None
BATT01-00390	97	100µg/L	D	None	N/A	N/A	None
BATT01-00390	98	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	98	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	98	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	98	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	98	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	98	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	98	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	98	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	98	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	98	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	98	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	98	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	98	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	98	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	98	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	98	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	98	33µg/L	A	None	N/A	N/A	None
BATT01-00390	98	33µg/L	B	None	N/A	N/A	None
BATT01-00390	98	33µg/L	C	None	N/A	N/A	None
BATT01-00390	98	33µg/L	D	None	N/A	N/A	None
BATT01-00390	98	100µg/L	A	None	N/A	N/A	None
BATT01-00390	98	100µg/L	B	None	N/A	N/A	None
BATT01-00390	98	100µg/L	C	None	N/A	N/A	None
BATT01-00390	98	100µg/L	D	None	N/A	N/A	None
BATT01-00390	99	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	99	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	99	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	99	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	99	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	99	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	99	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	99	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	99	3.6µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	99	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	99	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	99	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	99	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	99	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	99	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	99	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	99	33µg/L	A	None	N/A	N/A	None
BATT01-00390	99	33µg/L	B	None	N/A	N/A	None
BATT01-00390	99	33µg/L	C	None	N/A	N/A	None
BATT01-00390	99	33µg/L	D	None	N/A	N/A	None
BATT01-00390	99	100µg/L	A	None	N/A	N/A	None
BATT01-00390	99	100µg/L	B	None	N/A	N/A	None
BATT01-00390	99	100µg/L	C	None	N/A	N/A	None
BATT01-00390	99	100µg/L	D	None	N/A	N/A	None
BATT01-00390	100	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	100	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	100	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	100	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	100	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	100	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	100	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	100	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	100	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	100	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	100	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	100	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	100	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	100	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	100	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	100	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	100	33µg/L	A	None	N/A	N/A	None
BATT01-00390	100	33µg/L	B	None	N/A	N/A	None
BATT01-00390	100	33µg/L	C	None	N/A	N/A	None
BATT01-00390	100	33µg/L	D	None	N/A	N/A	None
BATT01-00390	100	100µg/L	A	None	N/A	N/A	None
BATT01-00390	100	100µg/L	B	None	N/A	N/A	None
BATT01-00390	100	100µg/L	C	None	N/A	N/A	None
BATT01-00390	100	100µg/L	D	None	N/A	N/A	None
BATT01-00390	101	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	101	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	101	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	101	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	101	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	101	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	101	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	101	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	101	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	101	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	101	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	101	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	101	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	101	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	101	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	101	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	101	33µg/L	A	None	N/A	N/A	None
BATT01-00390	101	33µg/L	B	None	N/A	N/A	None
BATT01-00390	101	33µg/L	C	None	N/A	N/A	None
BATT01-00390	101	33µg/L	D	None	N/A	N/A	None
BATT01-00390	101	100µg/L	A	None	N/A	N/A	None
BATT01-00390	101	100µg/L	B	None	N/A	N/A	None
BATT01-00390	101	100µg/L	C	None	N/A	N/A	None
BATT01-00390	101	100µg/L	D	None	N/A	N/A	None
BATT01-00390	102	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	102	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	102	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	102	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	102	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	102	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	102	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	102	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	102	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	102	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	102	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	102	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	102	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	102	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	102	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	102	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	102	33µg/L	A	None	N/A	N/A	None
BATT01-00390	102	33µg/L	B	None	N/A	N/A	None
BATT01-00390	102	33µg/L	C	None	N/A	N/A	None
BATT01-00390	102	33µg/L	D	None	N/A	N/A	None
BATT01-00390	102	100µg/L	A	None	N/A	N/A	None
BATT01-00390	102	100µg/L	B	None	N/A	N/A	None
BATT01-00390	102	100µg/L	C	None	N/A	N/A	None
BATT01-00390	102	100µg/L	D	None	N/A	N/A	None
BATT01-00390	103	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	103	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	103	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	103	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	103	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	103	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	103	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	103	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	103	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	103	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	103	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	103	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	103	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	103	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	103	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	103	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	103	33µg/L	A	None	N/A	N/A	None
BATT01-00390	103	33µg/L	B	None	N/A	N/A	None
BATT01-00390	103	33µg/L	C	None	N/A	N/A	None
BATT01-00390	103	33µg/L	D	None	N/A	N/A	None
BATT01-00390	103	100µg/L	A	None	N/A	N/A	None
BATT01-00390	103	100µg/L	B	None	N/A	N/A	None
BATT01-00390	103	100µg/L	C	None	N/A	N/A	None
BATT01-00390	103	100µg/L	D	None	N/A	N/A	None
BATT01-00390	104	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	104	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	104	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	104	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	104	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	104	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	104	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	104	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	104	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	104	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	104	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	104	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	104	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	104	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	104	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	104	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	104	33µg/L	A	None	N/A	N/A	None
BATT01-00390	104	33µg/L	B	None	N/A	N/A	None
BATT01-00390	104	33µg/L	C	None	N/A	N/A	None
BATT01-00390	104	33µg/L	D	None	N/A	N/A	None
BATT01-00390	104	100µg/L	A	None	N/A	N/A	None
BATT01-00390	104	100µg/L	B	None	N/A	N/A	None
BATT01-00390	104	100µg/L	C	None	N/A	N/A	None
BATT01-00390	104	100µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	105	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	105	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	105	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	105	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	105	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	105	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	105	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	105	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	105	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	105	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	105	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	105	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	105	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	105	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	105	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	105	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	105	33µg/L	A	None	N/A	N/A	None
BATT01-00390	105	33µg/L	B	None	N/A	N/A	None
BATT01-00390	105	33µg/L	C	None	N/A	N/A	None
BATT01-00390	105	33µg/L	D	None	N/A	N/A	None
BATT01-00390	105	100µg/L	A	None	N/A	N/A	None
BATT01-00390	105	100µg/L	B	None	N/A	N/A	None
BATT01-00390	105	100µg/L	C	None	N/A	N/A	None
BATT01-00390	105	100µg/L	D	None	N/A	N/A	None
BATT01-00390	106	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	106	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	106	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	106	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	106	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	106	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	106	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	106	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	106	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	106	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	106	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	106	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	106	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	106	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	106	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	106	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	106	33µg/L	A	None	N/A	N/A	None
BATT01-00390	106	33µg/L	B	None	N/A	N/A	None
BATT01-00390	106	33µg/L	C	None	N/A	N/A	None
BATT01-00390	106	33µg/L	D	None	N/A	N/A	None
BATT01-00390	106	100µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	106	100µg/L	B	None	N/A	N/A	None
BATT01-00390	106	100µg/L	C	None	N/A	N/A	None
BATT01-00390	106	100µg/L	D	None	N/A	N/A	None
BATT01-00390	107	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	107	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	107	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	107	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	107	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	107	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	107	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	107	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	107	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	107	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	107	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	107	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	107	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	107	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	107	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	107	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	107	33µg/L	A	None	N/A	N/A	None
BATT01-00390	107	33µg/L	B	None	N/A	N/A	None
BATT01-00390	107	33µg/L	C	None	N/A	N/A	None
BATT01-00390	107	33µg/L	D	None	N/A	N/A	None
BATT01-00390	107	100µg/L	A	None	N/A	N/A	None
BATT01-00390	107	100µg/L	B	None	N/A	N/A	None
BATT01-00390	107	100µg/L	C	None	N/A	N/A	None
BATT01-00390	107	100µg/L	D	None	N/A	N/A	None
BATT01-00390	108	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	108	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	108	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	108	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	108	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	108	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	108	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	108	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	108	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	108	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	108	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	108	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	108	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	108	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	108	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	108	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	108	33µg/L	A	None	N/A	N/A	None
BATT01-00390	108	33µg/L	B	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	108	33µg/L	C	None	N/A	N/A	None
BATT01-00390	108	33µg/L	D	None	N/A	N/A	None
BATT01-00390	108	100µg/L	A	None	N/A	N/A	None
BATT01-00390	108	100µg/L	B	None	N/A	N/A	None
BATT01-00390	108	100µg/L	C	None	N/A	N/A	None
BATT01-00390	108	100µg/L	D	None	N/A	N/A	None
BATT01-00390	109	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	109	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	109	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	109	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	109	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	109	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	109	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	109	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	109	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	109	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	109	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	109	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	109	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	109	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	109	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	109	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	109	33µg/L	A	None	N/A	N/A	None
BATT01-00390	109	33µg/L	B	None	N/A	N/A	None
BATT01-00390	109	33µg/L	C	None	N/A	N/A	None
BATT01-00390	109	33µg/L	D	None	N/A	N/A	None
BATT01-00390	109	100µg/L	A	None	N/A	N/A	None
BATT01-00390	109	100µg/L	B	None	N/A	N/A	None
BATT01-00390	109	100µg/L	C	None	N/A	N/A	None
BATT01-00390	109	100µg/L	D	None	N/A	N/A	None
BATT01-00390	110	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	110	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	110	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	110	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	110	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	110	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	110	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	110	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	110	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	110	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	110	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	110	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	110	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	110	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	110	10.9µg/L	C	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	110	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	110	33µg/L	A	None	N/A	N/A	None
BATT01-00390	110	33µg/L	B	None	N/A	N/A	None
BATT01-00390	110	33µg/L	C	None	N/A	N/A	None
BATT01-00390	110	33µg/L	D	None	N/A	N/A	None
BATT01-00390	110	100µg/L	A	None	N/A	N/A	None
BATT01-00390	110	100µg/L	B	None	N/A	N/A	None
BATT01-00390	110	100µg/L	C	None	N/A	N/A	None
BATT01-00390	110	100µg/L	D	None	N/A	N/A	None
BATT01-00390	111	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	111	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	111	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	111	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	111	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	111	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	111	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	111	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	111	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	111	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	111	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	111	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	111	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	111	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	111	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	111	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	111	33µg/L	A	None	N/A	N/A	None
BATT01-00390	111	33µg/L	B	None	N/A	N/A	None
BATT01-00390	111	33µg/L	C	None	N/A	N/A	None
BATT01-00390	111	33µg/L	D	None	N/A	N/A	None
BATT01-00390	111	100µg/L	A	None	N/A	N/A	None
BATT01-00390	111	100µg/L	B	None	N/A	N/A	None
BATT01-00390	111	100µg/L	C	None	N/A	N/A	None
BATT01-00390	111	100µg/L	D	None	N/A	N/A	None
BATT01-00390	112	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	112	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	112	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	112	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	112	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	112	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	112	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	112	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	112	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	112	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	112	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	112	3.6µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	112	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	112	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	112	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	112	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	112	33µg/L	A	None	N/A	N/A	None
BATT01-00390	112	33µg/L	B	None	N/A	N/A	None
BATT01-00390	112	33µg/L	C	None	N/A	N/A	None
BATT01-00390	112	33µg/L	D	None	N/A	N/A	None
BATT01-00390	112	100µg/L	A	None	N/A	N/A	None
BATT01-00390	112	100µg/L	B	None	N/A	N/A	None
BATT01-00390	112	100µg/L	C	None	N/A	N/A	None
BATT01-00390	112	100µg/L	D	None	N/A	N/A	None
BATT01-00390	113	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	113	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	113	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	113	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	113	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	113	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	113	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	113	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	113	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	113	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	113	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	113	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	113	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	113	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	113	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	113	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	113	33µg/L	A	None	N/A	N/A	None
BATT01-00390	113	33µg/L	B	None	N/A	N/A	None
BATT01-00390	113	33µg/L	C	None	N/A	N/A	None
BATT01-00390	113	33µg/L	D	None	N/A	N/A	None
BATT01-00390	113	100µg/L	A	None	N/A	N/A	None
BATT01-00390	113	100µg/L	B	None	N/A	N/A	None
BATT01-00390	113	100µg/L	C	None	N/A	N/A	None
BATT01-00390	113	100µg/L	D	None	N/A	N/A	None
BATT01-00390	114	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	114	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	114	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	114	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	114	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	114	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	114	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	114	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	114	3.6µg/L	A	None	N/A	N/A	None

DEST BATT01-00390 Clinical Signs (Daily)

Study ID	Test Day	Name of Treatment Group	Replicate ID	Clinical Sign/Mortality	Larva or Juvenile	Number Affected	Comments
BATT01-00390	114	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	114	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	114	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	114	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	114	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	114	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	114	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	114	33µg/L	A	None	N/A	N/A	None
BATT01-00390	114	33µg/L	B	None	N/A	N/A	None
BATT01-00390	114	33µg/L	C	None	N/A	N/A	None
BATT01-00390	114	33µg/L	D	None	N/A	N/A	None
BATT01-00390	114	100µg/L	A	None	N/A	N/A	None
BATT01-00390	114	100µg/L	B	None	N/A	N/A	None
BATT01-00390	114	100µg/L	C	None	N/A	N/A	None
BATT01-00390	114	100µg/L	D	None	N/A	N/A	None
BATT01-00390	115	(Ctrl) 0.0µg/L	A	None	N/A	N/A	None
BATT01-00390	115	(Ctrl) 0.0µg/L	B	None	N/A	N/A	None
BATT01-00390	115	(Ctrl) 0.0µg/L	C	None	N/A	N/A	None
BATT01-00390	115	(Ctrl) 0.0µg/L	D	None	N/A	N/A	None
BATT01-00390	115	(Ctrl) 0.0µg/L	E	None	N/A	N/A	None
BATT01-00390	115	(Ctrl) 0.0µg/L	F	None	N/A	N/A	None
BATT01-00390	115	(Ctrl) 0.0µg/L	G	None	N/A	N/A	None
BATT01-00390	115	(Ctrl) 0.0µg/L	H	None	N/A	N/A	None
BATT01-00390	115	3.6µg/L	A	None	N/A	N/A	None
BATT01-00390	115	3.6µg/L	B	None	N/A	N/A	None
BATT01-00390	115	3.6µg/L	C	None	N/A	N/A	None
BATT01-00390	115	3.6µg/L	D	None	N/A	N/A	None
BATT01-00390	115	10.9µg/L	A	None	N/A	N/A	None
BATT01-00390	115	10.9µg/L	B	None	N/A	N/A	None
BATT01-00390	115	10.9µg/L	C	None	N/A	N/A	None
BATT01-00390	115	10.9µg/L	D	None	N/A	N/A	None
BATT01-00390	115	33µg/L	A	None	N/A	N/A	None
BATT01-00390	115	33µg/L	B	None	N/A	N/A	None
BATT01-00390	115	33µg/L	C	None	N/A	N/A	None
BATT01-00390	115	33µg/L	D	None	N/A	N/A	None
BATT01-00390	115	100µg/L	A	None	N/A	N/A	None
BATT01-00390	115	100µg/L	B	None	N/A	N/A	None
BATT01-00390	115	100µg/L	C	None	N/A	N/A	None
BATT01-00390	115	100µg/L	D	None	N/A	N/A	None

DEST BATT01-00390 Overall Mortality

Study ID	Name of Treatment Group	Replicate ID	Time Period	Initial Number	Mortality (# dead)	% Mortality	Comments
BATT01-00390	(Ctrl) 0.0µg/L	A	To NF 66	20	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	B	To NF 66	20	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	C	To NF 66	20	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	D	To NF 66	20	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	E	To NF 66	20	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	F	To NF 66	20	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	G	To NF 66	20	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	H	To NF 66	20	0	0%	
BATT01-00390	3.6µg/L	A	To NF 66	20	0	0%	
BATT01-00390	3.6µg/L	B	To NF 66	20	0	0%	
BATT01-00390	3.6µg/L	C	To NF 66	20	0	0%	
BATT01-00390	3.6µg/L	D	To NF 66	20	0	0%	
BATT01-00390	10.9µg/L	A	To NF 66	20	0	0%	
BATT01-00390	10.9µg/L	B	To NF 66	20	0	0%	
BATT01-00390	10.9µg/L	C	To NF 66	20	0	0%	
BATT01-00390	10.9µg/L	D	To NF 66	20	0	0%	
BATT01-00390	33µg/L	A	To NF 66	20	0	0%	
BATT01-00390	33µg/L	B	To NF 66	20	0	0%	
BATT01-00390	33µg/L	C	To NF 66	20	0	0%	
BATT01-00390	33µg/L	D	To NF 66	20	0	0%	
BATT01-00390	100µg/L	A	To NF 66	20	0	0%	
BATT01-00390	100µg/L	B	To NF 66	20	0	0%	
BATT01-00390	100µg/L	C	To NF 66	20	0	0%	
BATT01-00390	100µg/L	D	To NF 66	20	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	A	To Termination	10	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	B	To Termination	10	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	C	To Termination	10	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	D	To Termination	10	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	E	To Termination	10	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	F	To Termination	10	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	G	To Termination	10	0	0%	
BATT01-00390	(Ctrl) 0.0µg/L	H	To Termination	10	0	0%	
BATT01-00390	3.6µg/L	A	To Termination	10	0	0%	
BATT01-00390	3.6µg/L	B	To Termination	10	0	0%	
BATT01-00390	3.6µg/L	C	To Termination	10	0	0%	
BATT01-00390	3.6µg/L	D	To Termination	10	0	0%	
BATT01-00390	10.9µg/L	A	To Termination	10	0	0%	
BATT01-00390	10.9µg/L	B	To Termination	10	0	0%	
BATT01-00390	10.9µg/L	C	To Termination	10	0	0%	
BATT01-00390	10.9µg/L	D	To Termination	10	0	0%	
BATT01-00390	33µg/L	A	To Termination	10	0	0%	
BATT01-00390	33µg/L	B	To Termination	10	0	0%	
BATT01-00390	33µg/L	C	To Termination	10	0	0%	
BATT01-00390	33µg/L	D	To Termination	10	0	0%	

DEST BATT01-00390 Overall Mortality

Study ID	Name of Treatment Group	Replicate ID	Time Period	Initial Number	Mortality (# dead)	% Mortality	Comments
BATT01-00390	100µg/L	A	To Termination	10	0	0%	
BATT01-00390	100µg/L	B	To Termination	10	0	0%	
BATT01-00390	100µg/L	C	To Termination	10	0	0%	
BATT01-00390	100µg/L	D	To Termination	10	0	0%	

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	(Ctrl) 0.0µg/L	A	1	36	Y	0.937	16.3			
BATT01-00390	(Ctrl) 0.0µg/L	A	2	38	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	3	41	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	4	42	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	5	44	Y	0.811	19.3			
BATT01-00390	(Ctrl) 0.0µg/L	A	6	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	7	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	8	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	9	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	10	46	Y	0.901	19.6			
BATT01-00390	(Ctrl) 0.0µg/L	A	11	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	12	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	13	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	14	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	15	46	Y	0.889	17.8			
BATT01-00390	(Ctrl) 0.0µg/L	A	16	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	17	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	18	47	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	19	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	A	20	48	Y	1.037	20.9			
BATT01-00390	(Ctrl) 0.0µg/L	B	1	37	Y	0.804	17.6			
BATT01-00390	(Ctrl) 0.0µg/L	B	2	39	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	3	40	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	4	43	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	5	44	Y	0.874	18.9			
BATT01-00390	(Ctrl) 0.0µg/L	B	6	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	7	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	8	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	9	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	10	45	Y	1.096	20.8			
BATT01-00390	(Ctrl) 0.0µg/L	B	11	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	12	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	13	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	14	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	15	49	Y	0.887	20.1			
BATT01-00390	(Ctrl) 0.0µg/L	B	16	49	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	17	49	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	18	51	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	19	51	N					
BATT01-00390	(Ctrl) 0.0µg/L	B	20	55	Y	0.821	17.9			
BATT01-00390	(Ctrl) 0.0µg/L	C	1	36	Y	1.051	19.3			
BATT01-00390	(Ctrl) 0.0µg/L	C	2	36	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	3	36	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	4	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	5	44	Y	0.891	19.7			
BATT01-00390	(Ctrl) 0.0µg/L	C	6	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	7	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	8	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	9	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	10	46	Y	0.898	19.2			
BATT01-00390	(Ctrl) 0.0µg/L	C	11	46	N					

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	(Ctrl) 0.0µg/L	C	12	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	13	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	14	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	15	50	Y	0.900	19.8			
BATT01-00390	(Ctrl) 0.0µg/L	C	16	51	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	17	53	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	18	56	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	19	57	N					
BATT01-00390	(Ctrl) 0.0µg/L	C	20	58	Y	0.882	17.7			
BATT01-00390	(Ctrl) 0.0µg/L	D	1	39	Y	1.048	20.7			
BATT01-00390	(Ctrl) 0.0µg/L	D	2	39	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	3	39	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	4	39	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	5	41	Y	0.833	20.9			
BATT01-00390	(Ctrl) 0.0µg/L	D	6	42	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	7	43	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	8	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	9	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	10	46	Y	1.169	22.4			
BATT01-00390	(Ctrl) 0.0µg/L	D	11	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	12	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	13	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	14	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	15	46	Y	0.816	19.2			
BATT01-00390	(Ctrl) 0.0µg/L	D	16	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	17	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	18	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	19	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	D	20	48	Y	0.813	18.0			
BATT01-00390	(Ctrl) 0.0µg/L	E	1	36	Y	0.827	15.4			
BATT01-00390	(Ctrl) 0.0µg/L	E	2	38	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	3	40	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	4	40	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	5	40	Y	0.937	16.9			
BATT01-00390	(Ctrl) 0.0µg/L	E	6	41	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	7	43	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	8	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	9	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	10	45	Y	0.821	18.0			
BATT01-00390	(Ctrl) 0.0µg/L	E	11	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	12	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	13	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	14	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	15	46	Y	0.838	18.0			
BATT01-00390	(Ctrl) 0.0µg/L	E	16	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	17	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	18	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	19	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	E	20	48	Y	0.801	16.9			
BATT01-00390	(Ctrl) 0.0µg/L	F	1	36	Y	0.820	17.6			
BATT01-00390	(Ctrl) 0.0µg/L	F	2	36	N					

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	(Ctrl) 0.0µg/L	F	3	37	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	4	38	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	5	38	Y	0.822	18.7			
BATT01-00390	(Ctrl) 0.0µg/L	F	6	38	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	7	39	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	8	40	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	9	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	10	44	Y	0.844	18.5			
BATT01-00390	(Ctrl) 0.0µg/L	F	11	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	12	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	13	45	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	14	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	15	46	Y	0.851	18.1			
BATT01-00390	(Ctrl) 0.0µg/L	F	16	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	17	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	18	48	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	19	49	N					
BATT01-00390	(Ctrl) 0.0µg/L	F	20	49	Y	1.052	20.3			
BATT01-00390	(Ctrl) 0.0µg/L	G	1	36	Y	0.829	15.8			
BATT01-00390	(Ctrl) 0.0µg/L	G	2	36	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	3	36	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	4	36	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	5	37	Y	0.898	17.2			
BATT01-00390	(Ctrl) 0.0µg/L	G	6	37	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	7	37	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	8	37	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	9	37	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	10	39	Y	0.890	20.2			
BATT01-00390	(Ctrl) 0.0µg/L	G	11	39	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	12	40	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	13	40	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	14	42	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	15	44	Y	1.174	22.0			
BATT01-00390	(Ctrl) 0.0µg/L	G	16	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	17	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	18	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	19	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	G	20	46	Y	0.969	20.6			
BATT01-00390	(Ctrl) 0.0µg/L	H	1	38	Y	0.909	17.2			
BATT01-00390	(Ctrl) 0.0µg/L	H	2	39	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	3	39	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	4	39	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	5	41	Y	0.819	17.9			
BATT01-00390	(Ctrl) 0.0µg/L	H	6	41	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	7	41	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	8	42	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	9	43	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	10	44	Y	0.813	18.4			
BATT01-00390	(Ctrl) 0.0µg/L	H	11	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	12	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	13	44	N					

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	(Ctrl) 0.0µg/L	H	14	44	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	15	45	Y	1.001	19.9			
BATT01-00390	(Ctrl) 0.0µg/L	H	16	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	17	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	18	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	19	46	N					
BATT01-00390	(Ctrl) 0.0µg/L	H	20	46	Y	0.807	17.9			
BATT01-00390	3.6µg/L	A	1	36	Y	0.983	18.6			
BATT01-00390	3.6µg/L	A	2	42	N					
BATT01-00390	3.6µg/L	A	3	43	N					
BATT01-00390	3.6µg/L	A	4	45	N					
BATT01-00390	3.6µg/L	A	5	45	Y	1.043	19.3			
BATT01-00390	3.6µg/L	A	6	46	N					
BATT01-00390	3.6µg/L	A	7	49	N					
BATT01-00390	3.6µg/L	A	8	49	N					
BATT01-00390	3.6µg/L	A	9	49	N					
BATT01-00390	3.6µg/L	A	10	51	Y	0.832	18.0			
BATT01-00390	3.6µg/L	A	11	53	N					
BATT01-00390	3.6µg/L	A	12	53	N					
BATT01-00390	3.6µg/L	A	13	53	N					
BATT01-00390	3.6µg/L	A	14	55	N					
BATT01-00390	3.6µg/L	A	15	56	Y	0.880	18.7			
BATT01-00390	3.6µg/L	A	16	56	N					
BATT01-00390	3.6µg/L	A	17	57	N					
BATT01-00390	3.6µg/L	A	18	57	N					
BATT01-00390	3.6µg/L	A	19	59	N					
BATT01-00390	3.6µg/L	A	20	70	Y	0.800	15.3			
BATT01-00390	3.6µg/L	B	1	46	Y	1.029	20.2			
BATT01-00390	3.6µg/L	B	2	48	N					
BATT01-00390	3.6µg/L	B	3	49	N					
BATT01-00390	3.6µg/L	B	4	49	N					
BATT01-00390	3.6µg/L	B	5	49	Y	0.832	17.4			
BATT01-00390	3.6µg/L	B	6	49	N					
BATT01-00390	3.6µg/L	B	7	49	N					
BATT01-00390	3.6µg/L	B	8	49	N					
BATT01-00390	3.6µg/L	B	9	49	N					
BATT01-00390	3.6µg/L	B	10	50	Y	0.813	17.7			
BATT01-00390	3.6µg/L	B	11	52	N					
BATT01-00390	3.6µg/L	B	12	53	N					
BATT01-00390	3.6µg/L	B	13	56	N					
BATT01-00390	3.6µg/L	B	14	57	N					
BATT01-00390	3.6µg/L	B	15	58	Y	0.886	19.3			
BATT01-00390	3.6µg/L	B	16	59	N					
BATT01-00390	3.6µg/L	B	17	59	N					
BATT01-00390	3.6µg/L	B	18	60	N					
BATT01-00390	3.6µg/L	B	19	62	N					
BATT01-00390	3.6µg/L	B	20	62	Y	1.056	20.7			
BATT01-00390	3.6µg/L	C	1	45	Y	1.142	22.0			
BATT01-00390	3.6µg/L	C	2	48	N					
BATT01-00390	3.6µg/L	C	3	50	N					
BATT01-00390	3.6µg/L	C	4	51	N					

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	3.6µg/L	C	5	51	Y	0.832	18.2			
BATT01-00390	3.6µg/L	C	6	51	N					
BATT01-00390	3.6µg/L	C	7	52	N					
BATT01-00390	3.6µg/L	C	8	52	N					
BATT01-00390	3.6µg/L	C	9	53	N					
BATT01-00390	3.6µg/L	C	10	53	Y	0.864	19.0			
BATT01-00390	3.6µg/L	C	11	54	N					
BATT01-00390	3.6µg/L	C	12	55	N					
BATT01-00390	3.6µg/L	C	13	56	N					
BATT01-00390	3.6µg/L	C	14	56	N					
BATT01-00390	3.6µg/L	C	15	56	Y	0.997	19.3			
BATT01-00390	3.6µg/L	C	16	58	N					
BATT01-00390	3.6µg/L	C	17	60	N					
BATT01-00390	3.6µg/L	C	18	62	N					
BATT01-00390	3.6µg/L	C	19	64	N					
BATT01-00390	3.6µg/L	C	20	65	Y	1.056	20.7			
BATT01-00390	3.6µg/L	D	1	40	Y	0.974	18.4			
BATT01-00390	3.6µg/L	D	2	42	N					
BATT01-00390	3.6µg/L	D	3	42	N					
BATT01-00390	3.6µg/L	D	4	42	N					
BATT01-00390	3.6µg/L	D	5	43	Y	0.969	18.3			
BATT01-00390	3.6µg/L	D	6	43	N					
BATT01-00390	3.6µg/L	D	7	44	N					
BATT01-00390	3.6µg/L	D	8	45	N					
BATT01-00390	3.6µg/L	D	9	45	N					
BATT01-00390	3.6µg/L	D	10	45	Y	0.839	17.5			
BATT01-00390	3.6µg/L	D	11	46	N					
BATT01-00390	3.6µg/L	D	12	49	N					
BATT01-00390	3.6µg/L	D	13	49	N					
BATT01-00390	3.6µg/L	D	14	49	N					
BATT01-00390	3.6µg/L	D	15	49	Y	0.845	16.2			
BATT01-00390	3.6µg/L	D	16	50	N					
BATT01-00390	3.6µg/L	D	17	50	N					
BATT01-00390	3.6µg/L	D	18	50	N					
BATT01-00390	3.6µg/L	D	19	51	N					
BATT01-00390	3.6µg/L	D	20	53	Y	0.808	19.2			
BATT01-00390	10.9µg/L	A	1	43	Y	1.034	21.8			
BATT01-00390	10.9µg/L	A	2	43	N					
BATT01-00390	10.9µg/L	A	3	45	N					
BATT01-00390	10.9µg/L	A	4	45	N					
BATT01-00390	10.9µg/L	A	5	45	Y	1.173	23.3			
BATT01-00390	10.9µg/L	A	6	46	N					
BATT01-00390	10.9µg/L	A	7	48	N					
BATT01-00390	10.9µg/L	A	8	49	N					
BATT01-00390	10.9µg/L	A	9	49	N					
BATT01-00390	10.9µg/L	A	10	49	Y	0.895	19.6			
BATT01-00390	10.9µg/L	A	11	50	N					
BATT01-00390	10.9µg/L	A	12	51	N					
BATT01-00390	10.9µg/L	A	13	51	N					
BATT01-00390	10.9µg/L	A	14	53	N					
BATT01-00390	10.9µg/L	A	15	58	Y	0.831	19.4			

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	10.9µg/L	A	16	58	N					
BATT01-00390	10.9µg/L	A	17	58	N					
BATT01-00390	10.9µg/L	A	18	60	N					
BATT01-00390	10.9µg/L	A	19	60	N					
BATT01-00390	10.9µg/L	A	20	62	Y	0.801	18.9			
BATT01-00390	10.9µg/L	B	1	40	Y	1.135	20.3			
BATT01-00390	10.9µg/L	B	2	44	N					
BATT01-00390	10.9µg/L	B	3	55	N					
BATT01-00390	10.9µg/L	B	4	56	N					
BATT01-00390	10.9µg/L	B	5	57	Y	0.831	19.9			
BATT01-00390	10.9µg/L	B	6	57	N					
BATT01-00390	10.9µg/L	B	7	57	N					
BATT01-00390	10.9µg/L	B	8	58	N					
BATT01-00390	10.9µg/L	B	9	59	N					
BATT01-00390	10.9µg/L	B	10	59	Y	0.915	20.1			
BATT01-00390	10.9µg/L	B	11	59	N					
BATT01-00390	10.9µg/L	B	12	61	N					
BATT01-00390	10.9µg/L	B	13	62	N					
BATT01-00390	10.9µg/L	B	14	63	N					
BATT01-00390	10.9µg/L	B	15	63	Y	0.928	21.3			
BATT01-00390	10.9µg/L	B	16	64	N					
BATT01-00390	10.9µg/L	B	17	65	N					
BATT01-00390	10.9µg/L	B	18	70	N					
BATT01-00390	10.9µg/L	B	19	70	N					
BATT01-00390	10.9µg/L	B	20	70	Y	0.805	18.5			
BATT01-00390	10.9µg/L	C	1	41	Y	0.987	22.3			
BATT01-00390	10.9µg/L	C	2	44	N					
BATT01-00390	10.9µg/L	C	3	45	N					
BATT01-00390	10.9µg/L	C	4	45	N					
BATT01-00390	10.9µg/L	C	5	45	Y	0.832	19.7			
BATT01-00390	10.9µg/L	C	6	48	N					
BATT01-00390	10.9µg/L	C	7	48	N					
BATT01-00390	10.9µg/L	C	8	48	N					
BATT01-00390	10.9µg/L	C	9	49	N					
BATT01-00390	10.9µg/L	C	10	49	Y	1.210	22.4			
BATT01-00390	10.9µg/L	C	11	49	N					
BATT01-00390	10.9µg/L	C	12	49	N					
BATT01-00390	10.9µg/L	C	13	50	N					
BATT01-00390	10.9µg/L	C	14	51	N					
BATT01-00390	10.9µg/L	C	15	52	Y	0.813	19.0			
BATT01-00390	10.9µg/L	C	16	52	N					
BATT01-00390	10.9µg/L	C	17	54	N					
BATT01-00390	10.9µg/L	C	18	56	N					
BATT01-00390	10.9µg/L	C	19	56	N					
BATT01-00390	10.9µg/L	C	20	59	Y	1.000	20.8			
BATT01-00390	10.9µg/L	D	1	43	Y	1.112	21.7			
BATT01-00390	10.9µg/L	D	2	49	N					
BATT01-00390	10.9µg/L	D	3	49	N					
BATT01-00390	10.9µg/L	D	4	49	N					
BATT01-00390	10.9µg/L	D	5	49	Y	0.863	19.1			
BATT01-00390	10.9µg/L	D	6	49	N					

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	10.9µg/L	D	7	49	N					
BATT01-00390	10.9µg/L	D	8	50	N					
BATT01-00390	10.9µg/L	D	9	51	N					
BATT01-00390	10.9µg/L	D	10	52	Y	0.877	20.5			
BATT01-00390	10.9µg/L	D	11	52	N					
BATT01-00390	10.9µg/L	D	12	53	N					
BATT01-00390	10.9µg/L	D	13	55	N					
BATT01-00390	10.9µg/L	D	14	55	N					
BATT01-00390	10.9µg/L	D	15	55	Y	0.866	19.3			
BATT01-00390	10.9µg/L	D	16	56	N					
BATT01-00390	10.9µg/L	D	17	56	N					
BATT01-00390	10.9µg/L	D	18	57	N					
BATT01-00390	10.9µg/L	D	19	59	N					
BATT01-00390	10.9µg/L	D	20	63	Y	0.820	20.3			
BATT01-00390	33µg/L	A	1	51	Y	1.079	22.2			
BATT01-00390	33µg/L	A	2	51	N					
BATT01-00390	33µg/L	A	3	52	N					
BATT01-00390	33µg/L	A	4	52	N					
BATT01-00390	33µg/L	A	5	53	Y	0.854	18.4			
BATT01-00390	33µg/L	A	6	53	N					
BATT01-00390	33µg/L	A	7	53	N					
BATT01-00390	33µg/L	A	8	53	N					
BATT01-00390	33µg/L	A	9	53	N					
BATT01-00390	33µg/L	A	10	55	Y	0.817	16.7			
BATT01-00390	33µg/L	A	11	56	N					
BATT01-00390	33µg/L	A	12	56	N					
BATT01-00390	33µg/L	A	13	58	N					
BATT01-00390	33µg/L	A	14	58	N					
BATT01-00390	33µg/L	A	15	60	Y	0.826	18.2			
BATT01-00390	33µg/L	A	16	61	N					
BATT01-00390	33µg/L	A	17	61	N					
BATT01-00390	33µg/L	A	18	62	N					
BATT01-00390	33µg/L	A	19	63	N					
BATT01-00390	33µg/L	A	20	63	Y	0.953	22.7			
BATT01-00390	33µg/L	B	1	42	Y	1.326	20.5			
BATT01-00390	33µg/L	B	2	48	N					
BATT01-00390	33µg/L	B	3	49	N					
BATT01-00390	33µg/L	B	4	49	N					
BATT01-00390	33µg/L	B	5	49	Y	1.125	23.0			
BATT01-00390	33µg/L	B	6	49	N					
BATT01-00390	33µg/L	B	7	53	N					
BATT01-00390	33µg/L	B	8	53	N					
BATT01-00390	33µg/L	B	9	55	N					
BATT01-00390	33µg/L	B	10	55	Y	0.859	20.4			
BATT01-00390	33µg/L	B	11	55	N					
BATT01-00390	33µg/L	B	12	55	N					
BATT01-00390	33µg/L	B	13	55	N					
BATT01-00390	33µg/L	B	14	56	N					
BATT01-00390	33µg/L	B	15	56	Y	1.008	21.0			
BATT01-00390	33µg/L	B	16	56	N					
BATT01-00390	33µg/L	B	17	57	N					

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	33µg/L	B	18	59	N					
BATT01-00390	33µg/L	B	19	60	N					
BATT01-00390	33µg/L	B	20	61	Y	0.937	18.5			
BATT01-00390	33µg/L	C	1	41	Y	0.928	22.4			
BATT01-00390	33µg/L	C	2	42	N					
BATT01-00390	33µg/L	C	3	44	N					
BATT01-00390	33µg/L	C	4	45	N					
BATT01-00390	33µg/L	C	5	45	Y	1.160	21.7			
BATT01-00390	33µg/L	C	6	46	N					
BATT01-00390	33µg/L	C	7	46	N					
BATT01-00390	33µg/L	C	8	48	N					
BATT01-00390	33µg/L	C	9	48	N					
BATT01-00390	33µg/L	C	10	48	Y	0.840	19.2			
BATT01-00390	33µg/L	C	11	49	N					
BATT01-00390	33µg/L	C	12	49	N					
BATT01-00390	33µg/L	C	13	51	N					
BATT01-00390	33µg/L	C	14	51	N					
BATT01-00390	33µg/L	C	15	51	Y	1.159	21.9			
BATT01-00390	33µg/L	C	16	52	N					
BATT01-00390	33µg/L	C	17	52	N					
BATT01-00390	33µg/L	C	18	53	N					
BATT01-00390	33µg/L	C	19	53	N					
BATT01-00390	33µg/L	C	20	55	Y	1.179	22.5			
BATT01-00390	33µg/L	D	1	43	Y	0.871	19.5			
BATT01-00390	33µg/L	D	2	45	N					
BATT01-00390	33µg/L	D	3	45	N					
BATT01-00390	33µg/L	D	4	45	N					
BATT01-00390	33µg/L	D	5	49	Y	1.124	22.3			
BATT01-00390	33µg/L	D	6	49	N					
BATT01-00390	33µg/L	D	7	50	N					
BATT01-00390	33µg/L	D	8	51	N					
BATT01-00390	33µg/L	D	9	51	N					
BATT01-00390	33µg/L	D	10	51	Y	0.996	19.8			
BATT01-00390	33µg/L	D	11	52	N					
BATT01-00390	33µg/L	D	12	52	N					
BATT01-00390	33µg/L	D	13	54	N					
BATT01-00390	33µg/L	D	14	55	N					
BATT01-00390	33µg/L	D	15	55	Y	0.923	20.7			
BATT01-00390	33µg/L	D	16	55	N					
BATT01-00390	33µg/L	D	17	55	N					
BATT01-00390	33µg/L	D	18	55	N					
BATT01-00390	33µg/L	D	19	55	N					
BATT01-00390	33µg/L	D	20	57	Y	0.833	19.3			
BATT01-00390	100µg/L	A	1	46	Y	1.125	23.3			
BATT01-00390	100µg/L	A	2	48	N					
BATT01-00390	100µg/L	A	3	51	N					
BATT01-00390	100µg/L	A	4	52	N					
BATT01-00390	100µg/L	A	5	52	Y	1.155	22.5			
BATT01-00390	100µg/L	A	6	52	N					
BATT01-00390	100µg/L	A	7	53	N					
BATT01-00390	100µg/L	A	8	54	N					

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	100µg/L	A	9	55	N					
BATT01-00390	100µg/L	A	10	55	Y	0.847	18.6			
BATT01-00390	100µg/L	A	11	56	N					
BATT01-00390	100µg/L	A	12	58	N					
BATT01-00390	100µg/L	A	13	58	N					
BATT01-00390	100µg/L	A	14	58	N					
BATT01-00390	100µg/L	A	15	58	Y	0.821	21.1			
BATT01-00390	100µg/L	A	16	60	N					
BATT01-00390	100µg/L	A	17	61	N					
BATT01-00390	100µg/L	A	18	62	N					
BATT01-00390	100µg/L	A	19	67	N					
BATT01-00390	100µg/L	A	20	67	Y	0.922	21.5			
BATT01-00390	100µg/L	B	1	44	Y	0.969	21.0			
BATT01-00390	100µg/L	B	2	45	N					
BATT01-00390	100µg/L	B	3	45	N					
BATT01-00390	100µg/L	B	4	46	N					
BATT01-00390	100µg/L	B	5	48	N					
BATT01-00390	100µg/L	B	6	49	Y	0.896	18.5			
BATT01-00390	100µg/L	B	7	49	N					
BATT01-00390	100µg/L	B	8	50	N					
BATT01-00390	100µg/L	B	9	51	N					
BATT01-00390	100µg/L	B	10	51	Y	0.887	19.5			
BATT01-00390	100µg/L	B	11	53	N					
BATT01-00390	100µg/L	B	12	53	N					
BATT01-00390	100µg/L	B	13	56	N					
BATT01-00390	100µg/L	B	14	56	N					
BATT01-00390	100µg/L	B	15	56	Y	1.114	21.7			
BATT01-00390	100µg/L	B	16	56	N					
BATT01-00390	100µg/L	B	17	58	N					
BATT01-00390	100µg/L	B	18	59	N					
BATT01-00390	100µg/L	B	19	59	N					
BATT01-00390	100µg/L	B	20	65	Y	0.968	21.5			
BATT01-00390	100µg/L	C	1	42	Y	1.198	20.1			
BATT01-00390	100µg/L	C	2	44	N					
BATT01-00390	100µg/L	C	3	48	N					
BATT01-00390	100µg/L	C	4	48	N					
BATT01-00390	100µg/L	C	5	49	Y	1.162	21.7			
BATT01-00390	100µg/L	C	6	49	N					
BATT01-00390	100µg/L	C	7	49	N					
BATT01-00390	100µg/L	C	8	49	N					
BATT01-00390	100µg/L	C	9	49	N					
BATT01-00390	100µg/L	C	10	49	Y	0.990	20.4			
BATT01-00390	100µg/L	C	11	49	N					
BATT01-00390	100µg/L	C	12	51	N					
BATT01-00390	100µg/L	C	13	51	N					
BATT01-00390	100µg/L	C	14	51	N					
BATT01-00390	100µg/L	C	15	52	Y	0.855	21.5			
BATT01-00390	100µg/L	C	16	52	N					
BATT01-00390	100µg/L	C	17	55	N					
BATT01-00390	100µg/L	C	18	56	N					
BATT01-00390	100µg/L	C	19	57	N					

DEST BATT01-00390 Larval Sub-Sample (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Larva ID	Time to NF 62 (days)	Larval Sub-Sample Selection	Body Weight (g)	Snout-to-Vent Length (mm)	External Abnormalities	Clinical Signs of Toxicity	Comments
BATT01-00390	100µg/L	C	20	62	Y	1.135	21.6			
BATT01-00390	100µg/L	D	1	38	Y	1.047	21.0			
BATT01-00390	100µg/L	D	2	40	N					
BATT01-00390	100µg/L	D	3	42	N					
BATT01-00390	100µg/L	D	4	42	N					
BATT01-00390	100µg/L	D	5	43	Y	0.990	20.9			
BATT01-00390	100µg/L	D	6	46	N					
BATT01-00390	100µg/L	D	7	46	N					
BATT01-00390	100µg/L	D	8	48	N					
BATT01-00390	100µg/L	D	9	48	N					
BATT01-00390	100µg/L	D	10	49	Y	1.104	22.7			
BATT01-00390	100µg/L	D	11	50	N					
BATT01-00390	100µg/L	D	12	50	N					
BATT01-00390	100µg/L	D	13	51	N					
BATT01-00390	100µg/L	D	14	53	N					
BATT01-00390	100µg/L	D	15	53	Y	1.165	22.0			
BATT01-00390	100µg/L	D	16	54	N					
BATT01-00390	100µg/L	D	17	55	N					
BATT01-00390	100µg/L	D	18	63	N					
BATT01-00390	100µg/L	D	19	63	N					
BATT01-00390	100µg/L	D	20	63	Y	1.180	23.8			

DEST BATT01-00390 Thyroid Histology (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Sub Sample/ Larval ID	Sample Number	Follicular Cell Hypertrophy	Follicular Cell Hyperplasia	Comments
BATT01-00390	0.0µg/L	A	1	074	1		
BATT01-00390	0.0µg/L	A	5	110	0	0	
BATT01-00390	0.0µg/L	A	10	135	1		
BATT01-00390	0.0µg/L	A	15	136	1		
BATT01-00390	0.0µg/L	A	20	146	1		
BATT01-00390	0.0µg/L	B	1	080	1		
BATT01-00390	0.0µg/L	B	5	111	1		
BATT01-00390	0.0µg/L	B	10	126	1		
BATT01-00390	0.0µg/L	B	15	150	1		
BATT01-00390	0.0µg/L	B	20	188	1		
BATT01-00390	0.0µg/L	C	1	075	1		
BATT01-00390	0.0µg/L	C	5	112	1		
BATT01-00390	0.0µg/L	C	10	137	1		
BATT01-00390	0.0µg/L	C	15	163	1		
BATT01-00390	0.0µg/L	C	20	201	2		
BATT01-00390	0.0µg/L	D	1	094	2		
BATT01-00390	0.0µg/L	D	5	099	2		
BATT01-00390	0.0µg/L	D	10	138	1		
BATT01-00390	0.0µg/L	D	15	139	1	1	
BATT01-00390	0.0µg/L	D	20	147	1		
BATT01-00390	0.0µg/L	E	1	076	0	0	
BATT01-00390	0.0µg/L	E	5	096	0	0	
BATT01-00390	0.0µg/L	E	10	127	1		
BATT01-00390	0.0µg/L	E	15	140	1		
BATT01-00390	0.0µg/L	E	20	148	0	0	
BATT01-00390	0.0µg/L	F	1	077	0	0	
BATT01-00390	0.0µg/L	F	5	082	1		
BATT01-00390	0.0µg/L	F	10	113	0	0	
BATT01-00390	0.0µg/L	F	15	141	1		
BATT01-00390	0.0µg/L	F	20	151	1		
BATT01-00390	0.0µg/L	G	1	078	0	0	
BATT01-00390	0.0µg/L	G	5	081	0	0	
BATT01-00390	0.0µg/L	G	10	095	1		
BATT01-00390	0.0µg/L	G	15	114	1		
BATT01-00390	0.0µg/L	G	20	142	2		
BATT01-00390	0.0µg/L	H	1	083	0	0	
BATT01-00390	0.0µg/L	H	5	100	1		
BATT01-00390	0.0µg/L	H	10	115	1		
BATT01-00390	0.0µg/L	H	15	128	1		
BATT01-00390	0.0µg/L	H	20	143	1		
BATT01-00390	3.6µg/L	A	1	079	1		
BATT01-00390	3.6µg/L	A	5	129	1		
BATT01-00390	3.6µg/L	A	10	165	1		
BATT01-00390	3.6µg/L	A	15	195	1		

DEST BATT01-00390 Thyroid Histology (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Sub Sample/ Larval ID	Sample Number	Follicular Cell Hypertrophy	Follicular Cell Hyperplasia	Comments
BATT01-00390	3.6µg/L	A	20	357	0	0	
BATT01-00390	3.6µg/L	B	1	144	0	0	
BATT01-00390	3.6µg/L	B	5	152	0	0	
BATT01-00390	3.6µg/L	B	10	164	0	0	
BATT01-00390	3.6µg/L	B	15	202	1		
BATT01-00390	3.6µg/L	B	20	218	1		
BATT01-00390	3.6µg/L	C	1	130	1		
BATT01-00390	3.6µg/L	C	5	166	1		
BATT01-00390	3.6µg/L	C	10	184	1		
BATT01-00390	3.6µg/L	C	15	196	1		
BATT01-00390	3.6µg/L	C	20	225	1		
BATT01-00390	3.6µg/L	D	1	097	1		
BATT01-00390	3.6µg/L	D	5	105	1		
BATT01-00390	3.6µg/L	D	10	131	0	0	
BATT01-00390	3.6µg/L	D	15	153	1		
BATT01-00390	3.6µg/L	D	20	185	2		
BATT01-00390	10.9µg/L	A	1	106	1		
BATT01-00390	10.9µg/L	A	5	132	1		
BATT01-00390	10.9µg/L	A	10	154	1		
BATT01-00390	10.9µg/L	A	15	203	0	0	
BATT01-00390	10.9µg/L	A	20	219	0	0	
BATT01-00390	10.9µg/L	B	1	098	2	1	
BATT01-00390	10.9µg/L	B	5	199	1	1	
BATT01-00390	10.9µg/L	B	10	214	1		
BATT01-00390	10.9µg/L	B	15	221	1	1	
BATT01-00390	10.9µg/L	B	20	356	1		
BATT01-00390	10.9µg/L	C	1	101	1		
BATT01-00390	10.9µg/L	C	5	133	0	0	
BATT01-00390	10.9µg/L	C	10	155	1		
BATT01-00390	10.9µg/L	C	15	171	0	0	
BATT01-00390	10.9µg/L	C	20	215	2		
BATT01-00390	10.9µg/L	D	1	107	1		
BATT01-00390	10.9µg/L	D	5	156	0	0	
BATT01-00390	10.9µg/L	D	10	172	1		
BATT01-00390	10.9µg/L	D	15	189	1		
BATT01-00390	10.9µg/L	D	20	222	1		
BATT01-00390	33µg/L	A	1	167	1		
BATT01-00390	33µg/L	A	5	186	1		
BATT01-00390	33µg/L	A	10	190	0	0	
BATT01-00390	33µg/L	A	15	216	0	0	
BATT01-00390	33µg/L	A	20	223	0	0	
BATT01-00390	33µg/L	B	1	103	0	0	
BATT01-00390	33µg/L	B	5	157	1	1	
BATT01-00390	33µg/L	B	10	191	1		

DEST BATT01-00390 Thyroid Histology (NF 62)

Study ID	Name of Treatment Group	Replicate ID	Sub Sample/ Larval ID	Sample Number	Follicular Cell Hypertrophy	Follicular Cell Hyperplasia	Comments
BATT01-00390	33µg/L	B	15	197	1		
BATT01-00390	33µg/L	B	20	217	0	0	
BATT01-00390	33µg/L	C	1	102	1		
BATT01-00390	33µg/L	C	5	134	1		
BATT01-00390	33µg/L	C	10	149	0	0	
BATT01-00390	33µg/L	C	15	168	1		
BATT01-00390	33µg/L	C	20	192	1		
BATT01-00390	33µg/L	D	1	108	1		
BATT01-00390	33µg/L	D	5	158	1		
BATT01-00390	33µg/L	D	10	169	1		
BATT01-00390	33µg/L	D	15	193	1		
BATT01-00390	33µg/L	D	20	200	0	0	
BATT01-00390	100µg/L	A	1	145	1		
BATT01-00390	100µg/L	A	5	173	1		
BATT01-00390	100µg/L	A	10	194	0	0	
BATT01-00390	100µg/L	A	15	204	1		
BATT01-00390	100µg/L	A	20	355	1		
BATT01-00390	100µg/L	B	1	116	0	0	
BATT01-00390	100µg/L	B	5	159	1		
BATT01-00390	100µg/L	B	10	170	1		
BATT01-00390	100µg/L	B	15	198	1		
BATT01-00390	100µg/L	B	20	226	1		
BATT01-00390	100µg/L	C	1	104	0	0	
BATT01-00390	100µg/L	C	5	160	0	0	
BATT01-00390	100µg/L	C	10	161	1		
BATT01-00390	100µg/L	C	15	174	1		
BATT01-00390	100µg/L	C	20	220	1		
BATT01-00390	100µg/L	D	1	084	1		
BATT01-00390	100µg/L	D	5	109	0	0	
BATT01-00390	100µg/L	D	10	162	1		
BATT01-00390	100µg/L	D	15	187	1		
BATT01-00390	100µg/L	D	20	224	1		

Study ID	Name of Treatment Group	Replicate ID	Animal ID	NF Stage	Body Weight (mg)	Snout-to-Vent Length (mm)	Phenotypic Sex	External Abnormalities	Comments
BATT01-00390	(Ctrl) 0.0µg/L	A	1	66	0.784	20.7	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	A	2	66	0.636	19.9	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	A	3	66	0.673	19.7	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	A	4	66	0.740	20.2	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	A	5	66	0.634	20.1	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	B	1	66	0.599	20.3	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	B	2	66	0.734	20.1	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	B	3	66	0.747	21.0	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	B	4	66	0.804	21.2	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	B	5	66	0.787	22.2	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	C	1	66	0.447	17.3	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	C	2	66	0.698	20.1	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	C	3	66	0.540	19.3	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	C	4	66	0.691	20.1	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	C	5	66	0.801	21.9	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	D	1	66	0.620	20.1	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	D	2	66	0.566	19.0	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	D	3	66	0.420	17.7	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	D	4	66	0.641	20.1	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	D	5	66	0.701	20.8	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	E	1	66	0.734	21.2	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	E	2	66	0.408	17.2	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	E	3	66	0.621	19.3	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	E	4	66	0.713	20.2	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	E	5	66	0.645	20.2	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	F	1	66	0.467	17.9	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	F	2	66	0.597	20.1	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	F	3	66	0.814	19.4	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	F	4	66	0.535	21.9	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	F	5	66	0.859	22.4	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	G	1	66	0.614	21.6	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	G	2	66	0.895	22.6	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	G	3	66	0.893	17.2	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	G	4	66	0.931	17.5	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	G	5	66	0.955	19.1	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	H	1	66	0.432	19.5	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	H	2	66	0.473	20.4	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	H	3	66	0.599	19.5	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	H	4	66	0.609	19.5	Indeterminate		
BATT01-00390	(Ctrl) 0.0µg/L	H	5	66	0.688	18.5	Indeterminate		
BATT01-00390	3.6µg/L	A	1	66	0.417	17.5	Indeterminate		
BATT01-00390	3.6µg/L	A	2	66	0.469	18.3	Indeterminate		
BATT01-00390	3.6µg/L	A	3	66	0.751	21.5	Indeterminate		
BATT01-00390	3.6µg/L	A	4	66	0.547	17.7	Indeterminate		
BATT01-00390	3.6µg/L	A	5	66	0.458	17.7	Indeterminate		
BATT01-00390	3.6µg/L	B	1	66	0.649	20.3	Indeterminate		
BATT01-00390	3.6µg/L	B	2	66	0.639	22.6	Indeterminate		
BATT01-00390	3.6µg/L	B	3	66	0.529	18.6	Indeterminate		
BATT01-00390	3.6µg/L	B	4	66	0.657	19.4	Indeterminate		
BATT01-00390	3.6µg/L	B	5	66	0.934	19.9	Indeterminate		
BATT01-00390	3.6µg/L	C	1	66	0.463	18.3	Indeterminate		
BATT01-00390	3.6µg/L	C	2	66	0.401	17.2	Indeterminate		

Study ID	Name of Treatment Group	Replicate ID	Animal ID	NF Stage	Body Weight (mg)	Snout-to-Vent Length (mm)	Phenotypic Sex	External Abnormalities	Comments
BATT01-00390	3.6µg/L	C	3	66	0.423	17.1	Indeterminate		
BATT01-00390	3.6µg/L	C	4	66	0.479	18.4	Indeterminate		
BATT01-00390	3.6µg/L	C	5	66	0.546	19.3	Indeterminate		
BATT01-00390	3.6µg/L	D	1	66	0.574	22.5	Indeterminate		
BATT01-00390	3.6µg/L	D	2	66	0.606	21.7	Indeterminate		
BATT01-00390	3.6µg/L	D	3	66	0.659	17.1	Indeterminate		
BATT01-00390	3.6µg/L	D	4	66	0.876	18.6	Indeterminate		
BATT01-00390	3.6µg/L	D	5	66	0.884	19.6	Indeterminate		
BATT01-00390	10.9µg/L	A	1	66	0.506	17.4	Indeterminate		
BATT01-00390	10.9µg/L	A	2	66	0.403	16.7	Indeterminate		
BATT01-00390	10.9µg/L	A	3	66	0.439	17.5	Indeterminate		
BATT01-00390	10.9µg/L	A	4	66	0.340	15.9	Indeterminate		
BATT01-00390	10.9µg/L	A	5	66	0.383	16.2	Indeterminate		
BATT01-00390	10.9µg/L	B	1	66	0.493	17.2	Indeterminate		
BATT01-00390	10.9µg/L	B	2	66	0.581	15.9	Indeterminate		
BATT01-00390	10.9µg/L	B	3	66	0.643	18.1	Indeterminate		
BATT01-00390	10.9µg/L	B	4	66	0.517	16.0	Indeterminate		
BATT01-00390	10.9µg/L	B	5	66	0.386	15.0	Indeterminate		
BATT01-00390	10.9µg/L	C	1	66	0.504	18.0	Indeterminate		
BATT01-00390	10.9µg/L	C	2	66	0.633	18.5	Indeterminate		
BATT01-00390	10.9µg/L	C	3	66	0.609	18.7	Indeterminate		
BATT01-00390	10.9µg/L	C	4	66	0.691	19.2	Indeterminate		
BATT01-00390	10.9µg/L	C	5	66	0.531	18.9	Indeterminate		
BATT01-00390	10.9µg/L	D	1	66	0.395	16.5	Indeterminate		
BATT01-00390	10.9µg/L	D	2	66	0.605	19.7	Indeterminate		
BATT01-00390	10.9µg/L	D	3	66	0.367	16.3	Indeterminate		
BATT01-00390	10.9µg/L	D	4	66	0.363	16.2	Indeterminate		
BATT01-00390	10.9µg/L	D	5	66	0.419	17.3	Indeterminate		
BATT01-00390	33µg/L	A	1	66	0.313	15.0	Indeterminate		
BATT01-00390	33µg/L	A	2	66	0.373	15.9	Indeterminate		
BATT01-00390	33µg/L	A	3	66	0.332	15.9	Indeterminate		
BATT01-00390	33µg/L	A	4	66	0.244	14.2	Indeterminate		
BATT01-00390	33µg/L	A	5	66	0.297	14.7	Indeterminate		
BATT01-00390	33µg/L	B	1	66	0.386	17.0	Indeterminate		
BATT01-00390	33µg/L	B	2	66	0.516	18.2	Indeterminate		
BATT01-00390	33µg/L	B	3	66	0.336	15.5	Indeterminate		
BATT01-00390	33µg/L	B	4	66	0.510	18.4	Indeterminate		
BATT01-00390	33µg/L	B	5	66	0.345	16.6	Indeterminate		
BATT01-00390	33µg/L	C	1	66	0.739	21.0	Indeterminate		
BATT01-00390	33µg/L	C	2	66	0.776	21.5	Indeterminate		
BATT01-00390	33µg/L	C	3	66	0.761	20.9	Indeterminate		
BATT01-00390	33µg/L	C	4	66	0.667	20.7	Indeterminate		
BATT01-00390	33µg/L	C	5	66	0.734	21.0	Indeterminate		
BATT01-00390	33µg/L	D	1	66	0.540	18.7	Indeterminate		
BATT01-00390	33µg/L	D	2	66	0.535	19.0	Indeterminate		
BATT01-00390	33µg/L	D	3	66	0.576	19.9	Indeterminate		
BATT01-00390	33µg/L	D	4	66	0.448	18.0	Indeterminate		
BATT01-00390	33µg/L	D	5	66	0.881	20.8	Indeterminate		
BATT01-00390	100µg/L	A	1	66	0.599	19.4	Indeterminate		
BATT01-00390	100µg/L	A	2	66	0.550	18.8	Indeterminate		
BATT01-00390	100µg/L	A	3	66	0.619	20.1	Indeterminate		
BATT01-00390	100µg/L	A	4	66	0.685	17.5	Indeterminate		

DEST BATT01-00390 Culled Animals

Study ID	Name of Treatment Group	Replicate ID	Animal ID	NF Stage	Body Weight (mg)	Snout-to-Vent Length (mm)	Phenotypic Sex	External Abnormalities	Comments
BATT01-00390	100µg/L	A	5	66	0.574	18.6	Indeterminate		
BATT01-00390	100µg/L	B	1	66	0.647	19.7	Indeterminate		
BATT01-00390	100µg/L	B	2	66	0.697	20.1	Indeterminate		
BATT01-00390	100µg/L	B	3	66	0.720	20.8	Indeterminate		
BATT01-00390	100µg/L	B	4	66	0.635	19.4	Indeterminate		
BATT01-00390	100µg/L	B	5	66	0.710	19.5	Indeterminate		
BATT01-00390	100µg/L	C	1	66	0.653	20.4	Indeterminate		
BATT01-00390	100µg/L	C	2	66	0.501	19.1	Indeterminate		
BATT01-00390	100µg/L	C	3	66	0.503	18.5	Indeterminate		
BATT01-00390	100µg/L	C	4	66	0.693	20.5	Indeterminate		
BATT01-00390	100µg/L	C	5	66	0.658	20.3	Indeterminate		
BATT01-00390	100µg/L	D	1	66	0.648	19.4	Indeterminate		
BATT01-00390	100µg/L	D	2	66	0.795	21.1	Indeterminate		
BATT01-00390	100µg/L	D	3	66	0.596	19.2	Indeterminate		
BATT01-00390	100µg/L	D	4	66	0.562	18.6	Indeterminate		
BATT01-00390	100µg/L	D	5	66	0.545	18.4	Indeterminate		

DEST

BATT01-00390

Juvenile Sample (Termination)

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Body Weight (g)	Snout-Vent Length (mm)	Phenotypic Sex	Genotypic Sex	Liver Weight (g)	Liver-Somatic Index	Comments
BATT01-00390	(Ctrl) 0.0µg/L	A	1	12.334	36.6	M	M	0.701	0.057	Phenotypic Gender identified, unless otherwise indicated, during histopathological examination.
BATT01-00390	(Ctrl) 0.0µg/L	A	2	13.415	36.9	F	F	0.806	0.060	
BATT01-00390	(Ctrl) 0.0µg/L	A	3	11.632	33.8	F	F	0.765	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	A	4	11.353	31.3	M	M	0.685	0.060	
BATT01-00390	(Ctrl) 0.0µg/L	A	5	11.677	33.7	M	M	0.731	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	A	6	11.421	34.3	F	F	0.742	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	A	7	10.906	33.5	M	M	0.679	0.062	
BATT01-00390	(Ctrl) 0.0µg/L	A	8	10.677	32.7	F	F	0.708	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	A	9	10.464	31.8	M	M	0.709	0.068	
BATT01-00390	(Ctrl) 0.0µg/L	A	10	10.459	29.9	M	M	0.762	0.073	
BATT01-00390	(Ctrl) 0.0µg/L	B	1	11.031	33.5	M	M	0.752	0.068	
BATT01-00390	(Ctrl) 0.0µg/L	B	2	11.893	35.9	M	M	0.784	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	B	3	11.957	33.4	F	F	0.679	0.057	
BATT01-00390	(Ctrl) 0.0µg/L	B	4	11.271	34.4	F	F	0.739	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	B	5	11.530	34.3	F	F	0.746	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	B	6	10.473	31.7	M	M	0.717	0.068	
BATT01-00390	(Ctrl) 0.0µg/L	B	7	10.905	33.1	M	M	0.765	0.070	
BATT01-00390	(Ctrl) 0.0µg/L	B	8	11.156	33.4	F	F	0.839	0.075	
BATT01-00390	(Ctrl) 0.0µg/L	B	9	10.627	31.6	M	M	0.669	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	B	10	10.690	32.4	F	F	0.792	0.074	
BATT01-00390	(Ctrl) 0.0µg/L	C	1	12.292	34.8	M	M	0.756	0.062	
BATT01-00390	(Ctrl) 0.0µg/L	C	2	10.738	31.7	M	M	0.676	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	C	3	11.477	33.1	M	M	0.786	0.068	
BATT01-00390	(Ctrl) 0.0µg/L	C	4	10.700	30.0	F	F	0.758	0.071	
BATT01-00390	(Ctrl) 0.0µg/L	C	5	12.624	34.8	M	M	0.810	0.064	
BATT01-00390	(Ctrl) 0.0µg/L	C	6	10.829	32.1	M	M	0.681	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	C	7	10.345	32.4	F	F	0.674	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	C	8	10.702	32.1	M	M	0.728	0.068	
BATT01-00390	(Ctrl) 0.0µg/L	C	9	10.540	30.9	M	M	0.669	0.063	

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DEST

BATT01-00390

Juvenile Sample (Termination)

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Body Weight (g)	Snout-Vent Length (mm)	Phenotypic Sex	Genotypic Sex	Liver Weight (g)	Liver-Somatic Index	Comments
BATT01-00390	(Ctrl) 0.0µg/L	C	10	11.548	33.6	M	M	0.730	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	D	1	11.556	33.6	M	M	0.749	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	D	2	11.850	34.9	M	M	0.732	0.062	
BATT01-00390	(Ctrl) 0.0µg/L	D	3	11.902	33.3	M	M	0.677	0.057	
BATT01-00390	(Ctrl) 0.0µg/L	D	4	10.147	29.9	F	F	0.631	0.062	
BATT01-00390	(Ctrl) 0.0µg/L	D	5	10.536	31.9	M	M	0.695	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	D	6	10.327	29.4	Indeterminate	F	0.618	0.060	
BATT01-00390	(Ctrl) 0.0µg/L	D	7	10.307	31.2	F	F	0.675	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	D	8	10.166	29.7	F	F	0.685	0.067	
BATT01-00390	(Ctrl) 0.0µg/L	D	9	10.543	29.3	M	M	0.642	0.061	
BATT01-00390	(Ctrl) 0.0µg/L	D	10	10.577	29.3	Indeterminate	F	0.649	0.061	
BATT01-00390	(Ctrl) 0.0µg/L	E	1	11.813	33.2	F	F	0.744	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	E	2	11.530	31.4	F	F	0.780	0.068	
BATT01-00390	(Ctrl) 0.0µg/L	E	3	11.718	31.6	M	M	0.751	0.064	
BATT01-00390	(Ctrl) 0.0µg/L	E	4	11.332	31.4	M	M	0.712	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	E	5	11.564	32.0	F	F	0.755	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	E	6	11.469	31.7	F	F	0.741	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	E	7	11.499	30.7	M	M	0.777	0.068	
BATT01-00390	(Ctrl) 0.0µg/L	E	8	11.551	29.1	F	F	0.679	0.059	
BATT01-00390	(Ctrl) 0.0µg/L	E	9	11.748	29.0	M	M	0.668	0.057	
BATT01-00390	(Ctrl) 0.0µg/L	E	10	12.297	30.4	M	M	0.661	0.054	
BATT01-00390	(Ctrl) 0.0µg/L	F	1	11.040	31.4	F	F	0.730	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	F	2	11.557	33.3	F	F	0.727	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	F	3	11.248	30.6	F	F	0.711	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	F	4	11.621	31.2	F	F	0.780	0.067	
BATT01-00390	(Ctrl) 0.0µg/L	F	5	11.333	30.4	F	F	0.676	0.060	
BATT01-00390	(Ctrl) 0.0µg/L	F	6	11.893	30.8	M	M	0.722	0.061	
BATT01-00390	(Ctrl) 0.0µg/L	F	7	10.946	30.9	F	F	0.760	0.069	
BATT01-00390	(Ctrl) 0.0µg/L	F	8	10.396	28.0	M	M	0.693	0.067	
BATT01-00390	(Ctrl) 0.0µg/L	F	9	10.234	28.0	F	F	0.639	0.062	
BATT01-00390	(Ctrl) 0.0µg/L	F	10	10.053	27.8	F	F	0.690	0.069	
BATT01-00390	(Ctrl) 0.0µg/L	G	1	11.019	32.8	M	M	0.784	0.071	
BATT01-00390	(Ctrl) 0.0µg/L	G	2	10.134	27.7	F	F	0.670	0.065	

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DEST

BATT01-00390

Juvenile Sample (Termination)

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Body Weight (g)	Snout-Vent Length (mm)	Phenotypic Sex	Genotypic Sex	Liver Weight (g)	Liver-Somatic Index	Comments
BATT01-00390	(Ctrl) 0.0µg/L	G	3	10.848	31.9	M	M	0.726	0.067	
BATT01-00390	(Ctrl) 0.0µg/L	G	4	10.375	29.5	M	M	0.695	0.067	
BATT01-00390	(Ctrl) 0.0µg/L	G	5	11.234	31.8	M	M	0.741	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	G	6	10.574	30.8	M	M	0.692	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	G	7	10.188	29.7	F	F	0.644	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	G	8	10.289	30.5	M	M	0.683	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	G	9	10.303	29.6	M	M	0.634	0.062	
BATT01-00390	(Ctrl) 0.0µg/L	G	10	10.406	29.3	M	M	0.719	0.069	
BATT01-00390	(Ctrl) 0.0µg/L	H	1	12.368	33.8	M	M	0.775	0.063	
BATT01-00390	(Ctrl) 0.0µg/L	H	2	12.689	35.4	M	M	0.919	0.072	
BATT01-00390	(Ctrl) 0.0µg/L	H	3	12.273	33.6	M	M	0.705	0.057	
BATT01-00390	(Ctrl) 0.0µg/L	H	4	12.025	33.0	F	F	0.778	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	H	5	11.492	32.7	F	F	0.743	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	H	6	11.144	31.1	F	F	0.736	0.066	
BATT01-00390	(Ctrl) 0.0µg/L	H	7	11.076	31.2	M	M	0.716	0.065	
BATT01-00390	(Ctrl) 0.0µg/L	H	8	10.826	29.5	M	M	0.725	0.067	
BATT01-00390	(Ctrl) 0.0µg/L	H	9	10.465	29.7	M	M	0.667	0.064	
BATT01-00390	(Ctrl) 0.0µg/L	H	10	10.747	28.5	Indeterminate	F	0.675	0.063	
BATT01-00390	3.6µg/L	A	1	11.907	34.9	M	M	0.706	0.059	
BATT01-00390	3.6µg/L	A	2	11.584	34.0	M	M	0.729	0.063	
BATT01-00390	3.6µg/L	A	3	10.795	31.2	M	M	0.628	0.058	
BATT01-00390	3.6µg/L	A	4	11.383	33.3	F	F	0.716	0.063	
BATT01-00390	3.6µg/L	A	5	11.727	35.0	M	M	0.720	0.061	
BATT01-00390	3.6µg/L	A	6	10.870	32.1	M	M	0.648	0.060	
BATT01-00390	3.6µg/L	A	7	10.443	30.7	M	M	0.706	0.068	
BATT01-00390	3.6µg/L	A	8	10.246	31.1	M	M	0.637	0.062	
BATT01-00390	3.6µg/L	A	9	9.755	29.4	F	F	0.658	0.067	
BATT01-00390	3.6µg/L	A	10	9.647	28.7	M	M	0.657	0.068	
BATT01-00390	3.6µg/L	B	1	12.128	34.9	M	M	0.724	0.060	
BATT01-00390	3.6µg/L	B	2	12.380	35.9	M	M	0.796	0.064	
BATT01-00390	3.6µg/L	B	3	9.568	28.5	M	M	0.673	0.070	
BATT01-00390	3.6µg/L	B	4	11.150	32.6	M	M	0.754	0.068	
BATT01-00390	3.6µg/L	B	5	10.977	32.3	F	F	0.721	0.065	

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DEST

BATT01-00390

Juvenile Sample (Termination)

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Body Weight (g)	Snout-Vent Length (mm)	Phenotypic Sex	Genotypic Sex	Liver Weight (g)	Liver-Somatic Index	Comments
BATT01-00390	3.6µg/L	B	6	10.875	32.4	M	M	0.721	0.065	
BATT01-00390	3.6µg/L	B	7	11.350	31.6	M	M	0.701	0.062	
BATT01-00390	3.6µg/L	B	8	11.491	32.9	F	F	0.705	0.061	
BATT01-00390	3.6µg/L	B	9	11.621	33.5	F	F	0.742	0.064	
BATT01-00390	3.6µg/L	B	10	11.574	33.3	F	F	0.722	0.062	
BATT01-00390	3.6µg/L	C	1	9.526	28.4	F	F	0.645	0.068	
BATT01-00390	3.6µg/L	C	2	11.583	34.6	M	M	0.801	0.069	
BATT01-00390	3.6µg/L	C	3	10.223	30.0	F	F	0.660	0.065	
BATT01-00390	3.6µg/L	C	4	11.916	33.9	M	M	0.733	0.062	
BATT01-00390	3.6µg/L	C	5	9.755	29.9	M	M	0.647	0.065	
BATT01-00390	3.6µg/L	C	6	11.450	34.0	F	F	0.669	0.058	
BATT01-00390	3.6µg/L	C	7	11.296	32.4	M	M	0.646	0.057	
BATT01-00390	3.6µg/L	C	8	11.560	33.4	F	F	0.745	0.064	
BATT01-00390	3.6µg/L	C	9	11.631	33.5	M	M	0.731	0.063	
BATT01-00390	3.6µg/L	C	10	12.053	32.9	M	M	0.810	0.067	
BATT01-00390	3.6µg/L	D	1	10.612	30.7	M	M	0.630	0.059	
BATT01-00390	3.6µg/L	D	2	11.815	34.0	M	M	0.720	0.061	
BATT01-00390	3.6µg/L	D	3	11.261	30.7	M	M	0.691	0.061	
BATT01-00390	3.6µg/L	D	4	11.820	32.6	Indeterminate	F	0.740	0.063	
BATT01-00390	3.6µg/L	D	5	11.152	32.7	M	M	0.652	0.058	
BATT01-00390	3.6µg/L	D	6	11.707	32.5	M	M	0.686	0.059	
BATT01-00390	3.6µg/L	D	7	12.649	35.2	M	M	0.750	0.059	
BATT01-00390	3.6µg/L	D	8	12.249	33.1	M	M	0.745	0.061	
BATT01-00390	3.6µg/L	D	9	12.873	35.8	M	M	0.735	0.057	
BATT01-00390	3.6µg/L	D	10	13.294	35.9	F	F	0.742	0.055	
BATT01-00390	10.9µg/L	A	1	8.826	28.1	F	F	0.649	0.073	
BATT01-00390	10.9µg/L	A	2	9.352	30.4	M	M	0.634	0.068	
BATT01-00390	10.9µg/L	A	3	10.665	33.8	F	F	0.642	0.060	
BATT01-00390	10.9µg/L	A	4	10.307	34.9	F	F	0.655	0.063	
BATT01-00390	10.9µg/L	A	5	10.602	34.1	F	F	0.700	0.065	
BATT01-00390	10.9µg/L	A	6	11.745	37.2	F	F	0.725	0.062	
BATT01-00390	10.9µg/L	A	7	11.214	35.7	M	M	0.674	0.060	
BATT01-00390	10.9µg/L	A	8	12.123	36.0	M	M	0.713	0.059	

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Body Weight (g)	Snout-Vent Length (mm)	Phenotypic Sex	Genotypic Sex	Liver Weight (g)	Liver-Somatic Index	Comments
BATT01-00390	10.9µg/L	A	9	12.077	37.8	M	M	0.765	0.063	
BATT01-00390	10.9µg/L	A	10	12.465	39.7	M	M	0.785	0.063	
BATT01-00390	10.9µg/L	B	1	10.617	33.5	F	F	0.674	0.064	
BATT01-00390	10.9µg/L	B	2	10.176	32.1	F	F	0.676	0.065	
BATT01-00390	10.9µg/L	B	3	10.100	32.1	M	M	0.637	0.063	
BATT01-00390	10.9µg/L	B	4	10.017	35.0	M	M	0.702	0.070	
BATT01-00390	10.9µg/L	B	5	11.193	34.3	M	M	0.687	0.061	
BATT01-00390	10.9µg/L	B	6	11.842	36.0	F	F	0.660	0.055	
BATT01-00390	10.9µg/L	B	7	11.159	34.7	M	M	0.673	0.060	
BATT01-00390	10.9µg/L	B	8	11.344	34.9	M	M	0.709	0.062	
BATT01-00390	10.9µg/L	B	9	12.072	36.9	M	M	0.727	0.060	
BATT01-00390	10.9µg/L	B	10	12.476	36.1	M	M	0.718	0.058	
BATT01-00390	10.9µg/L	C	1	9.596	31.7	F	F	0.671	0.070	
BATT01-00390	10.9µg/L	C	2	10.747	33.2	F	F	0.684	0.064	
BATT01-00390	10.9µg/L	C	3	9.615	30.2	M	M	0.605	0.063	
BATT01-00390	10.9µg/L	C	4	11.972	36.5	F	F	0.778	0.065	
BATT01-00390	10.9µg/L	C	5	9.897	31.1	M	M	0.657	0.066	
BATT01-00390	10.9µg/L	C	6	10.419	35.0	F	F	0.652	0.063	
BATT01-00390	10.9µg/L	C	7	10.152	32.7	F	F	0.658	0.065	
BATT01-00390	10.9µg/L	C	8	11.687	36.2	F	F	0.761	0.065	
BATT01-00390	10.9µg/L	C	9	12.143	37.9	M	M	0.742	0.061	
BATT01-00390	10.9µg/L	C	10	12.313	37.4	F	F	0.715	0.058	
BATT01-00390	10.9µg/L	D	1	10.172	33.0	M	M	0.671	0.066	
BATT01-00390	10.9µg/L	D	2	11.244	35.2	F	F	0.751	0.067	
BATT01-00390	10.9µg/L	D	3	10.505	33.0	F	F	0.673	0.064	
BATT01-00390	10.9µg/L	D	4	11.737	36.7	M	M	0.665	0.057	
BATT01-00390	10.9µg/L	D	5	10.565	33.9	F	F	0.681	0.064	
BATT01-00390	10.9µg/L	D	6	11.665	35.5	M	M	0.659	0.057	
BATT01-00390	10.9µg/L	D	7	11.581	35.1	F	F	0.726	0.063	
BATT01-00390	10.9µg/L	D	8	11.210	33.8	F	F	0.693	0.062	
BATT01-00390	10.9µg/L	D	9	12.390	36.9	M	M	0.744	0.060	
BATT01-00390	10.9µg/L	D	10	12.539	37.0	F	F	0.821	0.065	
BATT01-00390	33µg/L	A	1	9.939	30.7	Indeterminate	F	0.722	0.073	

FEL

DEST

BATT01-00390

Juvenile Sample (Termination)

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Body Weight (g)	Snout-Vent Length (mm)	Phenotypic Sex	Genotypic Sex	Liver Weight (g)	Liver-Somatic Index	Comments
BATT01-00390	33µg/L	A	2	10.972	33.0	F	F	0.692	0.063	
BATT01-00390	33µg/L	A	3	10.138	30.0	F	F	0.694	0.068	
BATT01-00390	33µg/L	A	4	10.493	32.6	M	M	0.720	0.069	
BATT01-00390	33µg/L	A	5	10.362	32.5	F	F	0.703	0.068	
BATT01-00390	33µg/L	A	6	10.868	33.6	F	F	0.661	0.061	
BATT01-00390	33µg/L	A	7	10.797	33.9	F	F	0.719	0.067	
BATT01-00390	33µg/L	A	8	11.506	34.6	M	M	0.839	0.073	
BATT01-00390	33µg/L	A	9	11.473	34.3	M	M	0.740	0.064	
BATT01-00390	33µg/L	A	10	13.139	38.9	F	F	0.747	0.057	
BATT01-00390	33µg/L	B	1	9.473	30.8	Indeterminate	M	0.685	0.072	
BATT01-00390	33µg/L	B	2	9.961	32.2	M	M	0.723	0.073	
BATT01-00390	33µg/L	B	3	10.184	33.9	Indeterminate	M	0.665	0.065	
BATT01-00390	33µg/L	B	4	10.208	33.0	M	M	0.731	0.072	
BATT01-00390	33µg/L	B	5	12.064	37.6	M	M	0.713	0.059	
BATT01-00390	33µg/L	B	6	12.554	38.7	F	F	0.689	0.055	
BATT01-00390	33µg/L	B	7	10.991	34.4	F	F	0.728	0.066	
BATT01-00390	33µg/L	B	8	12.094	37.1	M	M	0.840	0.069	
BATT01-00390	33µg/L	B	9	12.376	38.4	F	F	0.748	0.060	
BATT01-00390	33µg/L	B	10	12.631	38.3	F	F	0.688	0.054	
BATT01-00390	33µg/L	C	1	10.404	32.7	M	M	0.707	0.068	
BATT01-00390	33µg/L	C	2	11.616	36.2	M	M	0.756	0.065	
BATT01-00390	33µg/L	C	3	12.072	35.1	M	M	0.700	0.058	
BATT01-00390	33µg/L	C	4	12.405	37.5	F	F	0.786	0.063	
BATT01-00390	33µg/L	C	5	11.522	34.1	Indeterminate	F	0.711	0.062	
BATT01-00390	33µg/L	C	6	12.619	36.7	M	M	0.740	0.059	
BATT01-00390	33µg/L	C	7	11.831	33.8	M	M	0.677	0.057	
BATT01-00390	33µg/L	C	8	12.693	35.8	M	M	0.713	0.055	
BATT01-00390	33µg/L	C	9	12.299	33.5	F	F	0.708	0.058	
BATT01-00390	33µg/L	C	10	13.927	38.2	F	F	0.775	0.055	
BATT01-00390	33µg/L	D	1	10.894	33.1	F	F	0.663	0.061	
BATT01-00390	33µg/L	D	2	10.912	33.9	F	F	0.686	0.063	
BATT01-00390	33µg/L	D	3	11.218	34.2	M	M	0.714	0.064	
BATT01-00390	33µg/L	D	4	12.221	38.2	M	M	0.697	0.057	

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DEST

BATT01-00390

Juvenile Sample (Termination)

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Body Weight (g)	Snout-Vent Length (mm)	Phenotypic Sex	Genotypic Sex	Liver Weight (g)	Liver-Somatic Index	Comments
BATT01-00390	33µg/L	D	5	10.956	33.5	F	F	0.669	0.061	
BATT01-00390	33µg/L	D	6	10.985	33.9	M	M	0.669	0.061	
BATT01-00390	33µg/L	D	7	11.217	34.3	M	M	0.683	0.061	
BATT01-00390	33µg/L	D	8	11.583	36.2	F	F	0.690	0.060	
BATT01-00390	33µg/L	D	9	12.565	38.4	M	M	0.703	0.056	
BATT01-00390	33µg/L	D	10	13.229	38.9	M	M	0.766	0.058	
BATT01-00390	100µg/L	A	1	10.884	38.0	F	F	0.670	0.062	
BATT01-00390	100µg/L	A	2	12.154	40.7	F	F	0.604	0.050	
BATT01-00390	100µg/L	A	3	10.399	40.6	F	F	0.657	0.063	
BATT01-00390	100µg/L	A	4	11.574	35.7	M	M	0.680	0.059	
BATT01-00390	100µg/L	A	5	10.147	39.4	F	F	0.691	0.068	
BATT01-00390	100µg/L	A	6	11.054	38.8	M	M	0.726	0.065	
BATT01-00390	100µg/L	A	7	9.306	34.3	F	F	0.649	0.070	
BATT01-00390	100µg/L	A	8	10.157	37.2	F	F	0.660	0.065	
BATT01-00390	100µg/L	A	9	9.176	34.5	Indeterminate	M	0.646	0.070	
BATT01-00390	100µg/L	A	10	9.919	36.9	F	F	0.649	0.065	
BATT01-00390	100µg/L	B	1	9.691	34.3	F	F	0.664	0.068	
BATT01-00390	100µg/L	B	2	10.127	35.5	M	M	0.725	0.072	
BATT01-00390	100µg/L	B	3	10.185	35.0	F	F	0.703	0.069	
BATT01-00390	100µg/L	B	4	11.516	37.5	M	M	0.830	0.072	
BATT01-00390	100µg/L	B	5	10.780	36.9	M	M	0.702	0.065	
BATT01-00390	100µg/L	B	6	10.480	38.7	M	M	0.718	0.068	
BATT01-00390	100µg/L	B	7	10.048	33.8	F	F	0.654	0.065	
BATT01-00390	100µg/L	B	8	8.978	31.6	F	F	0.599	0.067	
BATT01-00390	100µg/L	B	9	9.601	33.5	M	M	0.684	0.071	
BATT01-00390	100µg/L	B	10	11.337	37.3	F	F	0.720	0.064	
BATT01-00390	100µg/L	C	1	9.458	33.5	F	F	0.640	0.068	
BATT01-00390	100µg/L	C	2	10.652	34.6	M	M	0.707	0.065	
BATT01-00390	100µg/L	C	3	11.305	37.2	M	M	0.721	0.064	
BATT01-00390	100µg/L	C	4	11.571	37.5	F	F	0.762	0.065	
BATT01-00390	100µg/L	C	5	11.184	36.9	M	M	0.721	0.064	
BATT01-00390	100µg/L	C	6	10.498	35.8	F	F	0.750	0.071	
BATT01-00390	100µg/L	C	7	11.881	37.6	M	M	0.752	0.063	

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Study ID	Name of Treatment Group	Replicate ID	Animal ID	Body Weight (g)	Snout-Vent Length (mm)	Phenotypic Sex	Genotypic Sex	Liver Weight (g)	Liver-Somatic Index	Comments
BATT01-00390	100µg/L	C	8	11.702	37.3	F	F	0.783	0.067	
BATT01-00390	100µg/L	C	9	11.798	38.5	F	F	0.802	0.068	
BATT01-00390	100µg/L	C	10	14.389	43.1	F	F	0.853	0.059	
BATT01-00390	100µg/L	D	1	9.605	35.2	M	M	0.668	0.070	
BATT01-00390	100µg/L	D	2	10.257	35.8	M	M	0.676	0.065	
BATT01-00390	100µg/L	D	3	12.098	39.4	F	F	0.761	0.063	
BATT01-00390	100µg/L	D	4	10.152	35.6	F	F	0.694	0.068	
BATT01-00390	100µg/L	D	5	12.334	40.3	F	F	0.823	0.067	
BATT01-00390	100µg/L	D	6	11.212	37.6	F	F	0.763	0.068	
BATT01-00390	100µg/L	D	7	11.876	38.3	M	M	0.822	0.069	
BATT01-00390	100µg/L	D	8	12.115	39.0	F	F	0.785	0.065	
BATT01-00390	100µg/L	D	9	12.164	40.0	F	F	0.752	0.062	
BATT01-00390	100µg/L	D	10	13.167	41.4	F	F	0.752	0.057	

BATT01-00390

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DEST BATT01-00391 Genetic Sex

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Sample Number	Genotypic Sex	Comments
BATT01-00390	0.0µg/L	A	1	643	M	
BATT01-00390	0.0µg/L	A	2	644	F	
BATT01-00390	0.0µg/L	A	3	645	F	
BATT01-00390	0.0µg/L	A	4	646	M	
BATT01-00390	0.0µg/L	A	5	647	M	
BATT01-00390	0.0µg/L	A	6	648	F	
BATT01-00390	0.0µg/L	A	7	649	M	
BATT01-00390	0.0µg/L	A	8	650	F	
BATT01-00390	0.0µg/L	A	9	651	M	
BATT01-00390	0.0µg/L	A	10	652	M	
BATT01-00390	0.0µg/L	B	1	653	M	
BATT01-00390	0.0µg/L	B	2	654	M	
BATT01-00390	0.0µg/L	B	3	655	F	
BATT01-00390	0.0µg/L	B	4	656	F	
BATT01-00390	0.0µg/L	B	5	657	F	
BATT01-00390	0.0µg/L	B	6	658	M	
BATT01-00390	0.0µg/L	B	7	659	M	
BATT01-00390	0.0µg/L	B	8	660	F	
BATT01-00390	0.0µg/L	B	9	661	M	
BATT01-00390	0.0µg/L	B	10	662	F	
BATT01-00390	0.0µg/L	C	1	663	M	
BATT01-00390	0.0µg/L	C	2	664	M	
BATT01-00390	0.0µg/L	C	3	665	M	
BATT01-00390	0.0µg/L	C	4	666	F	
BATT01-00390	0.0µg/L	C	5	667	M	
BATT01-00390	0.0µg/L	C	6	668	M	
BATT01-00390	0.0µg/L	C	7	669	F	
BATT01-00390	0.0µg/L	C	8	670	M	
BATT01-00390	0.0µg/L	C	9	671	M	
BATT01-00390	0.0µg/L	C	10	672	M	
BATT01-00390	0.0µg/L	D	1	673	M	
BATT01-00390	0.0µg/L	D	2	674	M	
BATT01-00390	0.0µg/L	D	3	675	M	
BATT01-00390	0.0µg/L	D	4	676	F	
BATT01-00390	0.0µg/L	D	5	677	M	
BATT01-00390	0.0µg/L	D	6	678	F	
BATT01-00390	0.0µg/L	D	7	679	F	
BATT01-00390	0.0µg/L	D	8	680	F	
BATT01-00390	0.0µg/L	D	9	681	M	
BATT01-00390	0.0µg/L	D	10	682	F	
BATT01-00390	0.0µg/L	E	1	683	F	
BATT01-00390	0.0µg/L	E	2	684	F	
BATT01-00390	0.0µg/L	E	3	685	M	
BATT01-00390	0.0µg/L	E	4	686	M	
BATT01-00390	0.0µg/L	E	5	687	F	
BATT01-00390	0.0µg/L	E	6	688	F	
BATT01-00390	0.0µg/L	E	7	689	M	
BATT01-00390	0.0µg/L	E	8	690	F	

DEST BATT01-00391 Genetic Sex

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Sample Number	Genotypic Sex	Comments
BATT01-00390	0.0µg/L	E	9	691	M	
BATT01-00390	0.0µg/L	E	10	692	M	
BATT01-00390	0.0µg/L	F	1	693	F	
BATT01-00390	0.0µg/L	F	2	694	F	
BATT01-00390	0.0µg/L	F	3	695	F	
BATT01-00390	0.0µg/L	F	4	696	F	
BATT01-00390	0.0µg/L	F	5	697	F	
BATT01-00390	0.0µg/L	F	6	698	M	
BATT01-00390	0.0µg/L	F	7	699	F	
BATT01-00390	0.0µg/L	F	8	700	M	
BATT01-00390	0.0µg/L	F	9	701	F	
BATT01-00390	0.0µg/L	F	10	702	F	
BATT01-00390	0.0µg/L	G	1	703	M	
BATT01-00390	0.0µg/L	G	2	704	F	
BATT01-00390	0.0µg/L	G	3	705	M	
BATT01-00390	0.0µg/L	G	4	706	M	
BATT01-00390	0.0µg/L	G	5	707	M	
BATT01-00390	0.0µg/L	G	6	708	M	
BATT01-00390	0.0µg/L	G	7	709	F	
BATT01-00390	0.0µg/L	G	8	710	M	
BATT01-00390	0.0µg/L	G	9	711	M	
BATT01-00390	0.0µg/L	G	10	712	M	
BATT01-00390	0.0µg/L	H	1	713	M	
BATT01-00390	0.0µg/L	H	2	714	M	
BATT01-00390	0.0µg/L	H	3	715	M	
BATT01-00390	0.0µg/L	H	4	716	F	
BATT01-00390	0.0µg/L	H	5	717	F	
BATT01-00390	0.0µg/L	H	6	718	F	
BATT01-00390	0.0µg/L	H	7	719	M	
BATT01-00390	0.0µg/L	H	8	720	M	
BATT01-00390	0.0µg/L	H	9	721	M	
BATT01-00390	0.0µg/L	H	10	722	F	
BATT01-00390	3.6µg/L	A	1	723	M	
BATT01-00390	3.6µg/L	A	2	724	M	
BATT01-00390	3.6µg/L	A	3	725	M	
BATT01-00390	3.6µg/L	A	4	726	F	
BATT01-00390	3.6µg/L	A	5	727	M	
BATT01-00390	3.6µg/L	A	6	728	M	
BATT01-00390	3.6µg/L	A	7	729	M	
BATT01-00390	3.6µg/L	A	8	730	M	
BATT01-00390	3.6µg/L	A	9	731	F	
BATT01-00390	3.6µg/L	A	10	732	M	
BATT01-00390	3.6µg/L	B	1	733	M	
BATT01-00390	3.6µg/L	B	2	734	M	
BATT01-00390	3.6µg/L	B	3	735	M	
BATT01-00390	3.6µg/L	B	4	736	M	
BATT01-00390	3.6µg/L	B	5	737	F	
BATT01-00390	3.6µg/L	B	6	738	M	

DEST BATT01-00391 Genetic Sex

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Sample Number	Genotypic Sex	Comments
BATT01-00390	3.6µg/L	B	7	739	M	
BATT01-00390	3.6µg/L	B	8	740	F	
BATT01-00390	3.6µg/L	B	9	741	F	
BATT01-00390	3.6µg/L	B	10	742	F	
BATT01-00390	3.6µg/L	C	1	743	F	
BATT01-00390	3.6µg/L	C	2	744	M	
BATT01-00390	3.6µg/L	C	3	745	F	
BATT01-00390	3.6µg/L	C	4	746	M	
BATT01-00390	3.6µg/L	C	5	747	M	
BATT01-00390	3.6µg/L	C	6	748	F	
BATT01-00390	3.6µg/L	C	7	749	M	
BATT01-00390	3.6µg/L	C	8	750	F	
BATT01-00390	3.6µg/L	C	9	751	M	
BATT01-00390	3.6µg/L	C	10	752	M	
BATT01-00390	3.6µg/L	D	1	753	M	
BATT01-00390	3.6µg/L	D	2	754	M	
BATT01-00390	3.6µg/L	D	3	755	M	
BATT01-00390	3.6µg/L	D	4	756	F	
BATT01-00390	3.6µg/L	D	5	757	M	
BATT01-00390	3.6µg/L	D	6	758	M	
BATT01-00390	3.6µg/L	D	7	759	M	
BATT01-00390	3.6µg/L	D	8	760	M	
BATT01-00390	3.6µg/L	D	9	761	M	
BATT01-00390	3.6µg/L	D	10	762	F	
BATT01-00390	10.9µg/L	A	1	763	F	
BATT01-00390	10.9µg/L	A	2	764	M	
BATT01-00390	10.9µg/L	A	3	765	F	
BATT01-00390	10.9µg/L	A	4	766	F	
BATT01-00390	10.9µg/L	A	5	767	F	
BATT01-00390	10.9µg/L	A	6	768	F	
BATT01-00390	10.9µg/L	A	7	769	M	
BATT01-00390	10.9µg/L	A	8	770	M	
BATT01-00390	10.9µg/L	A	9	771	M	
BATT01-00390	10.9µg/L	A	10	772	M	
BATT01-00390	10.9µg/L	B	1	773	F	
BATT01-00390	10.9µg/L	B	2	774	F	
BATT01-00390	10.9µg/L	B	3	775	M	
BATT01-00390	10.9µg/L	B	4	776	M	
BATT01-00390	10.9µg/L	B	5	777	M	
BATT01-00390	10.9µg/L	B	6	778	F	
BATT01-00390	10.9µg/L	B	7	779	M	
BATT01-00390	10.9µg/L	B	8	780	M	
BATT01-00390	10.9µg/L	B	9	781	M	
BATT01-00390	10.9µg/L	B	10	782	M	
BATT01-00390	10.9µg/L	C	1	783	F	
BATT01-00390	10.9µg/L	C	2	784	F	
BATT01-00390	10.9µg/L	C	3	785	M	
BATT01-00390	10.9µg/L	C	4	786	F	

DEST BATT01-00391 Genetic Sex

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Sample Number	Genotypic Sex	Comments
BATT01-00390	10.9µg/L	C	5	787	M	
BATT01-00390	10.9µg/L	C	6	788	F	
BATT01-00390	10.9µg/L	C	7	789	F	
BATT01-00390	10.9µg/L	C	8	790	F	
BATT01-00390	10.9µg/L	C	9	791	M	
BATT01-00390	10.9µg/L	C	10	792	F	
BATT01-00390	10.9µg/L	D	1	793	M	
BATT01-00390	10.9µg/L	D	2	794	F	
BATT01-00390	10.9µg/L	D	3	795	F	
BATT01-00390	10.9µg/L	D	4	796	M	
BATT01-00390	10.9µg/L	D	5	797	F	
BATT01-00390	10.9µg/L	D	6	798	M	
BATT01-00390	10.9µg/L	D	7	799	F	
BATT01-00390	10.9µg/L	D	8	800	F	
BATT01-00390	10.9µg/L	D	9	801	M	
BATT01-00390	10.9µg/L	D	10	802	F	
BATT01-00390	33µg/L	A	1	803	F	
BATT01-00390	33µg/L	A	2	804	F	
BATT01-00390	33µg/L	A	3	805	F	
BATT01-00390	33µg/L	A	4	806	M	
BATT01-00390	33µg/L	A	5	807	F	
BATT01-00390	33µg/L	A	6	808	F	
BATT01-00390	33µg/L	A	7	809	F	
BATT01-00390	33µg/L	A	8	810	M	
BATT01-00390	33µg/L	A	9	811	M	
BATT01-00390	33µg/L	A	10	812	F	
BATT01-00390	33µg/L	B	1	813	M	
BATT01-00390	33µg/L	B	2	814	M	
BATT01-00390	33µg/L	B	3	815	M	
BATT01-00390	33µg/L	B	4	816	M	
BATT01-00390	33µg/L	B	5	817	M	
BATT01-00390	33µg/L	B	6	818	F	
BATT01-00390	33µg/L	B	7	819	F	
BATT01-00390	33µg/L	B	8	820	M	
BATT01-00390	33µg/L	B	9	821	F	
BATT01-00390	33µg/L	B	10	822	F	
BATT01-00390	33µg/L	C	1	823	M	
BATT01-00390	33µg/L	C	2	824	M	
BATT01-00390	33µg/L	C	3	825	M	
BATT01-00390	33µg/L	C	4	826	F	
BATT01-00390	33µg/L	C	5	827	F	
BATT01-00390	33µg/L	C	6	828	M	
BATT01-00390	33µg/L	C	7	829	M	
BATT01-00390	33µg/L	C	8	830	M	
BATT01-00390	33µg/L	C	9	831	F	
BATT01-00390	33µg/L	C	10	832	F	
BATT01-00390	33µg/L	D	1	833	F	
BATT01-00390	33µg/L	D	2	834	F	

DEST BATT01-00391 Genetic Sex

Study ID	Name of Treatment Group	Replicate ID	Animal ID	Sample Number	Genotypic Sex	Comments
BATT01-00390	33µg/L	D	3	835	M	
BATT01-00390	33µg/L	D	4	836	M	
BATT01-00390	33µg/L	D	5	837	F	
BATT01-00390	33µg/L	D	6	838	M	
BATT01-00390	33µg/L	D	7	839	M	
BATT01-00390	33µg/L	D	8	840	F	
BATT01-00390	33µg/L	D	9	841	M	
BATT01-00390	33µg/L	D	10	842	M	
BATT01-00390	100µg/L	A	1	843	F	
BATT01-00390	100µg/L	A	2	844	F	
BATT01-00390	100µg/L	A	3	845	F	
BATT01-00390	100µg/L	A	4	846	M	
BATT01-00390	100µg/L	A	5	847	F	
BATT01-00390	100µg/L	A	6	848	M	
BATT01-00390	100µg/L	A	7	849	F	
BATT01-00390	100µg/L	A	8	850	F	
BATT01-00390	100µg/L	A	9	851	M	
BATT01-00390	100µg/L	A	10	852	F	
BATT01-00390	100µg/L	B	1	853	F	
BATT01-00390	100µg/L	B	2	854	M	
BATT01-00390	100µg/L	B	3	855	F	
BATT01-00390	100µg/L	B	4	856	M	
BATT01-00390	100µg/L	B	5	857	M	
BATT01-00390	100µg/L	B	6	858	M	
BATT01-00390	100µg/L	B	7	859	F	
BATT01-00390	100µg/L	B	8	860	F	
BATT01-00390	100µg/L	B	9	861	M	
BATT01-00390	100µg/L	B	10	862	F	
BATT01-00390	100µg/L	C	1	863	F	
BATT01-00390	100µg/L	C	2	864	M	
BATT01-00390	100µg/L	C	3	865	M	
BATT01-00390	100µg/L	C	4	866	F	
BATT01-00390	100µg/L	C	5	867	M	
BATT01-00390	100µg/L	C	6	868	F	
BATT01-00390	100µg/L	C	7	869	M	
BATT01-00390	100µg/L	C	8	870	F	
BATT01-00390	100µg/L	C	9	871	F	
BATT01-00390	100µg/L	C	10	872	F	
BATT01-00390	100µg/L	D	1	873	M	
BATT01-00390	100µg/L	D	2	874	M	
BATT01-00390	100µg/L	D	3	875	F	
BATT01-00390	100µg/L	D	4	876	F	
BATT01-00390	100µg/L	D	5	877	F	
BATT01-00390	100µg/L	D	6	878	F	
BATT01-00390	100µg/L	D	7	879	M	
BATT01-00390	100µg/L	D	8	880	F	
BATT01-00390	100µg/L	D	9	881	F	
BATT01-00390	100µg/L	D	10	882	F	

Study ID	Name of Treatment Group	Replicate ID	Phenotypic Sex Ratio (M:F)	Genotypic Sex Ratio (M:F)	Comments
BATT01-00390	0.0µg/L	A	6:4	6:4	
BATT01-00390	0.0µg/L	B	5:5	5:5	
BATT01-00390	0.0µg/L	C	8:2	8:2	
BATT01-00390	0.0µg/L	D	5:3	5:5	Specimen 0.0µg/L D6 and D10 Undetermined Phenotypic Sex
BATT01-00390	0.0µg/L	E	5:5	5:5	
BATT01-00390	0.0µg/L	F	2:8	2:8	
BATT01-00390	0.0µg/L	G	8:2	8:2	
BATT01-00390	0.0µg/L	H	6:3	6:4	Specimen 0.0µg/L H10 Undetermined Phenotypic Sex
BATT01-00390	3.6µg/L	A	8:2	8:2	
BATT01-00390	3.6µg/L	B	6:4	6:4	
BATT01-00390	3.6µg/L	C	6:4	6:4	
BATT01-00390	3.6µg/L	D	8:1	8:2	Specimen 3.6µg/L D4 Undetermined Phenotypic Sex
BATT01-00390	10.9µg/L	A	5:5	5:5	
BATT01-00390	10.9µg/L	B	7:3	7:3	
BATT01-00390	10.9µg/L	C	3:7	3:7	
BATT01-00390	10.9µg/L	D	4:6	4:6	
BATT01-00390	33µg/L	A	3:6	3:7	Specimen 33µg/L A1 Undetermined Phenotypic Sex
BATT01-00390	33µg/L	B	4:4	6:4	Specimen 33µg/L B1 and B3 Undetermined Phenotypic Sex
BATT01-00390	33µg/L	C	6:3	6:4	Specimen 33µg/L C5 Undetermined Phenotypic Sex
BATT01-00390	33µg/L	D	6:4	6:4	
BATT01-00390	100µg/L	A	2:7	3:7	Specimen 100µg/L A9 Undetermined Phenotypic Sex
BATT01-00390	100µg/L	B	5:5	5:5	
BATT01-00390	100µg/L	C	4:6	4:6	
BATT01-00390	100µg/L	D	3:7	3:7	

FEL

DEST

Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Germinal Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Mononuclear Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oocyte Stage	Wolffian Duct Stage	Comments
BATT01-00390	0.0ug/L	A	1	643	Anterior	5		M	M	0	1			2					2	2	
BATT01-00390	0.0ug/L	A	1	643	Middle	5		M	M	0	1			2					2	2	
BATT01-00390	0.0ug/L	A	1	643	Posterior	5		M	M	0			1	2			1		2	2	
BATT01-00390	0.0ug/L	A	2	644	Anterior		4	F	F	0	1						1		2	1	
BATT01-00390	0.0ug/L	A	2	644	Middle		4	F	F	0							1		2	2	
BATT01-00390	0.0ug/L	A	2	644	Posterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	A	3	645	Anterior		3	F	F	0							1		2	2	
BATT01-00390	0.0ug/L	A	3	645	Middle		3	F	F	0							1		2	2	
BATT01-00390	0.0ug/L	A	3	645	Posterior		3	F	F	0									2	2	
BATT01-00390	0.0ug/L	A	4	646	Anterior	Incomplete		M	M	Incomplete									1	2	Insufficient Tissue For Diagnostic Purposes
BATT01-00390	0.0ug/L	A	4	646	Middle	5		M	M	0	1		1						1	2	
BATT01-00390	0.0ug/L	A	4	646	Posterior	Incomplete		M	M	Incomplete									1	2	Insufficient Tissue For Diagnostic Purposes
BATT01-00390	0.0ug/L	A	5	647	Anterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	A	5	647	Middle	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	A	5	647	Posterior	5		M	M	0			2						1	2	
BATT01-00390	0.0ug/L	A	6	648	Anterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	A	6	648	Middle		4	F	F	0	1								2	2	
BATT01-00390	0.0ug/L	A	6	648	Posterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	A	7	649	Anterior	5		M	M	0		1	1						1	1	
BATT01-00390	0.0ug/L	A	7	649	Middle	4		M	M	0	1	1							1	1	
BATT01-00390	0.0ug/L	A	7	649	Posterior	4		M	M	0	1								1	1	
BATT01-00390	0.0ug/L	A	8	650	Anterior		3	F	F	0	1								2	2	
BATT01-00390	0.0ug/L	A	8	650	Middle		3	F	F	0	1								2	2	
BATT01-00390	0.0ug/L	A	8	650	Posterior		3	F	F	0									2	2	
BATT01-00390	0.0ug/L	A	9	651	Anterior	5		M	M	0			1			2			1	2	
BATT01-00390	0.0ug/L	A	9	651	Middle	5		M	M	0			1						1	2	
BATT01-00390	0.0ug/L	A	9	651	Posterior	5		M	M	0									1	2	
BATT01-00390	0.0ug/L	A	10	652	Anterior	4		M	M	0	1		2						1	2	
BATT01-00390	0.0ug/L	A	10	652	Middle	5		M	M	0	1		2						1	2	
BATT01-00390	0.0ug/L	A	10	652	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	B	1	653	Anterior	5		M	M	0	1		1						1	2	
BATT01-00390	0.0ug/L	B	1	653	Middle	5		M	M	0									1	2	
BATT01-00390	0.0ug/L	B	1	653	Posterior	5		M	M	1	1					1			1	2	
BATT01-00390	0.0ug/L	B	2	654	Anterior	5		M	M	0			1						1	2	
BATT01-00390	0.0ug/L	B	2	654	Middle	4		M	M	0			1						1	2	
BATT01-00390	0.0ug/L	B	2	654	Posterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	B	3	655	Anterior		3	F	F	0							1		2	1	
BATT01-00390	0.0ug/L	B	3	655	Middle		4	F	F	0	1						1		2	1	
BATT01-00390	0.0ug/L	B	3	655	Posterior		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	B	4	656	Anterior		4	F	F	0						1			2	1	
BATT01-00390	0.0ug/L	B	4	656	Middle		4	F	F	0						1			2	2	
BATT01-00390	0.0ug/L	B	4	656	Posterior		3	F	F	0									2	2	
BATT01-00390	0.0ug/L	B	5	657	Anterior		4	F	F	0						1			2	2	
BATT01-00390	0.0ug/L	B	5	657	Middle		4	F	F	0						2			2	2	
BATT01-00390	0.0ug/L	B	5	657	Posterior		4	F	F	0						1			2	3	
BATT01-00390	0.0ug/L	B	6	658	Anterior	N/A		M	M	N/A								2	1	2	No Section
BATT01-00390	0.0ug/L	B	6	658	Middle	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	B	6	658	Posterior	4		M	M	0									1	3	
BATT01-00390	0.0ug/L	B	7	659	Anterior	4		M	M	0		1	2						2	1	
BATT01-00390	0.0ug/L	B	7	659	Middle	4		M	M	0	1	1	1						2	2	
BATT01-00390	0.0ug/L	B	7	659	Posterior	5		M	M	0	1	1	1	1					2	2	
BATT01-00390	0.0ug/L	B	8	660	Anterior		4	F	F	0									3	2	
BATT01-00390	0.0ug/L	B	8	660	Middle		4	F	F	0							1		3	2	
BATT01-00390	0.0ug/L	B	8	660	Posterior		4	F	F	0	1								3	2	
BATT01-00390	0.0ug/L	B	9	661	Anterior	N/A		M	M	N/A							1		2	2	
BATT01-00390	0.0ug/L	B	9	661	Middle	4		M	M	0	1								1	2	No Section
BATT01-00390	0.0ug/L	B	9	661	Posterior			M	M	0									1	2	
BATT01-00390	0.0ug/L	B	10	662	Anterior	4		F	F	0						2			2	1	No Section
BATT01-00390	0.0ug/L	B	10	662	Middle		4	F	F	0	1					1			2	1	
BATT01-00390	0.0ug/L	B	10	662	Posterior		3	F	F	0	1								2	1	
BATT01-00390	0.0ug/L	C	1	663	Anterior	5		M	M	0	1								2	2	
BATT01-00390	0.0ug/L	C	1	663	Middle	5		M	M	0	2								2	2	
BATT01-00390	0.0ug/L	C	1	663	Posterior	4		M	M	0	1		1						2	2	
BATT01-00390	0.0ug/L	C	2	664	Anterior	5		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	C	2	664	Middle	5		M	M	0	1						1		1	2	
BATT01-00390	0.0ug/L	C	2	664	Posterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	C	3	665	Anterior	5		M	M	0	1	1							1	2	
BATT01-00390	0.0ug/L	C	3	665	Middle	5		M	M	0	1		1						1	2	
BATT01-00390	0.0ug/L	C	3	665	Posterior	N/A		M	M	N/A									1	2	No Section

DEST

Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Germinal Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Mononuclear Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oviduct Stage	Wolffian Duct Stage	Comments
BATT01-00390	0.0ug/L	C	4	666	Anterior	N/A	N/A	F	F	N/A									2	2	
BATT01-00390	0.0ug/L	C	4	666	Middle		2	F	F	0	1						1		2	2	
BATT01-00390	0.0ug/L	C	4	666	Posterior		2	F	F	0									2	2	
BATT01-00390	0.0ug/L	C	5	667	Anterior	N/A		M	M	N/A									2	1	No Section
BATT01-00390	0.0ug/L	C	5	667	Middle	3		M	M	0									2	2	
BATT01-00390	0.0ug/L	C	5	667	Posterior	4		M	M	0	1		1						2	3	
BATT01-00390	0.0ug/L	C	6	668	Anterior	4		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	C	6	668	Middle	4		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	C	6	668	Posterior	3	3	M	M	0	1		1						1	2	
BATT01-00390	0.0ug/L	C	7	669	Anterior		3	F	F	0	1						1		2	1	
BATT01-00390	0.0ug/L	C	7	669	Middle		3	F	F	0	1						1		2	1	
BATT01-00390	0.0ug/L	C	7	669	Posterior		3	F	F	0	1							1	2	3	
BATT01-00390	0.0ug/L	C	8	670	Anterior	5		M	M	0	1		1						2	1	
BATT01-00390	0.0ug/L	C	8	670	Middle	5		M	M	0	1		1						2	1	
BATT01-00390	0.0ug/L	C	8	670	Posterior	5		M	M	0	1		1	1					2	2	
BATT01-00390	0.0ug/L	C	9	671	Anterior	3		M	M	0	1	1							1	2	
BATT01-00390	0.0ug/L	C	9	671	Middle	3		M	M	0	2								1	2	
BATT01-00390	0.0ug/L	C	9	671	Posterior	3		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	C	10	672	Anterior	4		M	M	0			1						2	1	
BATT01-00390	0.0ug/L	C	10	672	Middle	5		M	M	0			1						2	2	
BATT01-00390	0.0ug/L	C	10	672	Posterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	0.0ug/L	D	1	673	Anterior	5		M	M	0	1		1						1	2	
BATT01-00390	0.0ug/L	D	1	673	Middle	5		M	M	1	1					1			1	2	
BATT01-00390	0.0ug/L	D	1	673	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	D	2	674	Anterior	5		M	M	0	1		1						1	2	
BATT01-00390	0.0ug/L	D	2	674	Middle	5		M	M	0	1		1						1	1	
BATT01-00390	0.0ug/L	D	2	674	Posterior	4		M	M	0									1	1	
BATT01-00390	0.0ug/L	D	3	675	Anterior	5		M	M	0	1		1						1	3	
BATT01-00390	0.0ug/L	D	3	675	Middle	5		M	M	0	1		1					1	1	2	
BATT01-00390	0.0ug/L	D	3	675	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	D	4	676	Anterior		4	F	F	0	1								3	1	
BATT01-00390	0.0ug/L	D	4	676	Middle		4	F	F	0							1		2	1	
BATT01-00390	0.0ug/L	D	4	676	Posterior	Incomplete	4	F	F	0							1		2	2	Insufficient Tissue for Diagnostic Purposes
BATT01-00390	0.0ug/L	D	5	677	Anterior	Incomplete		M	M	Incomplete									1	2	
BATT01-00390	0.0ug/L	D	5	677	Middle	4		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	D	5	677	Posterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	D	6	678	Anterior	N/A	N/A	U	F	N/A									2	2	No Section
BATT01-00390	0.0ug/L	D	6	678	Middle	N/A	N/A	U	F	N/A									2	2	No Section
BATT01-00390	0.0ug/L	D	6	678	Posterior	N/A	N/A	U	F	N/A									2	1	No Section
BATT01-00390	0.0ug/L	D	7	679	Anterior		3	F	F	0									N/A	N/A	No Section
BATT01-00390	0.0ug/L	D	7	679	Middle		3	F	F	0	1								2	N/A	No Section
BATT01-00390	0.0ug/L	D	7	679	Posterior		3	F	F	0							1		2	2	
BATT01-00390	0.0ug/L	D	8	680	Anterior		2	F	F	0							1		2	1	
BATT01-00390	0.0ug/L	D	8	680	Middle		2	F	F	0							1		2	1	
BATT01-00390	0.0ug/L	D	8	680	Posterior	N/A	N/A	F	F	N/A									2	2	No Section
BATT01-00390	0.0ug/L	D	9	681	Anterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	0.0ug/L	D	9	681	Middle	N/A		M	M	N/A									2	2	No Section
BATT01-00390	0.0ug/L	D	9	681	Posterior	4		M	M	0									2	1	
BATT01-00390	0.0ug/L	D	10	682	Anterior	N/A	N/A	U	F	N/A									2	2	No Section
BATT01-00390	0.0ug/L	D	10	682	Middle	N/A	N/A	U	F	N/A									2	1	No Section
BATT01-00390	0.0ug/L	D	10	682	Posterior	N/A	N/A	U	F	N/A									2	1	No Section
BATT01-00390	0.0ug/L	E	1	683	Anterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	E	1	683	Middle		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	E	1	683	Posterior		4	F	F	0							1		2	2	
BATT01-00390	0.0ug/L	E	2	684	Anterior		4	F	F	0							1		2	2	
BATT01-00390	0.0ug/L	E	2	684	Middle		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	E	2	684	Posterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	E	3	685	Anterior	5		M	M	0									2	1	
BATT01-00390	0.0ug/L	E	3	685	Middle	5		M	M	0	1		1						1	2	
BATT01-00390	0.0ug/L	E	3	685	Posterior	4		M	M	0	1	1							1	1	
BATT01-00390	0.0ug/L	E	4	686	Anterior	5		M	M	0	1		1						1	2	
BATT01-00390	0.0ug/L	E	4	686	Middle	5		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	E	4	686	Posterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	E	5	687	Anterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	E	5	687	Middle		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	E	5	687	Posterior		4	F	F	0							1		2	2	
BATT01-00390	0.0ug/L	E	6	688	Anterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	E	6	688	Middle		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	E	6	688	Posterior		4	F	F	0	1								1	1	

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Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Genital Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Mononuclear Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oviduct Stage	Wolffian Duct Stage	Comments
BATT01-00390	0.0ug/L	E	7	689	Anterior	4		M	M	0	1		2						1	1	
BATT01-00390	0.0ug/L	E	7	689	Middle	4		M	M	0	1		2						1	2	
BATT01-00390	0.0ug/L	E	7	689	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	0.0ug/L	E	8	690	Anterior		4	F	F	0	1								2	1	
BATT01-00390	0.0ug/L	E	8	690	Middle		4	F	F	0	1								2	1	
BATT01-00390	0.0ug/L	E	8	690	Posterior		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	E	9	691	Anterior	4		M	M	0							2		1	2	
BATT01-00390	0.0ug/L	E	9	691	Middle	4		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	E	9	691	Posterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	0.0ug/L	E	10	692	Anterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	E	10	692	Middle	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	E	10	692	Posterior	5		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	F	1	693	Anterior		4	F	F	0	1								2	2	
BATT01-00390	0.0ug/L	F	1	693	Middle		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	F	1	693	Posterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	F	2	694	Anterior		4	F	F	0						1			2	2	
BATT01-00390	0.0ug/L	F	2	694	Middle		4	F	F	0						1			2	2	
BATT01-00390	0.0ug/L	F	2	694	Posterior		4	F	F	0	1								2	2	
BATT01-00390	0.0ug/L	F	3	695	Anterior		4	F	F	0	1					2			2	2	
BATT01-00390	0.0ug/L	F	3	695	Middle		4	F	F	0	1								2	2	
BATT01-00390	0.0ug/L	F	3	695	Posterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	F	4	696	Anterior		3	F	F	0	1								2	1	
BATT01-00390	0.0ug/L	F	4	696	Middle		4	F	F	0	1								2	1	
BATT01-00390	0.0ug/L	F	4	696	Posterior		4	F	F	0	1								2	1	
BATT01-00390	0.0ug/L	F	5	697	Anterior		3	F	F	0	1								2	1	
BATT01-00390	0.0ug/L	F	5	697	Middle		3	F	F	0	1					1			2	1	
BATT01-00390	0.0ug/L	F	5	697	Posterior		3	F	F	0	1								2	1	
BATT01-00390	0.0ug/L	F	6	698	Anterior	5		M	M	0									1	2	
BATT01-00390	0.0ug/L	F	6	698	Middle	5		M	M	0	1					1			1	1	
BATT01-00390	0.0ug/L	F	6	698	Posterior	Incomplete		M	M	Incomplete	1								1	2	Insufficient Tissue for Diagnostic Purposes
BATT01-00390	0.0ug/L	F	7	699	Anterior		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	F	7	699	Middle		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	F	7	699	Posterior		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	F	8	700	Anterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	F	8	700	Middle	4		M	M	0	1	1							1	2	
BATT01-00390	0.0ug/L	F	8	700	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	0.0ug/L	F	9	701	Anterior		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	F	9	701	Middle		4	F	F	0						1			2	1	
BATT01-00390	0.0ug/L	F	9	701	Posterior		3	F	F	0									2	1	
BATT01-00390	0.0ug/L	F	10	702	Anterior		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	F	10	702	Middle		4	F	F	0									2	2	
BATT01-00390	0.0ug/L	F	10	702	Posterior		4	F	F	0	1								2	2	
BATT01-00390	0.0ug/L	G	1	703	Anterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	G	1	703	Middle	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	G	1	703	Posterior	5		M	M	0									2	2	
BATT01-00390	0.0ug/L	G	2	704	Anterior		3	F	F	0	1								2	2	
BATT01-00390	0.0ug/L	G	2	704	Middle		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	G	2	704	Posterior		3	F	F	0									2	1	
BATT01-00390	0.0ug/L	G	3	705	Anterior	4		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	G	3	705	Middle	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	G	3	705	Posterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	G	4	706	Anterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	G	4	706	Middle	Incomplete		M	M	Incomplete									1	2	Insufficient Tissue for Diagnostic Purposes
BATT01-00390	0.0ug/L	G	4	706	Posterior	3		M	M	0			1						1	2	
BATT01-00390	0.0ug/L	G	5	707	Anterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	G	5	707	Middle	4		M	M	0	1								1	1	
BATT01-00390	0.0ug/L	G	5	707	Posterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	G	6	708	Anterior	N/A		M	M	N/A								1	2	2	No Section
BATT01-00390	0.0ug/L	G	6	708	Middle	N/A		M	M	N/A								1	2	2	No Section
BATT01-00390	0.0ug/L	G	6	708	Posterior	5		M	M	0	1								2	2	
BATT01-00390	0.0ug/L	G	7	709	Anterior		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	G	7	709	Middle		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	G	7	709	Posterior		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	G	8	710	Anterior	5		M	M	0	1					1			1	2	
BATT01-00390	0.0ug/L	G	8	710	Middle	4		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	G	8	710	Posterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	G	9	711	Anterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	G	9	711	Middle	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	G	9	711	Posterior	4		M	M	0									1	2	

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Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Cervical Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Mononuclear Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oviduct Stage	Wolffian Duct Stage	Comments
BATT01-00390	0.0ug/L	G	10	712	Anterior	5		M	M	0									1	1	
BATT01-00390	0.0ug/L	G	10	712	Middle	5		M	M	0									1	2	
BATT01-00390	0.0ug/L	G	10	712	Posterior	5		M	M	0	1						1		1	1	
BATT01-00390	0.0ug/L	H	1	713	Anterior	4		M	M	0	1								1	2	
BATT01-00390	0.0ug/L	H	1	713	Middle	5		M	M	0	1		1						1	2	No Section
BATT01-00390	0.0ug/L	H	1	713	Posterior	N/A		M	M	N/A									1	2	
BATT01-00390	0.0ug/L	H	2	714	Anterior	4		M	M	0	1								1	1	No Section
BATT01-00390	0.0ug/L	H	2	714	Middle	N/A		M	M	N/A									1	2	insufficient Tissue for Diagnostic Purposes
BATT01-00390	0.0ug/L	H	2	714	Posterior	Incomplete		M	M	0		1							1	2	No Section
BATT01-00390	0.0ug/L	H	3	715	Anterior	N/A		M	M	N/A									2	2	
BATT01-00390	0.0ug/L	H	3	715	Middle	4		M	M	0	1								2	2	
BATT01-00390	0.0ug/L	H	3	715	Posterior	4		M	M	0	1								2	1	
BATT01-00390	0.0ug/L	H	4	716	Anterior		4	F	F	0	1								2	2	
BATT01-00390	0.0ug/L	H	4	716	Middle		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	H	4	716	Posterior		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	H	5	717	Anterior		3	F	F	0							1		2	2	
BATT01-00390	0.0ug/L	H	5	717	Middle		3	F	F	0							2		2	2	
BATT01-00390	0.0ug/L	H	5	717	Posterior		3	F	F	0							1		2	1	
BATT01-00390	0.0ug/L	H	6	718	Anterior		4	F	F	0	1								2	1	
BATT01-00390	0.0ug/L	H	6	718	Middle		4	F	F	0	1						1		2	1	
BATT01-00390	0.0ug/L	H	6	718	Posterior		4	F	F	0									2	1	
BATT01-00390	0.0ug/L	H	7	719	Anterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	H	7	719	Middle	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	H	7	719	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	H	8	720	Anterior	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	H	8	720	Middle	4		M	M	0									1	2	
BATT01-00390	0.0ug/L	H	8	720	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	H	9	721	Anterior	5		M	M	0		1							1	1	
BATT01-00390	0.0ug/L	H	9	721	Middle	5		M	M	0	1	1							1	2	
BATT01-00390	0.0ug/L	H	9	721	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	0.0ug/L	H	10	722	Anterior	N/A	N/A	U	F	N/A									2	2	No Section
BATT01-00390	0.0ug/L	H	10	722	Middle	N/A	N/A	U	F	N/A									2	2	No Section
BATT01-00390	0.0ug/L	H	10	722	Posterior	N/A	N/A	U	F	N/A									2	2	No Section
BATT01-00390	3.5ug/L	A	1	723	Anterior	4		M	M	0			2						1	2	
BATT01-00390	3.5ug/L	A	1	723	Middle	4		M	M	0			2						1	2	
BATT01-00390	3.5ug/L	A	1	723	Posterior	4		M	M	0	1		2						1	1	
BATT01-00390	3.5ug/L	A	2	724	Anterior	5		M	M	0			2						2	1	No Section
BATT01-00390	3.5ug/L	A	2	724	Middle	4		M	M	0	1		2						2	1	No Section
BATT01-00390	3.5ug/L	A	2	724	Posterior	4		M	M	0			1						2	1	No Section
BATT01-00390	3.5ug/L	A	3	725	Anterior	4		M	M	0									2	1	
BATT01-00390	3.5ug/L	A	3	725	Middle	4		M	M	0									2	1	
BATT01-00390	3.5ug/L	A	3	725	Posterior	N/A		M	M	N/A									2	1	No Section
BATT01-00390	3.5ug/L	A	4	726	Anterior		4	F	F	0						1			2	1	
BATT01-00390	3.5ug/L	A	4	726	Middle		4	F	F	0						1			2	1	
BATT01-00390	3.5ug/L	A	4	726	Posterior		4	F	F	0									2	1	
BATT01-00390	3.5ug/L	A	5	727	Anterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	3.5ug/L	A	5	727	Middle	N/A		M	M	N/A									1	1	No Section
BATT01-00390	3.5ug/L	A	5	727	Posterior	N/A		M	M	N/A									1	1	
BATT01-00390	3.5ug/L	A	6	728	Anterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	3.5ug/L	A	6	728	Middle	N/A		M	M	N/A			1						1	2	No Section
BATT01-00390	3.5ug/L	A	6	728	Posterior			M	M	N/A									1	1	
BATT01-00390	3.5ug/L	A	7	729	Anterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	3.5ug/L	A	7	729	Middle	N/A		M	M	N/A									1	1	No Section
BATT01-00390	3.5ug/L	A	7	729	Posterior			M	M	N/A									N/A	N/A	No Section
BATT01-00390	3.5ug/L	A	8	730	Anterior	N/A		M	M	N/A			2						1	1	No Section
BATT01-00390	3.5ug/L	A	8	730	Middle	N/A		M	M	N/A									1	1	No Section
BATT01-00390	3.5ug/L	A	8	730	Posterior			M	M	N/A									1	1	
BATT01-00390	3.5ug/L	A	9	731	Anterior	4	3	F	F	0	1						1		2	1	
BATT01-00390	3.5ug/L	A	9	731	Middle		3	F	F	0	1						1		2	1	
BATT01-00390	3.5ug/L	A	9	731	Posterior		3	F	F	0	1								2	1	
BATT01-00390	3.5ug/L	A	10	732	Anterior	4		M	M	0			2						2	1	
BATT01-00390	3.5ug/L	A	10	732	Middle	4		M	M	0			1						2	2	
BATT01-00390	3.5ug/L	A	10	732	Posterior	N/A		M	M	N/A									2	1	
BATT01-00390	3.5ug/L	B	1	733	Anterior	4		M	M	0	1		2						1	1	No Section
BATT01-00390	3.5ug/L	B	1	733	Middle	4		M	M	0			2						1	1	
BATT01-00390	3.5ug/L	B	1	733	Posterior	1		M	M	0									1	1	
BATT01-00390	3.5ug/L	B	2	734	Anterior	4		M	M	0			2						2	1	
BATT01-00390	3.5ug/L	B	2	734	Middle	4		M	M	0			2						1	2	
BATT01-00390	3.5ug/L	B	2	734	Posterior	4		M	M	0			1						1	1	

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Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Germinal Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oxygen	Mononuclear Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oocyte Stage	Wolffian Duct Stage	Comments
BATT01-00390	3.5ug/L	B	3	735	Anterior	4		M	M	0			1						1	1	
BATT01-00390	3.5ug/L	B	3	735	Middle	4		M	M	0									1	2	
BATT01-00390	3.5ug/L	B	3	735	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	3.5ug/L	B	4	736	Anterior	4		M	M	0			1				1		2	2	
BATT01-00390	3.5ug/L	B	4	736	Middle	4		M	M	0							1		2	2	
BATT01-00390	3.5ug/L	B	4	736	Posterior	Incomplete		M	M	Incomplete									2	2	Insufficient Tissue for Diagnostic Purposes
BATT01-00390	3.5ug/L	B	5	737	Anterior		4	F	F	0	1								2	2	
BATT01-00390	3.5ug/L	B	5	737	Middle		4	F	F	0									2	2	
BATT01-00390	3.5ug/L	B	5	737	Posterior		3	F	F	0							1		2	1	
BATT01-00390	3.5ug/L	B	6	738	Anterior	4		M	M	0	1								1	1	
BATT01-00390	3.5ug/L	B	6	738	Middle	4		M	M	0									1	2	
BATT01-00390	3.5ug/L	B	6	738	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	3.5ug/L	B	7	739	Anterior	4		M	M	0			1						1	1	
BATT01-00390	3.5ug/L	B	7	739	Middle	4		M	M	0									1	1	
BATT01-00390	3.5ug/L	B	7	739	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	3.5ug/L	B	8	740	Anterior		3	F	F	0							1		N/A	1	No Section
BATT01-00390	3.5ug/L	B	8	740	Middle		3	F	F	0									N/A	1	No Section
BATT01-00390	3.5ug/L	B	8	740	Posterior		N/A	F	F	N/A	1								N/A	1	No Section
BATT01-00390	3.5ug/L	B	9	741	Anterior		4	F	F	0									2	1	
BATT01-00390	3.5ug/L	B	9	741	Middle		4	F	F	0									2	1	
BATT01-00390	3.5ug/L	B	9	741	Posterior		3	F	F	0									2	1	
BATT01-00390	3.5ug/L	B	10	742	Anterior		3	F	F	0								1	3	2	
BATT01-00390	3.5ug/L	B	10	742	Middle		3	F	F	0								1	3	2	
BATT01-00390	3.5ug/L	B	10	742	Posterior		3	F	F	0								1	2	1	
BATT01-00390	3.5ug/L	C	1	743	Anterior		3	F	F	0						1	1		2	2	
BATT01-00390	3.5ug/L	C	1	743	Middle		3	F	F	0						1	1		2	2	
BATT01-00390	3.5ug/L	C	1	743	Posterior		3	F	F	0									2	2	
BATT01-00390	3.5ug/L	C	2	744	Anterior	4		M	M	0			2						2	2	
BATT01-00390	3.5ug/L	C	2	744	Middle	4		M	M	0			2						1	1	No Section
BATT01-00390	3.5ug/L	C	2	744	Posterior	N/A		M	M	N/A									2	2	
BATT01-00390	3.5ug/L	C	3	745	Anterior	4		F	F	0			2						2	1	No Section
BATT01-00390	3.5ug/L	C	3	745	Middle		3	F	F	0			2						2	1	
BATT01-00390	3.5ug/L	C	3	745	Posterior		3	F	F	0									2	1	
BATT01-00390	3.5ug/L	C	4	746	Anterior	4		M	M	0			2						1	1	
BATT01-00390	3.5ug/L	C	4	746	Middle	4		M	M	0			2						1	1	No Section
BATT01-00390	3.5ug/L	C	4	746	Posterior	N/A		M	M	N/A									1	2	
BATT01-00390	3.5ug/L	C	5	747	Anterior	3		M	M	0			2						2	1	No Section
BATT01-00390	3.5ug/L	C	5	747	Middle	4		M	M	0			2						2	1	
BATT01-00390	3.5ug/L	C	5	747	Posterior		4	M	M	0									2	1	
BATT01-00390	3.5ug/L	C	6	748	Anterior		3	F	F	0									2	1	
BATT01-00390	3.5ug/L	C	6	748	Middle		3	F	F	0									2	1	
BATT01-00390	3.5ug/L	C	6	748	Posterior		3	F	F	0	1								2	1	
BATT01-00390	3.5ug/L	C	7	749	Anterior	4		M	M	0			1						1	2	
BATT01-00390	3.5ug/L	C	7	749	Middle	4		M	M	0			1						1	2	
BATT01-00390	3.5ug/L	C	7	749	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	3.5ug/L	C	8	750	Anterior		3	F	F	0						1			2	1	
BATT01-00390	3.5ug/L	C	8	750	Middle		3	F	F	0						1			2	1	
BATT01-00390	3.5ug/L	C	8	750	Posterior		3	F	F	0									2	2	
BATT01-00390	3.5ug/L	C	9	751	Anterior	1		M	M	0									1	1	
BATT01-00390	3.5ug/L	C	9	751	Middle	1		M	M	0									1	1	
BATT01-00390	3.5ug/L	C	9	751	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	3.5ug/L	C	10	752	Anterior	4		M	M	0			1			1			2	2	
BATT01-00390	3.5ug/L	C	10	752	Middle	4		M	M	0	1		1			1			2	2	
BATT01-00390	3.5ug/L	C	10	752	Posterior	4		M	M	0			1						2	1	
BATT01-00390	3.5ug/L	D	1	753	Anterior	4		M	M	0			1						2	1	
BATT01-00390	3.5ug/L	D	1	753	Middle	4		M	M	0			2						2	1	
BATT01-00390	3.5ug/L	D	1	753	Posterior	N/A		M	M	N/A									2	1	No Section
BATT01-00390	3.5ug/L	D	2	754	Anterior	4		M	M	0			1						1	2	
BATT01-00390	3.5ug/L	D	2	754	Middle	4		M	M	0	1		1						1	2	
BATT01-00390	3.5ug/L	D	2	754	Posterior	4		M	M	0		1	1						2	1	
BATT01-00390	3.5ug/L	D	3	755	Anterior	4		M	M	0			2						2	1	
BATT01-00390	3.5ug/L	D	3	755	Middle	4		M	M	0			2						2	1	
BATT01-00390	3.5ug/L	D	3	755	Posterior	N/A		M	M	N/A									2	1	No Section
BATT01-00390	3.5ug/L	D	4	756	Anterior	N/A	N/A	U	F	N/A									2	2	No Section
BATT01-00390	3.5ug/L	D	4	756	Middle	N/A	N/A	U	F	N/A							1		2	2	No Section
BATT01-00390	3.5ug/L	D	4	756	Posterior	N/A	N/A	U	F	N/A									2	2	No Section
BATT01-00390	3.5ug/L	D	5	757	Anterior	4		M	M	0		1							2	1	
BATT01-00390	3.5ug/L	D	5	757	Middle	4		M	M	0			1						2	1	
BATT01-00390	3.5ug/L	D	5	757	Posterior	N/A		M	M	N/A									2	1	No Section

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Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Germinal Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Mononuclear Cell Infiltrates	Epithelial Cells, Cytoplasmic Inclusions	Oviduct Stage	Wolffian Duct Stage	Comments
BATT01-00390	3.6ug/L	0	6	758	Anterior	4		M	M	0		1	2						2	1	
BATT01-00390	3.6ug/L	0	6	758	Middle	4		M	M	0			2						2	1	
BATT01-00390	3.6ug/L	0	6	758	Posterior	N/A		M	M	N/A									2	1	No Section
BATT01-00390	3.6ug/L	0	7	759	Anterior	4		M	M	0			2						1	1	
BATT01-00390	3.6ug/L	0	7	759	Middle	4		M	M	0			2						2	2	
BATT01-00390	3.6ug/L	0	7	759	Posterior	4		M	M	0			1						2	1	
BATT01-00390	3.6ug/L	0	8	760	Anterior	4		M	M	0			2					2	1	2	
BATT01-00390	3.6ug/L	0	8	760	Middle	4		M	M	0			2						2	2	
BATT01-00390	3.6ug/L	0	8	760	Posterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	3.6ug/L	0	9	761	Anterior	4		M	M	0	1		1				1		2	2	
BATT01-00390	3.6ug/L	0	9	761	Middle	4		M	M	0			2						2	2	
BATT01-00390	3.6ug/L	0	9	761	Posterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	3.6ug/L	0	10	762	Anterior		4	F	F	0									2	2	
BATT01-00390	3.6ug/L	0	10	762	Middle		4	F	F	0									2	2	
BATT01-00390	3.6ug/L	0	10	762	Posterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	A	1	763	Anterior		N/A	F	F	N/A									2	2	
BATT01-00390	10.9ug/L	A	1	763	Middle		4	F	F	0						1			2	2	
BATT01-00390	10.9ug/L	A	1	763	Posterior		4	F	F	0									2	2	
BATT01-00390	10.9ug/L	A	2	764	Anterior	N/A		M	M	N/A									1	3	No Section
BATT01-00390	10.9ug/L	A	2	764	Middle	4		M	M	0									1	3	
BATT01-00390	10.9ug/L	A	2	764	Posterior	4		M	M	0						1			1	3	
BATT01-00390	10.9ug/L	A	3	765	Anterior		4	F	F	0						2			2	1	
BATT01-00390	10.9ug/L	A	3	765	Middle		4	F	F	0									2	1	
BATT01-00390	10.9ug/L	A	3	765	Posterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	A	4	766	Anterior		3	F	F	0						1			2	1	
BATT01-00390	10.9ug/L	A	4	766	Middle		3	F	F	0									2	2	
BATT01-00390	10.9ug/L	A	4	766	Posterior		3	F	F	0									2	2	
BATT01-00390	10.9ug/L	A	5	767	Anterior		4	F	F	0						1			2	1	
BATT01-00390	10.9ug/L	A	5	767	Middle		4	F	F	0	1					1			2	1	
BATT01-00390	10.9ug/L	A	5	767	Posterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	A	6	768	Anterior		3	F	F	0						2			2	2	
BATT01-00390	10.9ug/L	A	6	768	Middle		3	F	F	0						1			2	1	
BATT01-00390	10.9ug/L	A	6	768	Posterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	A	7	769	Anterior	1		M	M	0									2	2	
BATT01-00390	10.9ug/L	A	7	769	Middle	1		M	M	0									2	2	
BATT01-00390	10.9ug/L	A	7	769	Posterior	N/A		M	M	N/A									2	1	No Section
BATT01-00390	10.9ug/L	A	8	770	Anterior	4		M	M	0	1	1	2						2	2	
BATT01-00390	10.9ug/L	A	8	770	Middle	4		M	M	0	1		1						2	2	
BATT01-00390	10.9ug/L	A	8	770	Posterior	4		M	M	0			2						2	2	
BATT01-00390	10.9ug/L	A	9	771	Anterior	5		M	M	0			2						2	1	
BATT01-00390	10.9ug/L	A	9	771	Middle	5		M	M	0			2						2	1	
BATT01-00390	10.9ug/L	A	9	771	Posterior	N/A		M	M	N/A									2	1	No Section
BATT01-00390	10.9ug/L	A	10	772	Anterior	4		M	M	0		1	1						2	2	
BATT01-00390	10.9ug/L	A	10	772	Middle	4		M	M	0	1	1	1						2	1	
BATT01-00390	10.9ug/L	A	10	772	Posterior	4		M	M	0	1		1						2	1	
BATT01-00390	10.9ug/L	B	1	773	Anterior		4	F	F	0						1			2	1	
BATT01-00390	10.9ug/L	B	1	773	Middle		4	F	F	0									2	1	
BATT01-00390	10.9ug/L	B	1	773	Posterior		3	F	F	0									2	2	
BATT01-00390	10.9ug/L	B	2	774	Anterior		3	F	F	0						1			2	1	
BATT01-00390	10.9ug/L	B	2	774	Middle		3	F	F	0	1								2	1	
BATT01-00390	10.9ug/L	B	2	774	Posterior		3	F	F	0	1								2	1	
BATT01-00390	10.9ug/L	B	3	775	Anterior	3		M	M	0	1								1	3	
BATT01-00390	10.9ug/L	B	3	775	Middle	4		M	M	0	1							2	1	3	
BATT01-00390	10.9ug/L	B	3	775	Posterior	4		M	M	0	1								1	2	
BATT01-00390	10.9ug/L	B	4	776	Anterior	4		M	M	0			1						1	3	
BATT01-00390	10.9ug/L	B	4	776	Middle	4		M	M	0			1						1	2	
BATT01-00390	10.9ug/L	B	4	776	Posterior	4		M	M	0			1						1	2	
BATT01-00390	10.9ug/L	B	5	777	Anterior	N/A		M	M	N/A									1	3	
BATT01-00390	10.9ug/L	B	5	777	Middle	4		M	M	0									1	3	
BATT01-00390	10.9ug/L	B	5	777	Posterior	2		M	M	0									1	1	
BATT01-00390	10.9ug/L	B	6	778	Anterior		4	F	F	0									2	1	
BATT01-00390	10.9ug/L	B	6	778	Middle		4	F	F	0	1								2	1	
BATT01-00390	10.9ug/L	B	6	778	Posterior		3	F	F	0	1								2	1	
BATT01-00390	10.9ug/L	B	7	779	Anterior	5		M	M	0	1	2							1	1	
BATT01-00390	10.9ug/L	B	7	779	Middle	5		M	M	0	1								1	2	
BATT01-00390	10.9ug/L	B	7	779	Posterior	5		M	M	0	1								1	2	
BATT01-00390	10.9ug/L	B	8	780	Anterior			M	M								1		1	2	
BATT01-00390	10.9ug/L	B	8	780	Middle	4		M	M	0							1		2	1	
BATT01-00390	10.9ug/L	B	8	780	Posterior	Incomplete		M	M	Incomplete									1	2	Insufficient Tissue for Diagnostic Purposes

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DEST

Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Germinal Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Monocyte/ Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oviduct Stage	Wolffian Duct Stage	Comments
BATT01-00390	10.9ug/L	B	9	761	Anterior	3		M	M	0									1	3	
BATT01-00390	10.9ug/L	B	9	761	Middle	N/A		M	M	N/A									1	3	No Section
BATT01-00390	10.9ug/L	B	9	761	Posterior	3		M	M	0									1	3	
BATT01-00390	10.9ug/L	B	10	762	Anterior	3		M	M	0									2	3	
BATT01-00390	10.9ug/L	B	10	762	Middle	3		M	M	0	1								2	3	
BATT01-00390	10.9ug/L	B	10	762	Posterior	3		M	M	0									1	2	
BATT01-00390	10.9ug/L	C	1	763	Anterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	C	1	763	Middle		3	F	F	0							1		2	1	
BATT01-00390	10.9ug/L	C	1	763	Posterior		3	F	F	0							1		2	1	
BATT01-00390	10.9ug/L	C	2	764	Anterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	C	2	764	Middle		3	F	F	0									2	2	
BATT01-00390	10.9ug/L	C	2	764	Posterior		3	F	F	0							1		2	2	
BATT01-00390	10.9ug/L	C	3	765	Anterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	10.9ug/L	C	3	765	Middle	4		M	M	0									2	2	
BATT01-00390	10.9ug/L	C	3	765	Posterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	10.9ug/L	C	4	766	Anterior		3	F	F	0	1								2	2	
BATT01-00390	10.9ug/L	C	4	766	Middle		4	F	F	0									2	2	
BATT01-00390	10.9ug/L	C	4	766	Posterior		3	F	F	0	1								2	3	
BATT01-00390	10.9ug/L	C	5	767	Anterior	4		M	M	0		1							2	1	
BATT01-00390	10.9ug/L	C	5	767	Middle	4		M	M	0			1						2	1	
BATT01-00390	10.9ug/L	C	5	767	Posterior	N/A		M	M	N/A									2	1	No Section
BATT01-00390	10.9ug/L	C	6	768	Anterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	C	6	768	Middle		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	C	6	768	Posterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	C	7	769	Anterior		3	F	F	0	1						1		2	2	
BATT01-00390	10.9ug/L	C	7	769	Middle		4	F	F	0	1						1		2	2	
BATT01-00390	10.9ug/L	C	7	769	Posterior		3	F	F	0	1								2	1	
BATT01-00390	10.9ug/L	C	8	790	Anterior		2	F	F	0	1								N/A	1	No Section
BATT01-00390	10.9ug/L	C	8	790	Middle		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	C	8	790	Posterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	C	9	791	Anterior	4		M	M	0			1						2	2	
BATT01-00390	10.9ug/L	C	9	791	Middle	4		M	M	0			1						2	2	
BATT01-00390	10.9ug/L	C	9	791	Posterior	5		M	M	0									2	1	
BATT01-00390	10.9ug/L	C	10	792	Anterior		4	F	F	0							1		2	2	
BATT01-00390	10.9ug/L	C	10	792	Middle		4	F	F	0									2	2	
BATT01-00390	10.9ug/L	C	10	792	Posterior		4	F	F	0							1		2	2	
BATT01-00390	10.9ug/L	D	1	793	Anterior	4		M	M	0			2						1	2	
BATT01-00390	10.9ug/L	D	1	793	Middle	4		M	M	0			2						1	1	
BATT01-00390	10.9ug/L	D	1	793	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	10.9ug/L	D	2	794	Anterior		3	F	F	0	1								2	2	
BATT01-00390	10.9ug/L	D	2	794	Middle		3	F	F	0	1								2	2	
BATT01-00390	10.9ug/L	D	2	794	Posterior		3	F	F	0	1								2	1	
BATT01-00390	10.9ug/L	D	3	795	Anterior		3	F	F	0	1						1		2	1	
BATT01-00390	10.9ug/L	D	3	795	Middle		3	F	F	0	1								2	1	
BATT01-00390	10.9ug/L	D	3	795	Posterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	D	4	796	Anterior	Incomplete		M	M	Incomplete									1	2	Insufficient Tissue for Diagnostic Purposes
BATT01-00390	10.9ug/L	D	4	796	Middle	4		M	M	0			2						1	2	
BATT01-00390	10.9ug/L	D	4	796	Posterior	4		M	M	0	1		1				1		1	1	
BATT01-00390	10.9ug/L	D	5	797	Anterior		4	F	F	0									2	1	
BATT01-00390	10.9ug/L	D	5	797	Middle		4	F	F	0								2	2	1	
BATT01-00390	10.9ug/L	D	5	797	Posterior		4	F	F	0									2	1	
BATT01-00390	10.9ug/L	D	6	798	Anterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	10.9ug/L	D	6	798	Middle	N/A		M	M	N/A									1	2	No Section
BATT01-00390	10.9ug/L	D	6	798	Posterior	4		M	M	0			2				1		1	1	
BATT01-00390	10.9ug/L	D	7	799	Anterior		3	F	F	0	1								3	1	
BATT01-00390	10.9ug/L	D	7	799	Middle		3	F	F	0	1						1		3	1	
BATT01-00390	10.9ug/L	D	7	799	Posterior		4	F	F	0	1						1		2	1	
BATT01-00390	10.9ug/L	D	8	820	Anterior		4	F	F	0							1		2	1	
BATT01-00390	10.9ug/L	D	8	820	Middle		4	F	F	0									2	1	
BATT01-00390	10.9ug/L	D	8	820	Posterior		3	F	F	0									2	1	
BATT01-00390	10.9ug/L	D	9	821	Anterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	10.9ug/L	D	9	821	Middle	4		M	M	0	1		1				1		1	2	
BATT01-00390	10.9ug/L	D	9	821	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	10.9ug/L	D	10	822	Anterior		3	F	F	0									2	2	
BATT01-00390	10.9ug/L	D	10	822	Middle		3	F	F	0							1		2	2	
BATT01-00390	10.9ug/L	D	10	822	Posterior		4	F	F	0							1		2	2	
BATT01-00390	33ug/L	A	1	823	Anterior	N/A	N/A	U	F	N/A									1	2	No Section
BATT01-00390	33ug/L	A	1	823	Middle	N/A	N/A	U	F	N/A									1	2	No Section
BATT01-00390	33ug/L	A	1	823	Posterior	N/A	N/A	U	F	N/A									1	2	No Section

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Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	GermCell Degeneration	GermCell Vacuolation	Exfoliated GermCells	Germinal Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Mononuclear Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oviduct Stage	Wolffian Duct Stage	Comments
BATT01-00390	30ug/L	A	2	824	Anterior		4	F	F	0							1		2	1	
BATT01-00390	30ug/L	A	2	824	Middle		4	F	F	0							1		2	2	
BATT01-00390	30ug/L	A	2	824	Posterior		3	F	F	0	1								2	2	
BATT01-00390	30ug/L	A	3	825	Anterior		4	F	F	0									2	2	
BATT01-00390	30ug/L	A	3	825	Middle		4	F	F	0									2	2	
BATT01-00390	30ug/L	A	3	825	Posterior		4	F	F	0									2	2	
BATT01-00390	30ug/L	A	4	826	Anterior	3		M	M	0	1								1	2	
BATT01-00390	30ug/L	A	4	826	Middle	3		M	M	0	1								1	2	
BATT01-00390	30ug/L	A	4	826	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	30ug/L	A	5	827	Anterior		4	F	F	0	1						1		2	2	
BATT01-00390	30ug/L	A	5	827	Middle		4	F	F	0									2	2	
BATT01-00390	30ug/L	A	5	827	Posterior		4	F	F	0									2	2	
BATT01-00390	30ug/L	A	6	828	Anterior		4	F	F	0							1		2	1	
BATT01-00390	30ug/L	A	6	828	Middle		4	F	F	0							1		2	1	
BATT01-00390	30ug/L	A	6	828	Posterior		3	F	F	0									2	1	
BATT01-00390	30ug/L	A	7	829	Anterior		4	F	F	0							1		2	2	
BATT01-00390	30ug/L	A	7	829	Middle		4	F	F	0							1		2	1	
BATT01-00390	30ug/L	A	7	829	Posterior		4	F	F	0									2	1	No Section
BATT01-00390	30ug/L	A	8	830	Anterior	5		M	M	0									1	2	
BATT01-00390	30ug/L	A	8	830	Middle	4		M	M	0									1	2	
BATT01-00390	30ug/L	A	8	830	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	30ug/L	A	9	831	Anterior	4		M	M	0									1	2	
BATT01-00390	30ug/L	A	9	831	Middle	4		M	M	0	1								1	2	
BATT01-00390	30ug/L	A	9	831	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	30ug/L	A	10	832	Anterior		4	F	F	0	1						1		2	1	
BATT01-00390	30ug/L	A	10	832	Middle		4	F	F	0	1						1		2	1	
BATT01-00390	30ug/L	A	10	832	Posterior		4	F	F	0									2	1	
BATT01-00390	30ug/L	B	1	833	Anterior	N/A	N/A	U	M	N/A									1	1	No Section
BATT01-00390	30ug/L	B	1	833	Middle	N/A	N/A	U	M	N/A									1	2	No Section
BATT01-00390	30ug/L	B	1	833	Posterior	N/A	N/A	U	M	N/A									1	1	No Section
BATT01-00390	30ug/L	B	2	834	Anterior	4		M	M	0	1								1	2	
BATT01-00390	30ug/L	B	2	834	Middle	4		M	M	0									1	2	
BATT01-00390	30ug/L	B	2	834	Posterior	N/A	4	F	F	N/A									1	1	No Section
BATT01-00390	30ug/L	B	3	835	Anterior	N/A	N/A	U	M	N/A									1	2	No Section
BATT01-00390	30ug/L	B	3	835	Middle	N/A	N/A	U	M	N/A									1	2	No Section
BATT01-00390	30ug/L	B	3	835	Posterior	N/A	N/A	U	M	N/A									1	2	No Section
BATT01-00390	30ug/L	B	4	836	Anterior	4		M	M	0									1	2	
BATT01-00390	30ug/L	B	4	836	Middle	4		M	M	0									1	1	
BATT01-00390	30ug/L	B	4	836	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	30ug/L	B	5	837	Anterior	4		M	M	0									2	1	
BATT01-00390	30ug/L	B	5	837	Middle	4		M	M	0									2	1	
BATT01-00390	30ug/L	B	5	837	Posterior	N/A		M	M	N/A									2	1	No Section
BATT01-00390	30ug/L	B	6	838	Anterior		4	F	F	0						1			2	2	
BATT01-00390	30ug/L	B	6	838	Middle		4	F	F	0						1			2	2	
BATT01-00390	30ug/L	B	6	838	Posterior		3	F	F	0						1			2	1	
BATT01-00390	30ug/L	B	7	839	Anterior		3	F	F	0							1		2	2	
BATT01-00390	30ug/L	B	7	839	Middle		3	F	F	0							1		2	2	
BATT01-00390	30ug/L	B	7	839	Posterior		3	F	F	0									2	2	
BATT01-00390	30ug/L	B	8	840	Anterior	4		M	M	0	1								1	2	
BATT01-00390	30ug/L	B	8	840	Middle	5		M	M	0									1	2	
BATT01-00390	30ug/L	B	8	840	Posterior	5		M	M	0	1								1	2	
BATT01-00390	30ug/L	B	9	841	Anterior		4	F	F	0									2	2	
BATT01-00390	30ug/L	B	9	841	Middle		4	F	F	0									2	2	
BATT01-00390	30ug/L	B	9	841	Posterior		4	F	F	0									2	2	
BATT01-00390	30ug/L	B	10	842	Anterior		4	F	F	0									2	2	
BATT01-00390	30ug/L	B	10	842	Middle		4	F	F	0									2	2	
BATT01-00390	30ug/L	B	10	842	Posterior		Incomplete	F	F	Incomplete									2	2	Insufficient Tissue for Diagnostic Purposes
BATT01-00390	30ug/L	C	1	843	Anterior	4		M	M	0	1								1	2	
BATT01-00390	30ug/L	C	1	843	Middle	4		M	M	0	1								1	2	
BATT01-00390	30ug/L	C	1	843	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	30ug/L	C	2	844	Anterior	4		M	M	0	2	1							2	1	
BATT01-00390	30ug/L	C	2	844	Middle	4		M	M	0	1								2	2	
BATT01-00390	30ug/L	C	2	844	Posterior	4		M	M	0	1								2	1	
BATT01-00390	30ug/L	C	3	845	Anterior	4		M	M	0		1							2	2	
BATT01-00390	30ug/L	C	3	845	Middle	4		M	M	0							2		2	2	
BATT01-00390	30ug/L	C	3	845	Posterior	4		M	M	0							2		2	2	
BATT01-00390	30ug/L	C	4	846	Anterior		4	F	F	0									2	2	
BATT01-00390	30ug/L	C	4	846	Middle		4	F	F	0									2	2	
BATT01-00390	30ug/L	C	4	846	Posterior		3	F	F	0							1		2	1	

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BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Germinal Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Mononuclear Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oviduct Stage	Wolffian Duct Stage	Comments
BATT01-00390	30ug/L	C	5	827	Anterior	N/A	N/A	U	F	N/A									1	1	No Section
BATT01-00390	30ug/L	C	5	827	Middle	N/A	N/A	U	F	N/A									1	1	No Section
BATT01-00390	30ug/L	C	5	827	Posterior	N/A	N/A	U	F	N/A									1	1	No Section
BATT01-00390	30ug/L	C	6	828	Anterior	4		M	M	0	2								1	2	
BATT01-00390	30ug/L	C	6	828	Middle	4		M	M	0	2								1	2	
BATT01-00390	30ug/L	C	6	828	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	30ug/L	C	7	829	Anterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	30ug/L	C	7	829	Middle	N/A		M	M	N/A									1	2	No Section
BATT01-00390	30ug/L	C	7	829	Posterior	4		M	M	0									1	1	
BATT01-00390	30ug/L	C	8	830	Anterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	30ug/L	C	8	830	Middle	N/A		M	M	N/A									2	2	No Section
BATT01-00390	30ug/L	C	8	830	Posterior	4		M	M	0	1								2	2	
BATT01-00390	30ug/L	C	9	831	Anterior		3	F	F	0	1					1			2	2	
BATT01-00390	30ug/L	C	9	831	Middle		3	F	F	0	1								2	2	
BATT01-00390	30ug/L	C	9	831	Posterior		3	F	F	0	1					1			2	1	
BATT01-00390	30ug/L	C	10	832	Anterior		4	F	F	0							1		3	2	
BATT01-00390	30ug/L	C	10	832	Middle		4	F	F	0							1		3	2	
BATT01-00390	30ug/L	C	10	832	Posterior		4	F	F	0					1				2	1	
BATT01-00390	30ug/L	D	1	833	Anterior		3	F	F	0	1						1		2	2	
BATT01-00390	30ug/L	D	1	833	Middle		4	F	F	0							1		2	1	
BATT01-00390	30ug/L	D	1	833	Posterior		N/A	F	F	N/A									2	1	No Section
BATT01-00390	30ug/L	D	2	834	Anterior		3	F	F	0									3	1	
BATT01-00390	30ug/L	D	2	834	Middle		3	F	F	0	1					1			2	1	
BATT01-00390	30ug/L	D	2	834	Posterior		3	F	F	0	1								2	1	
BATT01-00390	30ug/L	D	3	835	Anterior	4		M	M	0								1	2	1	
BATT01-00390	30ug/L	D	3	835	Middle	4		M	M	0	1								2	2	
BATT01-00390	30ug/L	D	3	835	Posterior	4		M	M	0	1							1	2	2	
BATT01-00390	30ug/L	D	4	836	Anterior	4		M	M	0	2								2	1	
BATT01-00390	30ug/L	D	4	836	Middle	4		M	M	0	2								2	1	
BATT01-00390	30ug/L	D	4	836	Posterior	4		M	M	0	2								1	1	
BATT01-00390	30ug/L	D	5	837	Anterior		4	F	F	0	1								2	2	
BATT01-00390	30ug/L	D	5	837	Middle		4	F	F	0									2	2	
BATT01-00390	30ug/L	D	5	837	Posterior		4	F	F	0									2	1	
BATT01-00390	30ug/L	D	6	838	Anterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	30ug/L	D	6	838	Middle	N/A		M	M	N/A									1	1	
BATT01-00390	30ug/L	D	6	838	Posterior	4		M	M	0	1								1	1	
BATT01-00390	30ug/L	D	7	839	Anterior	4		M	M	0	1		2						1	2	
BATT01-00390	30ug/L	D	7	839	Middle	4		M	M	0	1		2						1	1	
BATT01-00390	30ug/L	D	7	839	Posterior	4		M	M	0			2						1	2	
BATT01-00390	30ug/L	D	8	840	Anterior		4	F	F	0	1						1		2	1	
BATT01-00390	30ug/L	D	8	840	Middle		4	F	F	0							1		2	1	
BATT01-00390	30ug/L	D	8	840	Posterior		3	F	F	0									2	1	
BATT01-00390	30ug/L	D	9	841	Anterior	5		M	M	0	1		1						2	2	
BATT01-00390	30ug/L	D	9	841	Middle	5		M	M	0	1		1						2	2	
BATT01-00390	30ug/L	D	9	841	Posterior	5		M	M	0	1		1						2	1	
BATT01-00390	30ug/L	D	10	842	Anterior	4		M	M	0	2		2						2	2	
BATT01-00390	30ug/L	D	10	842	Middle	4		M	M	0			2						2	2	
BATT01-00390	30ug/L	D	10	842	Posterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	100ug/L	A	1	843	Anterior		3	F	F	0	1								2	2	
BATT01-00390	100ug/L	A	1	843	Middle		3	F	F	0	1						1		2	1	
BATT01-00390	100ug/L	A	1	843	Posterior		3	F	F	0							1		3	1	
BATT01-00390	100ug/L	A	2	844	Anterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	A	2	844	Middle		3	F	F	0	1						1		2	2	
BATT01-00390	100ug/L	A	2	844	Posterior		3	F	F	0									2	2	
BATT01-00390	100ug/L	A	3	845	Anterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	A	3	845	Middle		3	F	F	0									2	1	
BATT01-00390	100ug/L	A	3	845	Posterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	A	4	846	Anterior	4		M	M	0			2						1	2	
BATT01-00390	100ug/L	A	4	846	Middle	4		M	M	0			2						1	2	
BATT01-00390	100ug/L	A	4	846	Posterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	100ug/L	A	5	847	Anterior		3	F	F	0									2	2	
BATT01-00390	100ug/L	A	5	847	Middle		4	F	F	0									2	2	
BATT01-00390	100ug/L	A	5	847	Posterior		N/A	F	F	N/A									2	2	No Section
BATT01-00390	100ug/L	A	6	848	Anterior	4		M	M	0			2						2	1	
BATT01-00390	100ug/L	A	6	848	Middle	4		M	M	0			2						1	2	
BATT01-00390	100ug/L	A	6	848	Posterior	4		M	M	0			2						1	2	
BATT01-00390	100ug/L	A	7	849	Anterior		3	F	F	0							1		2	1	
BATT01-00390	100ug/L	A	7	849	Middle		3	F	F	0							1		2	2	
BATT01-00390	100ug/L	A	7	849	Posterior		3	F	F	0									2	1	

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Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Cervical Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Mononuclear Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oviduct Stage	Wolffian Duct Stage	Comments
BATT01-00390	100ug/L	A	8	850	Anterior		3	F	F	0							1		2	1	
BATT01-00390	100ug/L	A	8	850	Middle		3	F	F	0							1		2	1	
BATT01-00390	100ug/L	A	8	850	Posterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	A	9	851	Anterior	N/A	N/A	U	M	N/A									2	1	No Section
BATT01-00390	100ug/L	A	9	851	Middle	N/A	N/A	U	M	N/A									2	2	No Section
BATT01-00390	100ug/L	A	9	851	Posterior	N/A	N/A	U	M	N/A									2	2	No Section
BATT01-00390	100ug/L	A	10	852	Anterior		4	F	F	0							1		2	2	
BATT01-00390	100ug/L	A	10	852	Middle		4	F	F	0							1		2	1	
BATT01-00390	100ug/L	A	10	852	Posterior		4	F	F	0									2	1	
BATT01-00390	100ug/L	B	1	853	Anterior		N/A	F	F	N/A									2	2	
BATT01-00390	100ug/L	B	1	853	Middle		N/A	F	F	N/A									3	1	
BATT01-00390	100ug/L	B	1	853	Posterior		3	F	F	0							2		2	1	
BATT01-00390	100ug/L	B	2	854	Anterior	4		M	M	0									2	2	
BATT01-00390	100ug/L	B	2	854	Middle	4		M	M	0									2	1	
BATT01-00390	100ug/L	B	2	854	Posterior	4		M	M	0									2	1	
BATT01-00390	100ug/L	B	3	855	Anterior		4	F	F	0							1		2	2	
BATT01-00390	100ug/L	B	3	855	Middle		4	F	F	0							1		2	1	
BATT01-00390	100ug/L	B	3	855	Posterior		4	F	F	0	1						1		2	2	
BATT01-00390	100ug/L	B	4	856	Anterior	5		M	M	0	1	1	1				2		2	2	
BATT01-00390	100ug/L	B	4	856	Middle	4		M	M	0							2		2	2	
BATT01-00390	100ug/L	B	4	856	Posterior	Incomplete		M	M	Incomplete									2	1	Insufficient Tissue for Diagnostic Purposes
BATT01-00390	100ug/L	B	5	857	Anterior	4		M	M	0									1	1	
BATT01-00390	100ug/L	B	5	857	Middle	5		M	M	0									1	2	
BATT01-00390	100ug/L	B	5	857	Posterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	100ug/L	B	6	858	Anterior	4		M	M	0			2				1		2	1	
BATT01-00390	100ug/L	B	6	858	Middle	4		M	M	0			2				1		2	1	
BATT01-00390	100ug/L	B	6	858	Posterior	Incomplete		M	M	Incomplete									1	1	Insufficient Tissue for Diagnostic Purposes
BATT01-00390	100ug/L	B	7	859	Anterior		3	F	F	0									2	2	
BATT01-00390	100ug/L	B	7	859	Middle		3	F	F	0									2	1	
BATT01-00390	100ug/L	B	7	859	Posterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	B	8	860	Anterior		3	F	F	0	1								2	1	
BATT01-00390	100ug/L	B	8	860	Middle		3	F	F	0									2	1	
BATT01-00390	100ug/L	B	8	860	Posterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	B	9	861	Anterior	N/A		M	M	N/A									1	1	No Section
BATT01-00390	100ug/L	B	9	861	Middle	N/A		M	M	N/A									1	1	No Section
BATT01-00390	100ug/L	B	9	861	Posterior	4		M	M	0		1	1						1	1	
BATT01-00390	100ug/L	B	10	862	Anterior		4	F	F	0									2	1	
BATT01-00390	100ug/L	B	10	862	Middle		4	F	F	0									2	1	
BATT01-00390	100ug/L	B	10	862	Posterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	C	1	863	Anterior		N/A	F	F	N/A									2	1	
BATT01-00390	100ug/L	C	1	863	Middle		N/A	F	F	N/A									2	1	
BATT01-00390	100ug/L	C	1	863	Posterior		3	F	F	0							1		2	1	
BATT01-00390	100ug/L	C	2	864	Anterior	N/A		M	M	N/A									1	2	No Section
BATT01-00390	100ug/L	C	2	864	Middle	N/A		M	M	N/A									1	2	No Section
BATT01-00390	100ug/L	C	2	864	Posterior	4		M	M	0	1		2						1	2	
BATT01-00390	100ug/L	C	3	865	Anterior	4		M	M	0	1								2	2	
BATT01-00390	100ug/L	C	3	865	Middle	4		M	M	0									2	2	
BATT01-00390	100ug/L	C	3	865	Posterior	4		M	M	0									2	1	
BATT01-00390	100ug/L	C	4	866	Anterior		4	F	F	0							1		2	2	
BATT01-00390	100ug/L	C	4	866	Middle		4	F	F	0									2	2	
BATT01-00390	100ug/L	C	4	866	Posterior		3	F	F	0									2	2	
BATT01-00390	100ug/L	C	5	867	Anterior	4		M	M	0	1								2	2	
BATT01-00390	100ug/L	C	5	867	Middle	4		M	M	0									2	2	
BATT01-00390	100ug/L	C	5	867	Posterior	N/A		M	M	N/A									2	2	No Section
BATT01-00390	100ug/L	C	6	868	Anterior		4	F	F	0							2		3	1	
BATT01-00390	100ug/L	C	6	868	Middle		4	F	F	0							2		2	1	
BATT01-00390	100ug/L	C	6	868	Posterior		4	F	F	0	1						1		2	1	
BATT01-00390	100ug/L	C	7	869	Anterior	4		M	M	0									2	3	
BATT01-00390	100ug/L	C	7	869	Middle	4		M	M	0									2	3	
BATT01-00390	100ug/L	C	7	869	Posterior	4		M	M	0									2	3	
BATT01-00390	100ug/L	C	8	870	Anterior		3	F	F	0	1						1		2	1	
BATT01-00390	100ug/L	C	8	870	Middle		3	F	F	0							1		2	1	
BATT01-00390	100ug/L	C	8	870	Posterior		3	F	F	0	1						1		2	1	
BATT01-00390	100ug/L	C	9	871	Anterior		3	F	F	0							1		2	2	
BATT01-00390	100ug/L	C	9	871	Middle		3	F	F	0							1		2	2	
BATT01-00390	100ug/L	C	9	871	Posterior		3	F	F	0	1						1		2	2	
BATT01-00390	100ug/L	C	10	872	Anterior		3	F	F	0							1		2	2	
BATT01-00390	100ug/L	C	10	872	Middle		3	F	F	0							2		2	2	
BATT01-00390	100ug/L	C	10	872	Posterior		3	F	F	0							1		2	2	

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DEST

Gonad Histology (Terminal sn)

BATT01-00390

Study ID	Name of Treatment Group	Replicate ID	Juvenile Animal ID	Sample Number	Slide Number/ Section ID	Testis Stage	Ovary Stage	Phenotypic Sex	Genotypic Sex	Gonad Phenotype Score	Germ Cell Degeneration	Germ Cell Vacuolation	Exfoliated Germ Cells	Germinal Epithelium, Thinning and Dilation	Inflammation, Granulomatous	Testicular Oocytes	Mononuclear Cell Infiltration	Epithelial Cells, Cytoplasmic Inclusions	Oviduct Stage	Wolffian Duct Stage	Comments
BATT01-00390	100ug/L	0	1	873	Anterior	4		M	M	0	1								1	1	
BATT01-00390	100ug/L	0	1	873	Middle	4		M	M	0			1						1	1	
BATT01-00390	100ug/L	0	1	873	Posterior	4		M	M	0									1	1	
BATT01-00390	100ug/L	0	2	874	Anterior	5		M	M	0			1						2	1	
BATT01-00390	100ug/L	0	2	874	Middle	4		M	M	0			1				1		2	2	
BATT01-00390	100ug/L	0	2	874	Posterior	5		M	M	0		1	2						2	1	
BATT01-00390	100ug/L	0	3	875	Anterior		3	F	F	0							1		2	2	
BATT01-00390	100ug/L	0	3	875	Middle		3	F	F	0							1		2	2	
BATT01-00390	100ug/L	0	3	875	Posterior		3	F	F	0									2	2	
BATT01-00390	100ug/L	0	4	876	Anterior		3	F	F	0	1								2	1	
BATT01-00390	100ug/L	0	4	876	Middle		3	F	F	0	1								2	1	
BATT01-00390	100ug/L	0	4	876	Posterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	0	5	877	Anterior		4	F	F	0							1		2	2	
BATT01-00390	100ug/L	0	5	877	Middle		4	F	F	0									2	1	
BATT01-00390	100ug/L	0	5	877	Posterior		N/A	F	F	N/A									2	2	No Section
BATT01-00390	100ug/L	0	6	878	Anterior		3	F	F	0									2	2	
BATT01-00390	100ug/L	0	6	878	Middle		3	F	F	0									2	2	
BATT01-00390	100ug/L	0	6	878	Posterior		3	F	F	0	1								2	1	
BATT01-00390	100ug/L	0	7	879	Anterior	5		M	M	0			1						2	2	
BATT01-00390	100ug/L	0	7	879	Middle	4		M	M	0	1		1						2	2	
BATT01-00390	100ug/L	0	7	879	Posterior	4		M	M	0			1						2	2	
BATT01-00390	100ug/L	0	8	880	Anterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	0	8	880	Middle		3	F	F	0									2	1	
BATT01-00390	100ug/L	0	8	880	Posterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	0	9	881	Anterior		3	F	F	0							1		2	1	
BATT01-00390	100ug/L	0	9	881	Middle		3	F	F	0							1	1	2	2	
BATT01-00390	100ug/L	0	9	881	Posterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	0	10	882	Anterior		3	F	F	0									2	1	
BATT01-00390	100ug/L	0	10	882	Middle		3	F	F	0									2	1	
BATT01-00390	100ug/L	0	10	882	Posterior		3	F	F	0							1		2	2	

DEST BATT01-00390 Liver Histology (Termination)

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Hepatocellular Vacuolation, Decreased	Hepatocellular Vacuolation, Increased	Cellular Infiltrate, Parenchymal, Focal	Bile Duct, Dilated	Comments
BATT01-00390	0.0µg/L	A	1	643			1	4	
BATT01-00390	0.0µg/L	A	2	644		1	1		
BATT01-00390	0.0µg/L	A	3	645			1		
BATT01-00390	0.0µg/L	A	4	646	1		1		
BATT01-00390	0.0µg/L	A	5	647			1		
BATT01-00390	0.0µg/L	A	6	648			1		
BATT01-00390	0.0µg/L	A	7	649			2		
BATT01-00390	0.0µg/L	A	8	650	0	0	0	0	
BATT01-00390	0.0µg/L	A	9	651			1		
BATT01-00390	0.0µg/L	A	10	652			1		
BATT01-00390	0.0µg/L	B	1	653			1		
BATT01-00390	0.0µg/L	B	2	654	0	0	0	0	
BATT01-00390	0.0µg/L	B	3	655			1		
BATT01-00390	0.0µg/L	B	4	656	0	0	0	0	
BATT01-00390	0.0µg/L	B	5	657			1		
BATT01-00390	0.0µg/L	B	6	658	1				
BATT01-00390	0.0µg/L	B	7	659			1		
BATT01-00390	0.0µg/L	B	8	660			1		
BATT01-00390	0.0µg/L	B	9	661			1		
BATT01-00390	0.0µg/L	B	10	662	1				
BATT01-00390	0.0µg/L	C	1	663			1		
BATT01-00390	0.0µg/L	C	2	664			1		
BATT01-00390	0.0µg/L	C	3	665			1		
BATT01-00390	0.0µg/L	C	4	666			1		
BATT01-00390	0.0µg/L	C	5	667			1		
BATT01-00390	0.0µg/L	C	6	668	0	0	0	0	
BATT01-00390	0.0µg/L	C	7	669			1		
BATT01-00390	0.0µg/L	C	8	670	1				
BATT01-00390	0.0µg/L	C	9	671			1		
BATT01-00390	0.0µg/L	C	10	672	0	0	0	0	
BATT01-00390	0.0µg/L	D	1	673			1		
BATT01-00390	0.0µg/L	D	2	674			1		
BATT01-00390	0.0µg/L	D	3	675		1	1		
BATT01-00390	0.0µg/L	D	4	676	0	0	0	0	
BATT01-00390	0.0µg/L	D	5	677	0	0	0	0	
BATT01-00390	0.0µg/L	D	6	678			1		
BATT01-00390	0.0µg/L	D	7	679	1				
BATT01-00390	0.0µg/L	D	8	680			1		
BATT01-00390	0.0µg/L	D	9	681			1		
BATT01-00390	0.0µg/L	D	10	682	1				
BATT01-00390	0.0µg/L	E	1	683	0	0	0	0	
BATT01-00390	0.0µg/L	E	2	684			1		
BATT01-00390	0.0µg/L	E	3	685			1		
BATT01-00390	0.0µg/L	E	4	686	0	0	0	0	
BATT01-00390	0.0µg/L	E	5	687			1		
BATT01-00390	0.0µg/L	E	6	688		1	1		
BATT01-00390	0.0µg/L	E	7	689			1		
BATT01-00390	0.0µg/L	E	8	690			1		
BATT01-00390	0.0µg/L	E	9	691	0	0	0	0	
BATT01-00390	0.0µg/L	E	10	692			1		
BATT01-00390	0.0µg/L	F	1	693		1	1		

DEST BATT01-00390 Liver Histology (Termination)

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Hepatocellular Vacuolation, Decreased	Hepatocellular Vacuolation, Increased	Cellular Infiltrate, Parenchymal, Focal	Bile Duct, Dilated	Comments
BATT01-00390	0.0µg/L	F	2	694			1		
BATT01-00390	0.0µg/L	F	3	695	0	0	0	0	
BATT01-00390	0.0µg/L	F	4	696			1		
BATT01-00390	0.0µg/L	F	5	697	0	0	0	0	
BATT01-00390	0.0µg/L	F	6	698	0	0	0	0	
BATT01-00390	0.0µg/L	F	7	699		1	2		
BATT01-00390	0.0µg/L	F	8	700			2		
BATT01-00390	0.0µg/L	F	9	701			1		
BATT01-00390	0.0µg/L	F	10	702			1		
BATT01-00390	0.0µg/L	G	1	703			1		
BATT01-00390	0.0µg/L	G	2	704			1		
BATT01-00390	0.0µg/L	G	3	705			1		
BATT01-00390	0.0µg/L	G	4	706			1		
BATT01-00390	0.0µg/L	G	5	707			2		
BATT01-00390	0.0µg/L	G	6	708			2		
BATT01-00390	0.0µg/L	G	7	709			1		
BATT01-00390	0.0µg/L	G	8	710			1		
BATT01-00390	0.0µg/L	G	9	711			1		
BATT01-00390	0.0µg/L	G	10	712			2		
BATT01-00390	0.0µg/L	H	1	713			1		
BATT01-00390	0.0µg/L	H	2	714			1		
BATT01-00390	0.0µg/L	H	3	715	1				
BATT01-00390	0.0µg/L	H	4	716			2		
BATT01-00390	0.0µg/L	H	5	717	0	0	0	0	
BATT01-00390	0.0µg/L	H	6	718		1			
BATT01-00390	0.0µg/L	H	7	719	0	0	0	0	
BATT01-00390	0.0µg/L	H	8	720	1		2		
BATT01-00390	0.0µg/L	H	9	721			1		
BATT01-00390	0.0µg/L	H	10	722			1		
BATT01-00390	3.6µg/L	A	1	723		1			
BATT01-00390	3.6µg/L	A	2	724			2		
BATT01-00390	3.6µg/L	A	3	725	0	0	0	0	
BATT01-00390	3.6µg/L	A	4	726			1		
BATT01-00390	3.6µg/L	A	5	727			1		
BATT01-00390	3.6µg/L	A	6	728	0	0	0	0	
BATT01-00390	3.6µg/L	A	7	729		1	1		
BATT01-00390	3.6µg/L	A	8	730		1	1		
BATT01-00390	3.6µg/L	A	9	731	1				
BATT01-00390	3.6µg/L	A	10	732	0	0	0	0	
BATT01-00390	3.6µg/L	B	1	733			1		
BATT01-00390	3.6µg/L	B	2	734		1	1		
BATT01-00390	3.6µg/L	B	3	735			1		
BATT01-00390	3.6µg/L	B	4	736			1		
BATT01-00390	3.6µg/L	B	5	737			1		
BATT01-00390	3.6µg/L	B	6	738			1		
BATT01-00390	3.6µg/L	B	7	739			1		
BATT01-00390	3.6µg/L	B	8	740	0	0	0	0	
BATT01-00390	3.6µg/L	B	9	741			1		
BATT01-00390	3.6µg/L	B	10	742	0	0	0	0	
BATT01-00390	3.6µg/L	C	1	743			1		
BATT01-00390	3.6µg/L	C	2	744			2		

DEST BATT01-00390 Liver Histology (Termination)

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Hepatocellular Vacuolation, Decreased	Hepatocellular Vacuolation, Increased	Cellular Infiltrate, Parenchymal, Focal	Bile Duct, Dilated	Comments
BATT01-00390	3.6µg/L	C	3	745	0	0	0	0	
BATT01-00390	3.6µg/L	C	4	746			1		
BATT01-00390	3.6µg/L	C	5	747			1		
BATT01-00390	3.6µg/L	C	6	748			1		
BATT01-00390	3.6µg/L	C	7	749		1			
BATT01-00390	3.6µg/L	C	8	750	0	0	0	0	
BATT01-00390	3.6µg/L	C	9	751			1		
BATT01-00390	3.6µg/L	C	10	752			1		
BATT01-00390	3.6µg/L	D	1	753			1		
BATT01-00390	3.6µg/L	D	2	754			1		
BATT01-00390	3.6µg/L	D	3	755			1		
BATT01-00390	3.6µg/L	D	4	756	0	0	0	0	
BATT01-00390	3.6µg/L	D	5	757			1		
BATT01-00390	3.6µg/L	D	6	758			1		
BATT01-00390	3.6µg/L	D	7	759			1		
BATT01-00390	3.6µg/L	D	8	760	0	0	0	0	
BATT01-00390	3.6µg/L	D	9	761			1		
BATT01-00390	3.6µg/L	D	10	762			1		
BATT01-00390	10.9µg/L	A	1	763			1		
BATT01-00390	10.9µg/L	A	2	764			1		
BATT01-00390	10.9µg/L	A	3	765	0	0	0	0	
BATT01-00390	10.9µg/L	A	4	766			1		
BATT01-00390	10.9µg/L	A	5	767		1	1		
BATT01-00390	10.9µg/L	A	6	768	0	0	0	0	
BATT01-00390	10.9µg/L	A	7	769			2		
BATT01-00390	10.9µg/L	A	8	770			1		
BATT01-00390	10.9µg/L	A	9	771			1		
BATT01-00390	10.9µg/L	A	10	772			1		
BATT01-00390	10.9µg/L	B	1	773	0	0	0	0	
BATT01-00390	10.9µg/L	B	2	774			1		
BATT01-00390	10.9µg/L	B	3	775			1		
BATT01-00390	10.9µg/L	B	4	776			1		
BATT01-00390	10.9µg/L	B	5	777	0	0	0	0	
BATT01-00390	10.9µg/L	B	6	778			1		
BATT01-00390	10.9µg/L	B	7	779	0	0	0	0	
BATT01-00390	10.9µg/L	B	8	780	0	0	0	0	
BATT01-00390	10.9µg/L	B	9	781	0	0	0	0	
BATT01-00390	10.9µg/L	B	10	782			2		
BATT01-00390	10.9µg/L	C	1	783			1		
BATT01-00390	10.9µg/L	C	2	784			1		
BATT01-00390	10.9µg/L	C	3	785	0	0	0	0	
BATT01-00390	10.9µg/L	C	4	786			1		
BATT01-00390	10.9µg/L	C	5	787	0	0	0	0	
BATT01-00390	10.9µg/L	C	6	788			1		
BATT01-00390	10.9µg/L	C	7	789			1		
BATT01-00390	10.9µg/L	C	8	790			1		
BATT01-00390	10.9µg/L	C	9	791			1		
BATT01-00390	10.9µg/L	C	10	792	1		1		
BATT01-00390	10.9µg/L	D	1	793			1		
BATT01-00390	10.9µg/L	D	2	794			1		
BATT01-00390	10.9µg/L	D	3	795			1		

DEST BATT01-00390 Liver Histology (Termination)

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Hepatocellular Vacuolation, Decreased	Hepatocellular Vacuolation, Increased	Cellular Infiltrate, Parenchymal, Focal	Bile Duct, Dilated	Comments
BATT01-00390	10.9µg/L	D	4	796			1		
BATT01-00390	10.9µg/L	D	5	797	0	0	0	0	
BATT01-00390	10.9µg/L	D	6	798			1		
BATT01-00390	10.9µg/L	D	7	799			2		
BATT01-00390	10.9µg/L	D	8	800			1		
BATT01-00390	10.9µg/L	D	9	801	0	0	0	0	
BATT01-00390	10.9µg/L	D	10	802		1			
BATT01-00390	33µg/L	A	1	803			1		
BATT01-00390	33µg/L	A	2	804			2		
BATT01-00390	33µg/L	A	3	805			2		
BATT01-00390	33µg/L	A	4	806			2		
BATT01-00390	33µg/L	A	5	807			1		
BATT01-00390	33µg/L	A	6	808			1		
BATT01-00390	33µg/L	A	7	809			1		
BATT01-00390	33µg/L	A	8	810	0	0	0	0	
BATT01-00390	33µg/L	A	9	811		1	1		
BATT01-00390	33µg/L	A	10	812			1		
BATT01-00390	33µg/L	B	1	813			1		
BATT01-00390	33µg/L	B	2	814			2		
BATT01-00390	33µg/L	B	3	815			1		
BATT01-00390	33µg/L	B	4	816			1		
BATT01-00390	33µg/L	B	5	817		1	1		
BATT01-00390	33µg/L	B	6	818	0	0	0	0	
BATT01-00390	33µg/L	B	7	819	1				
BATT01-00390	33µg/L	B	8	820			1		
BATT01-00390	33µg/L	B	9	821			1		
BATT01-00390	33µg/L	B	10	822			1		
BATT01-00390	33µg/L	C	1	823			1		
BATT01-00390	33µg/L	C	2	824			1		
BATT01-00390	33µg/L	C	3	825			1		
BATT01-00390	33µg/L	C	4	826	0	0	0	0	
BATT01-00390	33µg/L	C	5	827			1		
BATT01-00390	33µg/L	C	6	828	0	0	0	0	
BATT01-00390	33µg/L	C	7	829			1		
BATT01-00390	33µg/L	C	8	830	0	0	0	0	
BATT01-00390	33µg/L	C	9	831			1		
BATT01-00390	33µg/L	C	10	832		1	1		
BATT01-00390	33µg/L	D	1	833			1		
BATT01-00390	33µg/L	D	2	834	0	0	0	0	
BATT01-00390	33µg/L	D	3	835			1		
BATT01-00390	33µg/L	D	4	836			1		
BATT01-00390	33µg/L	D	5	837	1		1		
BATT01-00390	33µg/L	D	6	838	0	0	0	0	
BATT01-00390	33µg/L	D	7	839			1		
BATT01-00390	33µg/L	D	8	840		1	1		
BATT01-00390	33µg/L	D	9	841			1		
BATT01-00390	33µg/L	D	10	842		1			
BATT01-00390	100µg/L	A	1	843			1		
BATT01-00390	100µg/L	A	2	844	0	0	0	0	
BATT01-00390	100µg/L	A	3	845			1		
BATT01-00390	100µg/L	A	4	846	0	0	0	0	

DEST BATT01-00390 Liver Histology (Termination)

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Hepatocellular Vacuolation, Decreased	Hepatocellular Vacuolation, Increased	Cellular Infiltrate, Parenchymal, Focal	Bile Duct, Dilated	Comments
BATT01-00390	100µg/L	A	5	847			1		
BATT01-00390	100µg/L	A	6	848	1		1		
BATT01-00390	100µg/L	A	7	849			1		
BATT01-00390	100µg/L	A	8	850	0	0	0	0	
BATT01-00390	100µg/L	A	9	851			1		
BATT01-00390	100µg/L	A	10	852			1		
BATT01-00390	100µg/L	B	1	853			2		
BATT01-00390	100µg/L	B	2	854			1		
BATT01-00390	100µg/L	B	3	855			1		
BATT01-00390	100µg/L	B	4	856			1		
BATT01-00390	100µg/L	B	5	857			1		
BATT01-00390	100µg/L	B	6	858	0	0	0	0	
BATT01-00390	100µg/L	B	7	859			1		
BATT01-00390	100µg/L	B	8	860	0	0	0	0	
BATT01-00390	100µg/L	B	9	861	0	0	0	0	
BATT01-00390	100µg/L	B	10	862	0	0	0	0	
BATT01-00390	100µg/L	C	1	863			1		
BATT01-00390	100µg/L	C	2	864	1		1		
BATT01-00390	100µg/L	C	3	865			1		
BATT01-00390	100µg/L	C	4	866			1		
BATT01-00390	100µg/L	C	5	867	1				
BATT01-00390	100µg/L	C	6	868	0	0	0	0	
BATT01-00390	100µg/L	C	7	869	0	0	0	0	
BATT01-00390	100µg/L	C	8	870			1		
BATT01-00390	100µg/L	C	9	871	0	0	0	0	
BATT01-00390	100µg/L	C	10	872			1		
BATT01-00390	100µg/L	D	1	873			1		
BATT01-00390	100µg/L	D	2	874	0	0	0	0	
BATT01-00390	100µg/L	D	3	875			1		
BATT01-00390	100µg/L	D	4	876			1		
BATT01-00390	100µg/L	D	5	877			1		
BATT01-00390	100µg/L	D	6	878			1		
BATT01-00390	100µg/L	D	7	879	0	0	0	0	
BATT01-00390	100µg/L	D	8	880			1		
BATT01-00390	100µg/L	D	9	881	1				
BATT01-00390	100µg/L	D	10	882	1				

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	0.0µg/L	A	1	643	Anterior	2						
BATT01-00390	0.0µg/L	A	1	643	Middle	2						
BATT01-00390	0.0µg/L	A	1	643	Posterior	2						
BATT01-00390	0.0µg/L	A	2	644	Anterior	1						
BATT01-00390	0.0µg/L	A	2	644	Middle	2						
BATT01-00390	0.0µg/L	A	2	644	Posterior	2						
BATT01-00390	0.0µg/L	A	3	645	Anterior	1					1	
BATT01-00390	0.0µg/L	A	3	645	Middle	2						
BATT01-00390	0.0µg/L	A	3	645	Posterior	1						
BATT01-00390	0.0µg/L	A	4	646	Anterior	2						
BATT01-00390	0.0µg/L	A	4	646	Middle	2						
BATT01-00390	0.0µg/L	A	4	646	Posterior	2	1				1	
BATT01-00390	0.0µg/L	A	5	647	Anterior	2					1	
BATT01-00390	0.0µg/L	A	5	647	Middle	1					1	
BATT01-00390	0.0µg/L	A	5	647	Posterior	2						
BATT01-00390	0.0µg/L	A	6	648	Anterior	2			1			
BATT01-00390	0.0µg/L	A	6	648	Middle	2						
BATT01-00390	0.0µg/L	A	6	648	Posterior	2						
BATT01-00390	0.0µg/L	A	7	649	Anterior	1						
BATT01-00390	0.0µg/L	A	7	649	Middle	2						
BATT01-00390	0.0µg/L	A	7	649	Posterior	2						
BATT01-00390	0.0µg/L	A	8	650	Anterior	2						
BATT01-00390	0.0µg/L	A	8	650	Middle	2						
BATT01-00390	0.0µg/L	A	8	650	Posterior	3					1	
BATT01-00390	0.0µg/L	A	9	651	Anterior	2					1	
BATT01-00390	0.0µg/L	A	9	651	Middle	2						
BATT01-00390	0.0µg/L	A	9	651	Posterior	1						
BATT01-00390	0.0µg/L	A	10	652	Anterior	2					1	
BATT01-00390	0.0µg/L	A	10	652	Middle	2						
BATT01-00390	0.0µg/L	A	10	652	Posterior	2					1	
BATT01-00390	0.0µg/L	B	1	653	Anterior	2						
BATT01-00390	0.0µg/L	B	1	653	Middle	2						
BATT01-00390	0.0µg/L	B	1	653	Posterior	2						
BATT01-00390	0.0µg/L	B	2	654	Anterior	2						
BATT01-00390	0.0µg/L	B	2	654	Middle	2	1				1	
BATT01-00390	0.0µg/L	B	2	654	Posterior	2					1	
BATT01-00390	0.0µg/L	B	3	655	Anterior	2						
BATT01-00390	0.0µg/L	B	3	655	Middle	2					1	
BATT01-00390	0.0µg/L	B	3	655	Posterior	2					1	
BATT01-00390	0.0µg/L	B	4	656	Anterior	2						
BATT01-00390	0.0µg/L	B	4	656	Middle	2						
BATT01-00390	0.0µg/L	B	4	656	Posterior	2						
BATT01-00390	0.0µg/L	B	5	657	Anterior	1						
BATT01-00390	0.0µg/L	B	5	657	Middle	1						
BATT01-00390	0.0µg/L	B	5	657	Posterior	1					1	
BATT01-00390	0.0µg/L	B	6	658	Anterior	2						
BATT01-00390	0.0µg/L	B	6	658	Middle	2						
BATT01-00390	0.0µg/L	B	6	658	Posterior	2					1	
BATT01-00390	0.0µg/L	B	7	659	Anterior	2						
BATT01-00390	0.0µg/L	B	7	659	Middle	2						
BATT01-00390	0.0µg/L	B	7	659	Posterior	2						
BATT01-00390	0.0µg/L	B	8	660	Anterior	1		1				
BATT01-00390	0.0µg/L	B	8	660	Middle	2		1				
BATT01-00390	0.0µg/L	B	8	660	Posterior	2						
BATT01-00390	0.0µg/L	B	9	661	Anterior	2						
BATT01-00390	0.0µg/L	B	9	661	Middle	2					1	
BATT01-00390	0.0µg/L	B	9	661	Posterior	2						
BATT01-00390	0.0µg/L	B	10	662	Anterior	2						
BATT01-00390	0.0µg/L	B	10	662	Middle	2					1	
BATT01-00390	0.0µg/L	B	10	662	Posterior	2						
BATT01-00390	0.0µg/L	C	1	663	Anterior	2						
BATT01-00390	0.0µg/L	C	1	663	Middle	2					1	
BATT01-00390	0.0µg/L	C	1	663	Posterior	2						

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	0.0µg/L	C	2	664	Anterior	2					1	
BATT01-00390	0.0µg/L	C	2	664	Middle	2					1	
BATT01-00390	0.0µg/L	C	2	664	Posterior	2					1	
BATT01-00390	0.0µg/L	C	3	665	Anterior	2					1	
BATT01-00390	0.0µg/L	C	3	665	Middle	2						
BATT01-00390	0.0µg/L	C	3	665	Posterior	2					1	
BATT01-00390	0.0µg/L	C	4	666	Anterior	2						
BATT01-00390	0.0µg/L	C	4	666	Middle	2						
BATT01-00390	0.0µg/L	C	4	666	Posterior	2						
BATT01-00390	0.0µg/L	C	5	667	Anterior	2					1	
BATT01-00390	0.0µg/L	C	5	667	Middle	2						
BATT01-00390	0.0µg/L	C	5	667	Posterior	2						
BATT01-00390	0.0µg/L	C	6	668	Anterior	2						
BATT01-00390	0.0µg/L	C	6	668	Middle	2						
BATT01-00390	0.0µg/L	C	6	668	Posterior	2						
BATT01-00390	0.0µg/L	C	7	669	Anterior	2					1	
BATT01-00390	0.0µg/L	C	7	669	Middle	2						
BATT01-00390	0.0µg/L	C	7	669	Posterior	2					1	
BATT01-00390	0.0µg/L	C	8	670	Anterior	2						
BATT01-00390	0.0µg/L	C	8	670	Middle	2						
BATT01-00390	0.0µg/L	C	8	670	Posterior	2						
BATT01-00390	0.0µg/L	C	9	671	Anterior	1						
BATT01-00390	0.0µg/L	C	9	671	Middle	2						
BATT01-00390	0.0µg/L	C	9	671	Posterior	2						
BATT01-00390	0.0µg/L	C	10	672	Anterior	2						
BATT01-00390	0.0µg/L	C	10	672	Middle	2						
BATT01-00390	0.0µg/L	C	10	672	Posterior	2						
BATT01-00390	0.0µg/L	D	1	673	Anterior	2						
BATT01-00390	0.0µg/L	D	1	673	Middle	2					1	
BATT01-00390	0.0µg/L	D	1	673	Posterior	2						
BATT01-00390	0.0µg/L	D	2	674	Anterior	2	1				1	
BATT01-00390	0.0µg/L	D	2	674	Middle	2	1					
BATT01-00390	0.0µg/L	D	2	674	Posterior	2	1				1	
BATT01-00390	0.0µg/L	D	3	675	Anterior	2						
BATT01-00390	0.0µg/L	D	3	675	Middle	2						
BATT01-00390	0.0µg/L	D	3	675	Posterior	2					1	
BATT01-00390	0.0µg/L	D	4	676	Anterior	2						
BATT01-00390	0.0µg/L	D	4	676	Middle	2					1	
BATT01-00390	0.0µg/L	D	4	676	Posterior	2						
BATT01-00390	0.0µg/L	D	5	677	Anterior	2						
BATT01-00390	0.0µg/L	D	5	677	Middle	2						
BATT01-00390	0.0µg/L	D	5	677	Posterior	2						
BATT01-00390	0.0µg/L	D	6	678	Anterior	1					1	
BATT01-00390	0.0µg/L	D	6	678	Middle	2						
BATT01-00390	0.0µg/L	D	6	678	Posterior	2						
BATT01-00390	0.0µg/L	D	7	679	Anterior	N/A						No Section
BATT01-00390	0.0µg/L	D	7	679	Middle	N/A						No Section
BATT01-00390	0.0µg/L	D	7	679	Posterior	2	1				1	
BATT01-00390	0.0µg/L	D	8	680	Anterior	2					1	
BATT01-00390	0.0µg/L	D	8	680	Middle	2						
BATT01-00390	0.0µg/L	D	8	680	Posterior	2						
BATT01-00390	0.0µg/L	D	9	681	Anterior	1						
BATT01-00390	0.0µg/L	D	9	681	Middle	1						
BATT01-00390	0.0µg/L	D	9	681	Posterior	2						
BATT01-00390	0.0µg/L	D	10	682	Anterior	2						
BATT01-00390	0.0µg/L	D	10	682	Middle	2						
BATT01-00390	0.0µg/L	D	10	682	Posterior	2						
BATT01-00390	0.0µg/L	E	1	683	Anterior	2					1	
BATT01-00390	0.0µg/L	E	1	683	Middle	2					1	
BATT01-00390	0.0µg/L	E	1	683	Posterior	2						
BATT01-00390	0.0µg/L	E	2	684	Anterior	2						
BATT01-00390	0.0µg/L	E	2	684	Middle	2						
BATT01-00390	0.0µg/L	E	2	684	Posterior	2						

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	0.0µg/L	E	3	685	Anterior	2	1					
BATT01-00390	0.0µg/L	E	3	685	Middle	2						
BATT01-00390	0.0µg/L	E	3	685	Posterior	2						
BATT01-00390	0.0µg/L	E	4	686	Anterior	2						
BATT01-00390	0.0µg/L	E	4	686	Middle	2						
BATT01-00390	0.0µg/L	E	4	686	Posterior	2						
BATT01-00390	0.0µg/L	E	5	687	Anterior	2						
BATT01-00390	0.0µg/L	E	5	687	Middle	2						
BATT01-00390	0.0µg/L	E	5	687	Posterior	2						
BATT01-00390	0.0µg/L	E	6	688	Anterior	2						
BATT01-00390	0.0µg/L	E	6	688	Middle	2					1	
BATT01-00390	0.0µg/L	E	6	688	Posterior	2						
BATT01-00390	0.0µg/L	E	7	689	Anterior	1						
BATT01-00390	0.0µg/L	E	7	689	Middle	2						
BATT01-00390	0.0µg/L	E	7	689	Posterior	2						
BATT01-00390	0.0µg/L	E	8	690	Anterior	1					1	
BATT01-00390	0.0µg/L	E	8	690	Middle	2						
BATT01-00390	0.0µg/L	E	8	690	Posterior	2						
BATT01-00390	0.0µg/L	E	9	691	Anterior	1					1	
BATT01-00390	0.0µg/L	E	9	691	Middle	1						
BATT01-00390	0.0µg/L	E	9	691	Posterior	2						
BATT01-00390	0.0µg/L	E	10	692	Anterior	2					1	
BATT01-00390	0.0µg/L	E	10	692	Middle	2						
BATT01-00390	0.0µg/L	E	10	692	Posterior	2					1	
BATT01-00390	0.0µg/L	F	1	693	Anterior	2	1					
BATT01-00390	0.0µg/L	F	1	693	Middle	2						
BATT01-00390	0.0µg/L	F	1	693	Posterior	2						
BATT01-00390	0.0µg/L	F	2	694	Anterior	1						
BATT01-00390	0.0µg/L	F	2	694	Middle	1						
BATT01-00390	0.0µg/L	F	2	694	Posterior	2						
BATT01-00390	0.0µg/L	F	3	695	Anterior	2						
BATT01-00390	0.0µg/L	F	3	695	Middle	2						
BATT01-00390	0.0µg/L	F	3	695	Posterior	1						
BATT01-00390	0.0µg/L	F	4	696	Anterior	1					1	
BATT01-00390	0.0µg/L	F	4	696	Middle	1					1	
BATT01-00390	0.0µg/L	F	4	696	Posterior	1						
BATT01-00390	0.0µg/L	F	5	697	Anterior	2						
BATT01-00390	0.0µg/L	F	5	697	Middle	2						
BATT01-00390	0.0µg/L	F	5	697	Posterior	1						
BATT01-00390	0.0µg/L	F	6	698	Anterior	1					1	
BATT01-00390	0.0µg/L	F	6	698	Middle	1					1	
BATT01-00390	0.0µg/L	F	6	698	Posterior	2						
BATT01-00390	0.0µg/L	F	7	699	Anterior	1						
BATT01-00390	0.0µg/L	F	7	699	Middle	1						
BATT01-00390	0.0µg/L	F	7	699	Posterior	1						
BATT01-00390	0.0µg/L	F	8	700	Anterior	2						
BATT01-00390	0.0µg/L	F	8	700	Middle	2					1	
BATT01-00390	0.0µg/L	F	8	700	Posterior	2						
BATT01-00390	0.0µg/L	F	9	701	Anterior	1						
BATT01-00390	0.0µg/L	F	9	701	Middle	1						
BATT01-00390	0.0µg/L	F	9	701	Posterior	1					1	
BATT01-00390	0.0µg/L	F	10	702	Anterior	2						
BATT01-00390	0.0µg/L	F	10	702	Middle	2						
BATT01-00390	0.0µg/L	F	10	702	Posterior	2						
BATT01-00390	0.0µg/L	G	1	703	Anterior	2					1	
BATT01-00390	0.0µg/L	G	1	703	Middle	2	1					
BATT01-00390	0.0µg/L	G	1	703	Posterior	2					1	
BATT01-00390	0.0µg/L	G	2	704	Anterior	2						
BATT01-00390	0.0µg/L	G	2	704	Middle	2						
BATT01-00390	0.0µg/L	G	2	704	Posterior	2						
BATT01-00390	0.0µg/L	G	3	705	Anterior	2	1					
BATT01-00390	0.0µg/L	G	3	705	Middle	2					1	
BATT01-00390	0.0µg/L	G	3	705	Posterior	2					1	

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	0.0µg/L	G	4	706	Anterior	2						
BATT01-00390	0.0µg/L	G	4	706	Middle	2	1					
BATT01-00390	0.0µg/L	G	4	706	Posterior	2						
BATT01-00390	0.0µg/L	G	5	707	Anterior	2	1					
BATT01-00390	0.0µg/L	G	5	707	Middle	2						
BATT01-00390	0.0µg/L	G	5	707	Posterior	2						
BATT01-00390	0.0µg/L	G	6	708	Anterior	2					1	
BATT01-00390	0.0µg/L	G	6	708	Middle	2						
BATT01-00390	0.0µg/L	G	6	708	Posterior	2						
BATT01-00390	0.0µg/L	G	7	709	Anterior	2					1	
BATT01-00390	0.0µg/L	G	7	709	Middle	2						
BATT01-00390	0.0µg/L	G	7	709	Posterior	2						
BATT01-00390	0.0µg/L	G	8	710	Anterior	2						
BATT01-00390	0.0µg/L	G	8	710	Middle	1						
BATT01-00390	0.0µg/L	G	8	710	Posterior	2						
BATT01-00390	0.0µg/L	G	9	711	Anterior	2						
BATT01-00390	0.0µg/L	G	9	711	Middle	2						
BATT01-00390	0.0µg/L	G	9	711	Posterior	2						
BATT01-00390	0.0µg/L	G	10	712	Anterior	2						
BATT01-00390	0.0µg/L	G	10	712	Middle	2						
BATT01-00390	0.0µg/L	G	10	712	Posterior	2						
BATT01-00390	0.0µg/L	H	1	713	Anterior	3	2					
BATT01-00390	0.0µg/L	H	1	713	Middle	3	2			1	2	
BATT01-00390	0.0µg/L	H	1	713	Posterior	3	1					
BATT01-00390	0.0µg/L	H	2	714	Anterior	2						
BATT01-00390	0.0µg/L	H	2	714	Middle	2						
BATT01-00390	0.0µg/L	H	2	714	Posterior	2						
BATT01-00390	0.0µg/L	H	3	715	Anterior	3	2			1	1	
BATT01-00390	0.0µg/L	H	3	715	Middle	3	1				1	
BATT01-00390	0.0µg/L	H	3	715	Posterior	3	1					
BATT01-00390	0.0µg/L	H	4	716	Anterior	2					1	
BATT01-00390	0.0µg/L	H	4	716	Middle	2					1	
BATT01-00390	0.0µg/L	H	4	716	Posterior	2						
BATT01-00390	0.0µg/L	H	5	717	Anterior	3	1				1	
BATT01-00390	0.0µg/L	H	5	717	Middle	3	1					
BATT01-00390	0.0µg/L	H	5	717	Posterior	3	1					
BATT01-00390	0.0µg/L	H	6	718	Anterior	2						
BATT01-00390	0.0µg/L	H	6	718	Middle	2						
BATT01-00390	0.0µg/L	H	6	718	Posterior	2						
BATT01-00390	0.0µg/L	H	7	719	Anterior	2					1	
BATT01-00390	0.0µg/L	H	7	719	Middle	2						
BATT01-00390	0.0µg/L	H	7	719	Posterior	2					1	
BATT01-00390	0.0µg/L	H	8	720	Anterior	3	2					
BATT01-00390	0.0µg/L	H	8	720	Middle	3	2					
BATT01-00390	0.0µg/L	H	8	720	Posterior	3	2					
BATT01-00390	0.0µg/L	H	9	721	Anterior	2						
BATT01-00390	0.0µg/L	H	9	721	Middle	2					1	
BATT01-00390	0.0µg/L	H	9	721	Posterior	2						
BATT01-00390	0.0µg/L	H	10	722	Anterior	1	1					
BATT01-00390	0.0µg/L	H	10	722	Middle	3						
BATT01-00390	0.0µg/L	H	10	722	Posterior	3						
BATT01-00390	3.6µg/L	A	1	723	Anterior	2					1	
BATT01-00390	3.6µg/L	A	1	723	Middle	2					2	
BATT01-00390	3.6µg/L	A	1	723	Posterior	2					1	
BATT01-00390	3.6µg/L	A	2	724	Anterior	1				1		
BATT01-00390	3.6µg/L	A	2	724	Middle	1				1	1	
BATT01-00390	3.6µg/L	A	2	724	Posterior	2						
BATT01-00390	3.6µg/L	A	3	725	Anterior	2						
BATT01-00390	3.6µg/L	A	3	725	Middle	1						
BATT01-00390	3.6µg/L	A	3	725	Posterior	2					1	
BATT01-00390	3.6µg/L	A	4	726	Anterior	2					1	
BATT01-00390	3.6µg/L	A	4	726	Middle	2						
BATT01-00390	3.6µg/L	A	4	726	Posterior	2						

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	3.6µg/L	A	5	727	Anterior	2						
BATT01-00390	3.6µg/L	A	5	727	Middle	2						
BATT01-00390	3.6µg/L	A	5	727	Posterior	2						
BATT01-00390	3.6µg/L	A	6	728	Anterior	2						
BATT01-00390	3.6µg/L	A	6	728	Middle	2						
BATT01-00390	3.6µg/L	A	6	728	Posterior	2	1					
BATT01-00390	3.6µg/L	A	7	729	Anterior	1						
BATT01-00390	3.6µg/L	A	7	729	Middle	2						
BATT01-00390	3.6µg/L	A	7	729	Posterior	2						
BATT01-00390	3.6µg/L	A	8	730	Anterior	2						
BATT01-00390	3.6µg/L	A	8	730	Middle	2						
BATT01-00390	3.6µg/L	A	8	730	Posterior	2						
BATT01-00390	3.6µg/L	A	9	731	Anterior	3						
BATT01-00390	3.6µg/L	A	9	731	Middle	3						
BATT01-00390	3.6µg/L	A	9	731	Posterior	2						
BATT01-00390	3.6µg/L	A	10	732	Anterior	2						
BATT01-00390	3.6µg/L	A	10	732	Middle	1					1	
BATT01-00390	3.6µg/L	A	10	732	Posterior	2						
BATT01-00390	3.6µg/L	B	1	733	Anterior	2						
BATT01-00390	3.6µg/L	B	1	733	Middle	2						
BATT01-00390	3.6µg/L	B	1	733	Posterior	2						
BATT01-00390	3.6µg/L	B	2	734	Anterior	2						
BATT01-00390	3.6µg/L	B	2	734	Middle	2						
BATT01-00390	3.6µg/L	B	2	734	Posterior	2					1	
BATT01-00390	3.6µg/L	B	3	735	Anterior	1	1					
BATT01-00390	3.6µg/L	B	3	735	Middle	1						
BATT01-00390	3.6µg/L	B	3	735	Posterior	1						
BATT01-00390	3.6µg/L	B	4	736	Anterior	2						
BATT01-00390	3.6µg/L	B	4	736	Middle	2					1	
BATT01-00390	3.6µg/L	B	4	736	Posterior	2						
BATT01-00390	3.6µg/L	B	5	737	Anterior	2		1				
BATT01-00390	3.6µg/L	B	5	737	Middle	2						
BATT01-00390	3.6µg/L	B	5	737	Posterior	2						
BATT01-00390	3.6µg/L	B	6	738	Anterior	2						
BATT01-00390	3.6µg/L	B	6	738	Middle	2						
BATT01-00390	3.6µg/L	B	6	738	Posterior	2					1	
BATT01-00390	3.6µg/L	B	7	739	Anterior	2						
BATT01-00390	3.6µg/L	B	7	739	Middle	2						
BATT01-00390	3.6µg/L	B	7	739	Posterior	2						
BATT01-00390	3.6µg/L	B	8	740	Anterior	2					1	
BATT01-00390	3.6µg/L	B	8	740	Middle	2					1	
BATT01-00390	3.6µg/L	B	8	740	Posterior	2					1	
BATT01-00390	3.6µg/L	B	9	741	Anterior	1					1	
BATT01-00390	3.6µg/L	B	9	741	Middle	1					1	
BATT01-00390	3.6µg/L	B	9	741	Posterior	2						
BATT01-00390	3.6µg/L	B	10	742	Anterior	2					1	
BATT01-00390	3.6µg/L	B	10	742	Middle	3						
BATT01-00390	3.6µg/L	B	10	742	Posterior	2					1	
BATT01-00390	3.6µg/L	C	1	743	Anterior	2					1	
BATT01-00390	3.6µg/L	C	1	743	Middle	2					1	
BATT01-00390	3.6µg/L	C	1	743	Posterior	2					1	
BATT01-00390	3.6µg/L	C	2	744	Anterior	1						
BATT01-00390	3.6µg/L	C	2	744	Middle	2						
BATT01-00390	3.6µg/L	C	2	744	Posterior	2						
BATT01-00390	3.6µg/L	C	3	745	Anterior	1					1	
BATT01-00390	3.6µg/L	C	3	745	Middle	2						
BATT01-00390	3.6µg/L	C	3	745	Posterior	2						
BATT01-00390	3.6µg/L	C	4	746	Anterior	2						
BATT01-00390	3.6µg/L	C	4	746	Middle	2						
BATT01-00390	3.6µg/L	C	4	746	Posterior	2						
BATT01-00390	3.6µg/L	C	5	747	Anterior	2						
BATT01-00390	3.6µg/L	C	5	747	Middle	2						
BATT01-00390	3.6µg/L	C	5	747	Posterior	2						

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	3.6µg/L	C	6	748	Anterior	2						
BATT01-00390	3.6µg/L	C	6	748	Middle	2						
BATT01-00390	3.6µg/L	C	6	748	Posterior	2						
BATT01-00390	3.6µg/L	C	7	749	Anterior	2						
BATT01-00390	3.6µg/L	C	7	749	Middle	2						
BATT01-00390	3.6µg/L	C	7	749	Posterior	2						
BATT01-00390	3.6µg/L	C	8	750	Anterior	2					1	
BATT01-00390	3.6µg/L	C	8	750	Middle	2						
BATT01-00390	3.6µg/L	C	8	750	Posterior	2						
BATT01-00390	3.6µg/L	C	9	751	Anterior	2						
BATT01-00390	3.6µg/L	C	9	751	Middle	2						
BATT01-00390	3.6µg/L	C	9	751	Posterior	2						
BATT01-00390	3.6µg/L	C	10	752	Anterior	1						
BATT01-00390	3.6µg/L	C	10	752	Middle	1						
BATT01-00390	3.6µg/L	C	10	752	Posterior	1						
BATT01-00390	3.6µg/L	D	1	753	Anterior	2						
BATT01-00390	3.6µg/L	D	1	753	Middle	2						
BATT01-00390	3.6µg/L	D	1	753	Posterior	2						
BATT01-00390	3.6µg/L	D	2	754	Anterior	2						
BATT01-00390	3.6µg/L	D	2	754	Middle	2						
BATT01-00390	3.6µg/L	D	2	754	Posterior	2						
BATT01-00390	3.6µg/L	D	3	755	Anterior	2						
BATT01-00390	3.6µg/L	D	3	755	Middle	2						
BATT01-00390	3.6µg/L	D	3	755	Posterior	2						
BATT01-00390	3.6µg/L	D	4	756	Anterior	2				1	1	
BATT01-00390	3.6µg/L	D	4	756	Middle	2				2		
BATT01-00390	3.6µg/L	D	4	756	Posterior	2						
BATT01-00390	3.6µg/L	D	5	757	Anterior	2						
BATT01-00390	3.6µg/L	D	5	757	Middle	2						
BATT01-00390	3.6µg/L	D	5	757	Posterior	2						
BATT01-00390	3.6µg/L	D	6	758	Anterior	2						
BATT01-00390	3.6µg/L	D	6	758	Middle	2						
BATT01-00390	3.6µg/L	D	6	758	Posterior	2						
BATT01-00390	3.6µg/L	D	7	759	Anterior	2						
BATT01-00390	3.6µg/L	D	7	759	Middle	2						
BATT01-00390	3.6µg/L	D	7	759	Posterior	2						
BATT01-00390	3.6µg/L	D	8	760	Anterior	2					1	
BATT01-00390	3.6µg/L	D	8	760	Middle	2					1	
BATT01-00390	3.6µg/L	D	8	760	Posterior	2					1	
BATT01-00390	3.6µg/L	D	9	761	Anterior	2	1					
BATT01-00390	3.6µg/L	D	9	761	Middle	2					1	
BATT01-00390	3.6µg/L	D	9	761	Posterior	2						
BATT01-00390	3.6µg/L	D	10	762	Anterior	2						
BATT01-00390	3.6µg/L	D	10	762	Middle	2		1				
BATT01-00390	3.6µg/L	D	10	762	Posterior	2						
BATT01-00390	10.9µg/L	A	1	763	Anterior	2	1					
BATT01-00390	10.9µg/L	A	1	763	Middle	2	1					
BATT01-00390	10.9µg/L	A	1	763	Posterior	2						
BATT01-00390	10.9µg/L	A	2	764	Anterior	3	2				1	
BATT01-00390	10.9µg/L	A	2	764	Middle	3	1					
BATT01-00390	10.9µg/L	A	2	764	Posterior	3						
BATT01-00390	10.9µg/L	A	3	765	Anterior	2						
BATT01-00390	10.9µg/L	A	3	765	Middle	2						
BATT01-00390	10.9µg/L	A	3	765	Posterior	2	1					
BATT01-00390	10.9µg/L	A	4	766	Anterior	2						
BATT01-00390	10.9µg/L	A	4	766	Middle	2						
BATT01-00390	10.9µg/L	A	4	766	Posterior	2						
BATT01-00390	10.9µg/L	A	5	767	Anterior	2						
BATT01-00390	10.9µg/L	A	5	767	Middle	2						
BATT01-00390	10.9µg/L	A	5	767	Posterior	2						
BATT01-00390	10.9µg/L	A	6	768	Anterior	2					1	
BATT01-00390	10.9µg/L	A	6	768	Middle	2						
BATT01-00390	10.9µg/L	A	6	768	Posterior	2						

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BATT01-00390	10.9µg/L	A	7	769	Anterior	2						
BATT01-00390	10.9µg/L	A	7	769	Middle	2					1	
BATT01-00390	10.9µg/L	A	7	769	Posterior	2						
BATT01-00390	10.9µg/L	A	8	770	Anterior	2						
BATT01-00390	10.9µg/L	A	8	770	Middle	2					1	
BATT01-00390	10.9µg/L	A	8	770	Posterior	2					1	
BATT01-00390	10.9µg/L	A	9	771	Anterior	2						
BATT01-00390	10.9µg/L	A	9	771	Middle	2					1	
BATT01-00390	10.9µg/L	A	9	771	Posterior	2					1	
BATT01-00390	10.9µg/L	A	10	772	Anterior	2	1					
BATT01-00390	10.9µg/L	A	10	772	Middle	2						
BATT01-00390	10.9µg/L	A	10	772	Posterior	2						
BATT01-00390	10.9µg/L	B	1	773	Anterior	2						
BATT01-00390	10.9µg/L	B	1	773	Middle	2						
BATT01-00390	10.9µg/L	B	1	773	Posterior	2						
BATT01-00390	10.9µg/L	B	2	774	Anterior	2						
BATT01-00390	10.9µg/L	B	2	774	Middle	2						
BATT01-00390	10.9µg/L	B	2	774	Posterior	2						
BATT01-00390	10.9µg/L	B	3	775	Anterior	2	1				1	
BATT01-00390	10.9µg/L	B	3	775	Middle	2					1	
BATT01-00390	10.9µg/L	B	3	775	Posterior	2	1					
BATT01-00390	10.9µg/L	B	4	776	Anterior	1						
BATT01-00390	10.9µg/L	B	4	776	Middle	1						
BATT01-00390	10.9µg/L	B	4	776	Posterior	1						
BATT01-00390	10.9µg/L	B	5	777	Anterior	2						
BATT01-00390	10.9µg/L	B	5	777	Middle	2	1					
BATT01-00390	10.9µg/L	B	5	777	Posterior	2						
BATT01-00390	10.9µg/L	B	6	778	Anterior	2						
BATT01-00390	10.9µg/L	B	6	778	Middle	2						
BATT01-00390	10.9µg/L	B	6	778	Posterior	1						
BATT01-00390	10.9µg/L	B	7	779	Anterior	2						
BATT01-00390	10.9µg/L	B	7	779	Middle	2						
BATT01-00390	10.9µg/L	B	7	779	Posterior	2						
BATT01-00390	10.9µg/L	B	8	780	Anterior	2	1			1		
BATT01-00390	10.9µg/L	B	8	780	Middle	2					1	
BATT01-00390	10.9µg/L	B	8	780	Posterior	2						
BATT01-00390	10.9µg/L	B	9	781	Anterior	2						
BATT01-00390	10.9µg/L	B	9	781	Middle	2						
BATT01-00390	10.9µg/L	B	9	781	Posterior	2						
BATT01-00390	10.9µg/L	B	10	782	Anterior	2						
BATT01-00390	10.9µg/L	B	10	782	Middle	2						
BATT01-00390	10.9µg/L	B	10	782	Posterior	2					1	
BATT01-00390	10.9µg/L	C	1	783	Anterior	1						
BATT01-00390	10.9µg/L	C	1	783	Middle	1						
BATT01-00390	10.9µg/L	C	1	783	Posterior	2						
BATT01-00390	10.9µg/L	C	2	784	Anterior	2					1	
BATT01-00390	10.9µg/L	C	2	784	Middle	2						
BATT01-00390	10.9µg/L	C	2	784	Posterior	2	1					
BATT01-00390	10.9µg/L	C	3	785	Anterior	2	1					
BATT01-00390	10.9µg/L	C	3	785	Middle	2					1	
BATT01-00390	10.9µg/L	C	3	785	Posterior	2	1					
BATT01-00390	10.9µg/L	C	4	786	Anterior	3				2		
BATT01-00390	10.9µg/L	C	4	786	Middle	2				2	1	
BATT01-00390	10.9µg/L	C	4	786	Posterior	2				1		
BATT01-00390	10.9µg/L	C	5	787	Anterior	2						
BATT01-00390	10.9µg/L	C	5	787	Middle	2						
BATT01-00390	10.9µg/L	C	5	787	Posterior	2						
BATT01-00390	10.9µg/L	C	6	788	Anterior	2						
BATT01-00390	10.9µg/L	C	6	788	Middle	2						
BATT01-00390	10.9µg/L	C	6	788	Posterior	1					1	
BATT01-00390	10.9µg/L	C	7	789	Anterior	2					1	
BATT01-00390	10.9µg/L	C	7	789	Middle	2						
BATT01-00390	10.9µg/L	C	7	789	Posterior	2						

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BATT01-00390	10.9µg/L	C	8	790	Anterior	1						
BATT01-00390	10.9µg/L	C	8	790	Middle	1					1	
BATT01-00390	10.9µg/L	C	8	790	Posterior	2					1	
BATT01-00390	10.9µg/L	C	9	791	Anterior	1						
BATT01-00390	10.9µg/L	C	9	791	Middle	2						
BATT01-00390	10.9µg/L	C	9	791	Posterior	1					1	
BATT01-00390	10.9µg/L	C	10	792	Anterior	2					1	
BATT01-00390	10.9µg/L	C	10	792	Middle	2					1	
BATT01-00390	10.9µg/L	C	10	792	Posterior	2						
BATT01-00390	10.9µg/L	D	1	793	Anterior	2						
BATT01-00390	10.9µg/L	D	1	793	Middle	2						
BATT01-00390	10.9µg/L	D	1	793	Posterior	2						
BATT01-00390	10.9µg/L	D	2	794	Anterior	2						
BATT01-00390	10.9µg/L	D	2	794	Middle	2					1	
BATT01-00390	10.9µg/L	D	2	794	Posterior	2						
BATT01-00390	10.9µg/L	D	3	795	Anterior	2					1	
BATT01-00390	10.9µg/L	D	3	795	Middle	2						
BATT01-00390	10.9µg/L	D	3	795	Posterior	2						
BATT01-00390	10.9µg/L	D	4	796	Anterior	2						
BATT01-00390	10.9µg/L	D	4	796	Middle	2					1	
BATT01-00390	10.9µg/L	D	4	796	Posterior	2						
BATT01-00390	10.9µg/L	D	5	797	Anterior	2						
BATT01-00390	10.9µg/L	D	5	797	Middle	2					1	
BATT01-00390	10.9µg/L	D	5	797	Posterior	1						
BATT01-00390	10.9µg/L	D	6	798	Anterior	2						
BATT01-00390	10.9µg/L	D	6	798	Middle	1						
BATT01-00390	10.9µg/L	D	6	798	Posterior	2						
BATT01-00390	10.9µg/L	D	7	799	Anterior	2	1					
BATT01-00390	10.9µg/L	D	7	799	Middle	2					1	
BATT01-00390	10.9µg/L	D	7	799	Posterior	2						
BATT01-00390	10.9µg/L	D	8	800	Anterior	2						
BATT01-00390	10.9µg/L	D	8	800	Middle	2	1				1	
BATT01-00390	10.9µg/L	D	8	800	Posterior	2					1	
BATT01-00390	10.9µg/L	D	9	801	Anterior	2						
BATT01-00390	10.9µg/L	D	9	801	Middle	2						
BATT01-00390	10.9µg/L	D	9	801	Posterior	2						
BATT01-00390	10.9µg/L	D	10	802	Anterior	2						
BATT01-00390	10.9µg/L	D	10	802	Middle	2						
BATT01-00390	10.9µg/L	D	10	802	Posterior	2	1					
BATT01-00390	33µg/L	A	1	803	Anterior	2					1	
BATT01-00390	33µg/L	A	1	803	Middle	2						
BATT01-00390	33µg/L	A	1	803	Posterior	2						
BATT01-00390	33µg/L	A	2	804	Anterior	2					1	
BATT01-00390	33µg/L	A	2	804	Middle	3						
BATT01-00390	33µg/L	A	2	804	Posterior	3						
BATT01-00390	33µg/L	A	3	805	Anterior	2						
BATT01-00390	33µg/L	A	3	805	Middle	2					1	
BATT01-00390	33µg/L	A	3	805	Posterior	2						
BATT01-00390	33µg/L	A	4	806	Anterior	2						
BATT01-00390	33µg/L	A	4	806	Middle	2						
BATT01-00390	33µg/L	A	4	806	Posterior	2						
BATT01-00390	33µg/L	A	5	807	Anterior	2						
BATT01-00390	33µg/L	A	5	807	Middle	2						
BATT01-00390	33µg/L	A	5	807	Posterior	2						
BATT01-00390	33µg/L	A	6	808	Anterior	2						
BATT01-00390	33µg/L	A	6	808	Middle	2						
BATT01-00390	33µg/L	A	6	808	Posterior	2					1	
BATT01-00390	33µg/L	A	7	809	Anterior	2						
BATT01-00390	33µg/L	A	7	809	Middle	2						
BATT01-00390	33µg/L	A	7	809	Posterior	2						
BATT01-00390	33µg/L	A	8	810	Anterior	2				1		
BATT01-00390	33µg/L	A	8	810	Middle	2						
BATT01-00390	33µg/L	A	8	810	Posterior	2						

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	33µg/L	A	9	811	Anterior	2						
BATT01-00390	33µg/L	A	9	811	Middle	1				1		
BATT01-00390	33µg/L	A	9	811	Posterior	2						
BATT01-00390	33µg/L	A	10	812	Anterior	2					1	
BATT01-00390	33µg/L	A	10	812	Middle	2					1	
BATT01-00390	33µg/L	A	10	812	Posterior	2						
BATT01-00390	33µg/L	B	1	813	Anterior	2						
BATT01-00390	33µg/L	B	1	813	Middle	2		1			1	
BATT01-00390	33µg/L	B	1	813	Posterior	2					1	
BATT01-00390	33µg/L	B	2	814	Anterior	2						
BATT01-00390	33µg/L	B	2	814	Middle	2						
BATT01-00390	33µg/L	B	2	814	Posterior	2						
BATT01-00390	33µg/L	B	3	815	Anterior	2					1	
BATT01-00390	33µg/L	B	3	815	Middle	2					1	
BATT01-00390	33µg/L	B	3	815	Posterior	2						
BATT01-00390	33µg/L	B	4	816	Anterior	2						
BATT01-00390	33µg/L	B	4	816	Middle	2					1	
BATT01-00390	33µg/L	B	4	816	Posterior	2						
BATT01-00390	33µg/L	B	5	817	Anterior	2						
BATT01-00390	33µg/L	B	5	817	Middle	2						
BATT01-00390	33µg/L	B	5	817	Posterior	2						
BATT01-00390	33µg/L	B	6	818	Anterior	2					1	
BATT01-00390	33µg/L	B	6	818	Middle	2					1	
BATT01-00390	33µg/L	B	6	818	Posterior	2					1	
BATT01-00390	33µg/L	B	7	819	Anterior	2						
BATT01-00390	33µg/L	B	7	819	Middle	2						
BATT01-00390	33µg/L	B	7	819	Posterior	2						
BATT01-00390	33µg/L	B	8	820	Anterior	1					1	
BATT01-00390	33µg/L	B	8	820	Middle	2						
BATT01-00390	33µg/L	B	8	820	Posterior	2						
BATT01-00390	33µg/L	B	9	821	Anterior	2						
BATT01-00390	33µg/L	B	9	821	Middle	2						
BATT01-00390	33µg/L	B	9	821	Posterior	2						
BATT01-00390	33µg/L	B	10	822	Anterior	2					1	
BATT01-00390	33µg/L	B	10	822	Middle	2					1	
BATT01-00390	33µg/L	B	10	822	Posterior	2						
BATT01-00390	33µg/L	C	1	823	Anterior	2						
BATT01-00390	33µg/L	C	1	823	Middle	2						
BATT01-00390	33µg/L	C	1	823	Posterior	2						
BATT01-00390	33µg/L	C	2	824	Anterior	2						
BATT01-00390	33µg/L	C	2	824	Middle	2						
BATT01-00390	33µg/L	C	2	824	Posterior	2						
BATT01-00390	33µg/L	C	3	825	Anterior	2						
BATT01-00390	33µg/L	C	3	825	Middle	2					1	
BATT01-00390	33µg/L	C	3	825	Posterior	2						
BATT01-00390	33µg/L	C	4	826	Anterior	2					1	
BATT01-00390	33µg/L	C	4	826	Middle	2					1	
BATT01-00390	33µg/L	C	4	826	Posterior	2						
BATT01-00390	33µg/L	C	5	827	Anterior	2						
BATT01-00390	33µg/L	C	5	827	Middle	2						
BATT01-00390	33µg/L	C	5	827	Posterior	2					1	
BATT01-00390	33µg/L	C	6	828	Anterior	2						
BATT01-00390	33µg/L	C	6	828	Middle	2						
BATT01-00390	33µg/L	C	6	828	Posterior	2						
BATT01-00390	33µg/L	C	7	829	Anterior	2						
BATT01-00390	33µg/L	C	7	829	Middle	2						
BATT01-00390	33µg/L	C	7	829	Posterior	2	1	1				
BATT01-00390	33µg/L	C	8	830	Anterior	2						
BATT01-00390	33µg/L	C	8	830	Middle	2						
BATT01-00390	33µg/L	C	8	830	Posterior	2						
BATT01-00390	33µg/L	C	9	831	Anterior	2					1	
BATT01-00390	33µg/L	C	9	831	Middle	2					1	
BATT01-00390	33µg/L	C	9	831	Posterior	2					1	

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	33µg/L	C	10	832	Anterior	2					1	
BATT01-00390	33µg/L	C	10	832	Middle	2					1	
BATT01-00390	33µg/L	C	10	832	Posterior	2					1	
BATT01-00390	33µg/L	D	1	833	Anterior	2	1					
BATT01-00390	33µg/L	D	1	833	Middle	2						
BATT01-00390	33µg/L	D	1	833	Posterior	2						
BATT01-00390	33µg/L	D	2	834	Anterior	2	1				1	
BATT01-00390	33µg/L	D	2	834	Middle	2	1				1	
BATT01-00390	33µg/L	D	2	834	Posterior	2						
BATT01-00390	33µg/L	D	3	835	Anterior	2	1					
BATT01-00390	33µg/L	D	3	835	Middle	2	1					
BATT01-00390	33µg/L	D	3	835	Posterior	2	2					
BATT01-00390	33µg/L	D	4	836	Anterior	2						
BATT01-00390	33µg/L	D	4	836	Middle	2						
BATT01-00390	33µg/L	D	4	836	Posterior	2						
BATT01-00390	33µg/L	D	5	837	Anterior	2				1	1	
BATT01-00390	33µg/L	D	5	837	Middle	2				1	1	
BATT01-00390	33µg/L	D	5	837	Posterior	2						
BATT01-00390	33µg/L	D	6	838	Anterior	2					1	
BATT01-00390	33µg/L	D	6	838	Middle	2						
BATT01-00390	33µg/L	D	6	838	Posterior	2						
BATT01-00390	33µg/L	D	7	839	Anterior	2						
BATT01-00390	33µg/L	D	7	839	Middle	1						
BATT01-00390	33µg/L	D	7	839	Posterior	2	1				1	
BATT01-00390	33µg/L	D	8	840	Anterior	2					1	
BATT01-00390	33µg/L	D	8	840	Middle	2					1	
BATT01-00390	33µg/L	D	8	840	Posterior	2						
BATT01-00390	33µg/L	D	9	841	Anterior	2					1	
BATT01-00390	33µg/L	D	9	841	Middle	2					1	
BATT01-00390	33µg/L	D	9	841	Posterior	2						
BATT01-00390	33µg/L	D	10	842	Anterior	2	1				1	
BATT01-00390	33µg/L	D	10	842	Middle	2	1				1	
BATT01-00390	33µg/L	D	10	842	Posterior	2						
BATT01-00390	100µg/L	A	1	843	Anterior	2					1	
BATT01-00390	100µg/L	A	1	843	Middle	2					2	
BATT01-00390	100µg/L	A	1	843	Posterior	2	1					
BATT01-00390	100µg/L	A	2	844	Anterior	2	1				1	
BATT01-00390	100µg/L	A	2	844	Middle	2	1			1		
BATT01-00390	100µg/L	A	2	844	Posterior	2						
BATT01-00390	100µg/L	A	3	845	Anterior	2	1					
BATT01-00390	100µg/L	A	3	845	Middle	1	1					
BATT01-00390	100µg/L	A	3	845	Posterior	2	2				1	
BATT01-00390	100µg/L	A	4	846	Anterior	2					2	
BATT01-00390	100µg/L	A	4	846	Middle	2					1	
BATT01-00390	100µg/L	A	4	846	Posterior	2					1	
BATT01-00390	100µg/L	A	5	847	Anterior	2					1	
BATT01-00390	100µg/L	A	5	847	Middle	2					1	
BATT01-00390	100µg/L	A	5	847	Posterior	2						
BATT01-00390	100µg/L	A	6	848	Anterior	2						
BATT01-00390	100µg/L	A	6	848	Middle	2						
BATT01-00390	100µg/L	A	6	848	Posterior	2					2	
BATT01-00390	100µg/L	A	7	849	Anterior	2					1	
BATT01-00390	100µg/L	A	7	849	Middle	2						
BATT01-00390	100µg/L	A	7	849	Posterior	2						
BATT01-00390	100µg/L	A	8	850	Anterior	2	1					
BATT01-00390	100µg/L	A	8	850	Middle	2	2					
BATT01-00390	100µg/L	A	8	850	Posterior	2	2					
BATT01-00390	100µg/L	A	9	851	Anterior	2						
BATT01-00390	100µg/L	A	9	851	Middle	2						
BATT01-00390	100µg/L	A	9	851	Posterior	2						
BATT01-00390	100µg/L	A	10	852	Anterior	2						
BATT01-00390	100µg/L	A	10	852	Middle	2						
BATT01-00390	100µg/L	A	10	852	Posterior	2						

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	100µg/L	B	1	853	Anterior	1						
BATT01-00390	100µg/L	B	1	853	Middle	2						
BATT01-00390	100µg/L	B	1	853	Posterior	2						
BATT01-00390	100µg/L	B	2	854	Anterior	2					1	
BATT01-00390	100µg/L	B	2	854	Middle	2					1	
BATT01-00390	100µg/L	B	2	854	Posterior	2						
BATT01-00390	100µg/L	B	3	855	Anterior	2						
BATT01-00390	100µg/L	B	3	855	Middle	1						
BATT01-00390	100µg/L	B	3	855	Posterior	2						
BATT01-00390	100µg/L	B	4	856	Anterior	2						
BATT01-00390	100µg/L	B	4	856	Middle	2						
BATT01-00390	100µg/L	B	4	856	Posterior	2						
BATT01-00390	100µg/L	B	5	857	Anterior	2					1	
BATT01-00390	100µg/L	B	5	857	Middle	1						
BATT01-00390	100µg/L	B	5	857	Posterior	2						
BATT01-00390	100µg/L	B	6	858	Anterior	2					1	
BATT01-00390	100µg/L	B	6	858	Middle	2						
BATT01-00390	100µg/L	B	6	858	Posterior	2					1	
BATT01-00390	100µg/L	B	7	859	Anterior	2	2			1		
BATT01-00390	100µg/L	B	7	859	Middle	2	1			1	1	
BATT01-00390	100µg/L	B	7	859	Posterior	2					1	
BATT01-00390	100µg/L	B	8	860	Anterior	2					1	
BATT01-00390	100µg/L	B	8	860	Middle	2					1	
BATT01-00390	100µg/L	B	8	860	Posterior	1						
BATT01-00390	100µg/L	B	9	861	Anterior	2					1	
BATT01-00390	100µg/L	B	9	861	Middle	2						
BATT01-00390	100µg/L	B	9	861	Posterior	2					1	
BATT01-00390	100µg/L	B	10	862	Anterior	2					1	
BATT01-00390	100µg/L	B	10	862	Middle	2					1	
BATT01-00390	100µg/L	B	10	862	Posterior	2						
BATT01-00390	100µg/L	C	1	863	Anterior	1	1				1	
BATT01-00390	100µg/L	C	1	863	Middle	1					1	
BATT01-00390	100µg/L	C	1	863	Posterior	2						
BATT01-00390	100µg/L	C	2	864	Anterior	2				2		
BATT01-00390	100µg/L	C	2	864	Middle	2				2		
BATT01-00390	100µg/L	C	2	864	Posterior	2						
BATT01-00390	100µg/L	C	3	865	Anterior	2						
BATT01-00390	100µg/L	C	3	865	Middle	2						
BATT01-00390	100µg/L	C	3	865	Posterior	2	1				1	
BATT01-00390	100µg/L	C	4	866	Anterior	2					1	
BATT01-00390	100µg/L	C	4	866	Middle	2					2	
BATT01-00390	100µg/L	C	4	866	Posterior	2						
BATT01-00390	100µg/L	C	5	867	Anterior	2	1				1	
BATT01-00390	100µg/L	C	5	867	Middle	2						
BATT01-00390	100µg/L	C	5	867	Posterior	2						
BATT01-00390	100µg/L	C	6	868	Anterior	2						
BATT01-00390	100µg/L	C	6	868	Middle	2						
BATT01-00390	100µg/L	C	6	868	Posterior	2						
BATT01-00390	100µg/L	C	7	869	Anterior	2	1					
BATT01-00390	100µg/L	C	7	869	Middle	2	1				1	
BATT01-00390	100µg/L	C	7	869	Posterior	2					1	
BATT01-00390	100µg/L	C	8	870	Anterior	2	1					
BATT01-00390	100µg/L	C	8	870	Middle	2	2					
BATT01-00390	100µg/L	C	8	870	Posterior	2						
BATT01-00390	100µg/L	C	9	871	Anterior	2					1	
BATT01-00390	100µg/L	C	9	871	Middle	2					1	
BATT01-00390	100µg/L	C	9	871	Posterior	2	1				1	
BATT01-00390	100µg/L	C	10	872	Anterior	2	2				1	
BATT01-00390	100µg/L	C	10	872	Middle	2	1					
BATT01-00390	100µg/L	C	10	872	Posterior	2	1				1	
BATT01-00390	100µg/L	D	1	873	Anterior	2						
BATT01-00390	100µg/L	D	1	873	Middle	1					1	
BATT01-00390	100µg/L	D	1	873	Posterior	1	1					

DEST BATT01-00390 Kidney Histology (Termination)

Study ID	Name of Treatment Group	Replicate ID	Sub-Sample Larval Animal ID	Sample Number	Slide Number/ Section ID	Mineralization	Tubule Dilation	Tubule Vacuolation	Tubular Epithelium, Cytoplasmic Pigment	Fibrosis, Interstitial	Cell Infiltrate, Mononuclear Cell	Comments
BATT01-00390	100µg/L	D	2	874	Anterior	2					1	
BATT01-00390	100µg/L	D	2	874	Middle	2					1	
BATT01-00390	100µg/L	D	2	874	Posterior	2					1	
BATT01-00390	100µg/L	D	3	875	Anterior	2	1					
BATT01-00390	100µg/L	D	3	875	Middle	2	1					
BATT01-00390	100µg/L	D	3	875	Posterior	2						
BATT01-00390	100µg/L	D	4	876	Anterior	2						
BATT01-00390	100µg/L	D	4	876	Middle	2						
BATT01-00390	100µg/L	D	4	876	Posterior	2						
BATT01-00390	100µg/L	D	5	877	Anterior	2	1				1	
BATT01-00390	100µg/L	D	5	877	Middle	2	1					
BATT01-00390	100µg/L	D	5	877	Posterior	2					1	
BATT01-00390	100µg/L	D	6	878	Anterior	2					1	
BATT01-00390	100µg/L	D	6	878	Middle	2	1					
BATT01-00390	100µg/L	D	6	878	Posterior	2					1	
BATT01-00390	100µg/L	D	7	879	Anterior	2	1				1	
BATT01-00390	100µg/L	D	7	879	Middle	2	1					
BATT01-00390	100µg/L	D	7	879	Posterior	2	1				1	
BATT01-00390	100µg/L	D	8	880	Anterior	2					1	
BATT01-00390	100µg/L	D	8	880	Middle	2					1	
BATT01-00390	100µg/L	D	8	880	Posterior	2						
BATT01-00390	100µg/L	D	9	881	Anterior	2						
BATT01-00390	100µg/L	D	9	881	Middle	1					1	
BATT01-00390	100µg/L	D	9	881	Posterior	2						
BATT01-00390	100µg/L	D	10	882	Anterior	2					1	
BATT01-00390	100µg/L	D	10	882	Middle	2					1	
BATT01-00390	100µg/L	D	10	882	Posterior	2						

Appendix F.
Statistical Analyses

Endocrine Disruptor Screening Program

USEPA Contract No: EP-W-11-063

Task Order No: 14

Final Statistical Analysis Report for

Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

FEL Study No. BATT01-00390

(LAGDA #390)

May 18, 2018

BATTELLE

505 King Avenue

Columbus, Ohio 43201

COMPLIANCE STATEMENT

FEL Study Number: BATT01-00390

Study Title: Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *Xenopus laevis*

Battelle Statistician / Report Originator: Po-Hsu Chen
Battelle Statistician / Technical Reviewer: Ying-Liang Chou

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 5/18/18
Battelle Study Statistician Date

SIGNATURES

Name (Role)	Signature	Date
Po-Hsu Chen (Battelle Statistician / Report Originator)	Po-Hsu Chen	5/18/18
Ying-Liang Chou (Battelle Statistician / Technical Reviewer)	Ying-Liang Chou	5/18/18
Vince Brown (Program Manager)	Vincent J. Brown	5/18/18

USEPA Contract No.: EP-W-11-063, TO 14
FEL Study No. BATT01-00390 (LAGDA #390)

Quality Assurance Statement
Battelle

USEPA Contract No.: EP-W-11-063, TO 14
Study No. BATT01-00390

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	June 30 to July 1, 2017	July 5, 2017
Audit Draft Statistical Report	June 30 to July 1, 2017	July 5, 2017
Audit Final Statistical Report	May 17, 2018	May 17, 2018

Quality Assurance Unit, Battelle — Date: 5.18.18

INTRODUCTION

This report summarizes the statistical analysis of the data collected under the Fort Environmental Laboratories (FEL) Study Number BATT01-00390, "Larval Amphibian Growth and Development Assay (LAGDA) of 2-Ethyhexyl 4-Hydroxybenzoate with African Clawed Frog, *X.laevis*" (LAGDA #390).

LAGDA was intended to identify and characterize the adverse consequences of exposure to substances which interfere with the normal development and growth of amphibians through larval development and metamorphosis. LAGDA evaluated potential, inciting contributors to amphibian population declines by evaluating the effects, both through endocrine and non-endocrine mechanisms, from exposure to contaminants during the larval stage of development that may adversely affect populations. Thus, the primary objective of the study was to evaluate the potential developmental toxicity of 2-Ethyhexyl 4-Hydroxybenzoate (2-EHHB) to *X.laevis* in general accordance with the USEPA guidelines established for the LAGDA (1).

The general experimental design of the LAGDA entailed exposing Nieuwkoop and Faber (NF) (2) stage 8 *X.laevis* embryos to one of four concentrations of a test chemical or to a control until 10 weeks post median metamorphosis time (MMT). There were four replicate chambers of 20 organisms (embryos) each in each test concentration treatment group and eight replicate chambers in the control group. For this study, MMT was defined as the median time (in days) at which 50% of embryos in the control group reach NF stage 62 (as larvae). At MMT, an interim sub-sample of 5 larvae per replicate chamber was collected and various endpoints examined. The remaining larvae were continuously exposed until each reached NF stage 66 or after 70 days of exposure (whichever occurred first), at which time the exposure tanks were culled to 10 organisms/replicate. These culled organisms were then exposed for the remainder of the exposure period (10 weeks from MMT). Endpoints were measured on 5 of these organisms per replicate at NF stage 66. At test termination, additional endpoints were collected on all 10 organisms per replicate. Five organisms per replicate were made available for histopathology. The experimental design is presented in Table 1.

Endpoints evaluated during the exposure included those indicative of generalized toxicity: mortality (survival), abnormal behavior, abnormal morphological features, TTM, and growth determinations (length and weight). Data on thyroid histopathology for NF stage 62 specimens and on gonad, gonadal ducts, liver, and kidney histopathology for study termination specimens were also collected.

Table 1. Experimental Design

2-EHHB Treatment Group (µg/L)	Number of Replicates	Number of Animals per Replicate	Total Number of Animals per Treatment Group
0.0 (control)	8	20	160
3.6	4	20	80
10.9	4	20	80
33.0	4	20	80
100.0	4	20	80
TOTAL			480

STATISTICAL METHODS

Statistical analyses were performed and consistent with OCSPP 890.2300 test guidelines (1), the TO 14 QAPP (3), and generally follow procedures described in the document "Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application" (4). The statistical analyses identified the lowest observed effect concentration (LOEC) and no observed effect concentration (NOEC) for each measured endpoint.

Three types of data were collected: 1) quantitative continuous data (mortality, growth, and liver-somatic index, LSI), 2) Time-to-event data (developmental rates such as time to metamorphosis, TTM), and 3) ordinal data (severity scores and developmental stages from histopathological evaluations). At NF stage 62 for larval sub-samples, TTM, growth measurements (body weight and snout-to-vent length, SVL), and thyroid histopathological data were collected. At NF stage 66 for culled animals, body weight and SVL data were collected. At termination for juvenile samples, body weight, SVL, phenotypic and genotypic sex, LSI, and histopathology (from gonad, reproductive ducts, kidney, and liver) data were collected. Because no mortality was noted in this study, a survival analysis was not performed.

For TTM at NF stage 62, descriptive statistics (mean, median, standard deviation, coefficient of variation (CV)) were calculated on the replicate medians. For body weight and SVL), descriptive statistics (mean, median, standard deviation, standard error of the mean (SEM), CV, minimum, first quartile (Q1), third quartile (Q3), and maximum) were calculated on the replicate means at NF stages 62 and 66. These descriptive statistics were also calculated at termination, separately by genotypic sex, for body weight, SVL, and LSI. Phenotypic and genotypic sex determinations at termination were summarized.

TTM data on individual animals at NF stage 62 were analyzed using a mixed effects Cox proportional hazard model with replicates as a random effect. Due to control group having zero concentration of 2-EHHB, a nominal value of 1 was added to each treatment concentration so that a log10 transformation of the concentrations could be made before fitting the model to the data. The analysis was performed in a step-down fashion, and LOEC and NOEC were assessed from the results.

Data for continuous endpoints were first checked for monotonicity by rank-transforming the data, fitting the transformed data to a mixed effects ANOVA model, and evaluating linear and quadratic contrasts within the model fitting. The data were determined to be non-monotonic if the linear contrast was not statistically significant and the quadratic contrast was statistically significant; otherwise the data were determined to be monotonic. For continuous 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 ANOVA followed by 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-values 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-values 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 with a Bonferroni-Holm adjustment to the p-values as a post hoc test and the ANOVA followed by Dunnett's test were performed on replicate means.

Potential statistical outliers were identified among the study data for TTM and continuous endpoints. The statistical analyses above were performed with and without potential statistical outliers included. Data values were labeled as potential statistical outliers if their residuals from fitting a mixed effects model to the data were outside of the bounds defined as Q1 – 1.5*IQD and Q3 + 1.5*IQD. Here, Q1 and Q3 were calculated from the residuals and IQD is the interquartile difference (i.e., Q3 minus Q1). The mixed effects model included random replicate effects.

Histopathology data took the form of severity scores or developmental stages. A RSCABS (Rao-Scott Cochran-Armitage by Slices) test (5), 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. In the by slices (BS) process, the severity scores associated with an endpoint are split into two groups based on the score being tested. One group contains all severity scores less than the target score, and the other group contains all severity scores equal to or greater than the target score. Developmental staging data (gonad and reproductive ducts) were analyzed as reported to detect acceleration in development and then manually inverted prior to a second analysis to detect a delay in development. LOEC and NOEC were also assessed for each endpoint.

The Kruskal-Wallis (KW) ANOVA test followed by a pairwise Dunn's test with a Bonferroni-Holm adjustment to the p-values was performed using the statistical analysis software R (version 3.4.0) with PMCMR package (version 4.1) (6). The RSCABS analysis on histopathology data was performed using R software with RSCABS package (version 0.9.2) (7). All other statistical analyses were performed using SAS® (version 9.4). In all analyses, statistical significance was assessed at the 0.05 level (two-sided test for TTM; one-sided test for other continuous endpoints). The RSCABS analysis was performed at a one-sided 0.05 level at each slice.

RESULTS

Table 2 summarizes survival rates among the replicates within each treatment group. As noted above, all animals survived in the study; therefore, no statistical analysis was performed on survival data. Table 3a presents descriptive statistics for TTM at NF stage 62 for larval sub-samples. Tables 3b through 3k present descriptive statistics for body weight at NF stage 62, snout-to-vent length (SVL) at NF stage 62, body weight at NF stage 66, SVL at NF stage 66, female body weight at termination, male body weight at termination, female SVL at termination, male SVL at termination, female LSI at termination, and male LSI at termination, respectively.

Table 3l presents a summary of phenotypic sex and genotypic sex determination at termination for each treatment.

Table 4 presents the Cox proportional hazard model analysis results for TTM. A negative significant treatment effect was observed when including five, four, three, or two treatment groups in the model. The LOEC occurred at treatment group 2 (3.6 µg/L), while the NOEC could not be identified.

Table 5 presents statistical analysis results for continuous endpoints. Body weight and SVL at NF stage 62, female and male body weight at termination, female and male SVL at termination, and male LSI at termination, each followed a monotonic concentration-response. For body weight and SVL at NF Stage 62 and both female and male SVL at termination, significant increasing linear trends were seen at the highest three treatment groups (10.9 µg/L, 33 µg/L, and 100 µg/L). Thus, the LOEC was observed at group 3 (10.9 µg/L), and the NOEC corresponded to the next lowest treatment group, group 2 (3.6 µg/L). For body weight at termination (both sexes) and male LSI at termination, no significant linear trend was seen.

For the three endpoints in which a monotonic-concentration response was not observed, both female and male body weight at NF stage 66 were normally distributed but with heterogeneous variance, and female LSI at termination was not normally distributed. No normalizing or homogenizing data transformations were deemed sufficient for these three endpoints. For each of these three endpoints, the Kruskal-Wallis (KW) ANOVA tests show no significant treatment group effects (Table 5).

Table 6 presents the RSCABS analysis results for thyroid histopathology data at NF stage 62. Tables 7a and 7b present RSCABS results for female and male liver histopathology data at termination, respectively. Tables 8a through 8f present RSCABS results for kidney histopathology data at termination, while Tables 9a through 9f present RSCABS results for gonad histopathology data at termination. Table 6 shows that for severity slice 1, a NOEC does not exist for neither follicular cell hyperplasia nor hypertrophy. However, for follicular cell hypertrophy at severity slice 2, LOEC occurred at treatment group 5 (100 µg/L), and NOEC occurred at treatment group 4 (33 µg/L). Results from the other RSCABS tables can be interpreted in a similar manner.

Potential statistical outliers were identified for TTM at NF stage 62 (11 data points), body weight at NF stage 66 (1 data point), female body weight at termination (1 data point), and female LSI at termination (7 data points). Tables A-1a though A-1d in Appendix A list these potential statistical outliers by endpoint, while the remaining tables in Appendix A present statistical analyses performed on data with potential statistical outliers removed. Table A-2 presents the Cox proportional hazard model analysis results for TTM after potential statistical outliers were removed. The statistical analysis results were not changed for TTM upon removing these data points. Table A-3 presents statistical analysis results for body weight at NF stage 66, female body weight at termination, and female LSI at termination after potential statistical outliers were removed. Again, the statistical analysis results were not changed from Table 5 upon removing these data points for these three endpoints.

STUDY ARCHIVAL

Supporting data and the final report were archived at Battelle.

DISCUSSION ON RSCABS ANALYSIS

The RSCABS analysis applied to the histopathology data uses a "step-down" procedure on treatment (concentration) level. In this procedure, if a higher treatment (concentration) was not statistically significant for a specified severity slice, then any lower treatments (concentrations) were inferred to be not significant. For a specified endpoint, the RSCABS summary tables present results only for those severity slices for which specimens existed at that severity level or greater. Then for a given severity slice, only those treatment levels for which specimens exist at that severity level or greater are included in the tables. For example, in Table 8b (cell infiltrate, mononuclear cell), no specimens existed with severity level 2 or greater in treatment groups 4, 3, 2, or 1 (33 µg/L, 10.9 µg/L, 3.6 µg/L, or 0.0 µg/L). Thus, even though a significant treatment effect was seen at group 5 (100 µg/L) for severity slice 2, no test was performed at treatment group 4 (33 µg/L) for severity slice 2. Due to the general complexity in utilizing RSCABS in statistical analysis for histopathology data, one should use caution when interpreting RSCABS results and should consult with a pathologist if necessary.

REFERENCES

1. OCSPP. 890.2300 Larval Amphibian Growth and Development Assay (LAGDA), United States Environmental Protection Agency, Washington DC, EPA 740-C-15-001, July 2015.

2. Nieuwkoop, P.D. and Faber, J. Normal Tables of Xenopus laevis (Daudin). Garland Publishing, London, 1994.

3. 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.

4. OECD. Current Approaches in the Statistical Analysis of Ecotoxicity Data: A Guidance to Application. Environmental Health and Safety Publications. Series on Testing and Assessment, No. 54, Paris, France, 2006.

5. Green J.W., Springer T.A., Saulnier A.N., Swintek J. 2014. Statistical analysis of histopathology endpoints. Environmental Toxicology and Chemistry. 33(5):1108-1116.

6. Pohlert T. https://cran.r-project.org/web/packages/PMCMR/vignettes/PMCMR.pdf, 2016-01-06.

7. Swintek J. https://cran.r-project.org/web/packages/RSCABS/RSCABS.pdf, April 26, 2017.

Table 2. Summary of Survival Rates.

		NF Stage 62 (%)					Termination (%)				
Treatment (µg/L)	Replicate	N	Replicate Percent	Mean	Std Dev	CV (%)	N	Replicate Percent	Mean	Std Dev	CV (%)
0.0	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			
	E	20	100				10	100			
	F	20	100				10	100			
	G	20	100				10	100			
	H	20	100				10	100			
3.6	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			
10.9	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			
33	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			
100	A	20	100	100	0	0	10	100	100	0	0
	B	20	100				10	100			
	C	20	100				10	100			
	D	20	100				10	100			

Std Dev Standard deviation.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.

Table 3a. Descriptive Statistics for Time to Metamorphosis (TTM) in Days at NF Stage 62.

Treatment (µg/L)	Replicate ID	N	Median	Mean	Median	Standard Deviation	Coefficient of Variation
0.0	A	20	46.0	44.38	45.00	2.33	5.24
	B	20	45.0				
	C	20	46.0				
	D	20	46.0				
	E	20	45.0				
	F	20	44.0				
	G	20	39.0				
	H	20	44.0				
3.6	A	20	52.0	50.50	51.50	3.49	6.91
	B	20	51.0				
	C	20	53.5				
	D	20	45.5				
10.9	A	20	49.5	52.38	50.75	4.61	8.80
	B	20	59.0				
	C	20	49.0				
	D	20	52.0				
33	A	20	55.5	52.63	53.25	3.28	6.22
	B	20	55.0				
	C	20	48.5				
	D	20	51.5				
100	A	20	55.5	51.50	50.75	2.97	5.77
	B	20	52.0				
	C	20	49.0				
	D	20	49.5				

Coefficient of variation = (standard deviation / mean) × 100%.
Mean, Median, Standard deviation, and coefficient of variation calculated from the replicate medians for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3b. Descriptive Statistics for Body Weight (g) at NF Stage 62 for Larval Sub-Samples.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	5	0.915	0.082	0.902	0.906	0.036	0.013	4.028	0.845	0.874	0.930	0.952
	B	5	0.896	0.117									
	C	5	0.924	0.071									
	D	5	0.936	0.164									
	E	5	0.845	0.053									
	F	5	0.878	0.098									
	G	5	0.952	0.134									
	H	5	0.870	0.084									
3.6	A	5	0.908	0.103	0.924	0.915	0.039	0.020	4.227	0.887	0.897	0.951	0.978
	B	5	0.923	0.113									
	C	5	0.978	0.130									
	D	5	0.887	0.078									
10.9	A	5	0.947	0.155	0.936	0.935	0.027	0.013	2.857	0.908	0.915	0.958	0.968
	B	5	0.923	0.130									
	C	5	0.968	0.160									
	D	5	0.908	0.116									
33	A	5	0.906	0.111	0.990	1.000	0.074	0.037	7.482	0.906	0.928	1.052	1.053
	B	5	1.051	0.182									
	C	5	1.053	0.158									
	D	5	0.949	0.115									
100	A	5	0.974	0.156	1.027	1.021	0.066	0.033	6.423	0.967	0.970	1.083	1.097
	B	5	0.967	0.091									
	C	5	1.068	0.143									
	D	5	1.097	0.080									

Std Dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3c. Descriptive Statistics for Snout-to-Vent Length (mm) at NF Stage 62 for Larval Sub-Samples.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	5	18.780	1.771	18.790	18.920	0.910	0.322	4.845	17.040	18.450	19.150	20.240
	B	5	19.060	1.379									
	C	5	19.140	0.844									
	D	5	20.240	1.689									
	E	5	17.040	1.069									
	F	5	18.640	1.019									
	G	5	19.160	2.567									
	H	5	18.260	1.011									
3.6	A	5	17.980	1.567	18.700	18.520	0.923	0.462	4.936	17.920	17.950	19.450	19.840
	B	5	19.060	1.471									
	C	5	19.840	1.508									
	D	5	17.920	1.134									
10.9	A	5	20.600	1.875	20.410	20.390	0.377	0.188	1.846	20.020	20.100	20.720	20.840
	B	5	20.020	1.006									
	C	5	20.840	1.521									
	D	5	20.180	1.045									
33	A	5	19.640	2.654	20.545	20.500	0.791	0.396	3.851	19.640	19.980	21.110	21.540
	B	5	20.680	1.608									
	C	5	21.540	1.350									
	D	5	20.320	1.230									
100	A	5	21.400	1.786	21.245	21.230	0.684	0.342	3.220	20.440	20.750	21.740	22.080
	B	5	20.440	1.385									
	C	5	21.060	0.750									
	D	5	22.080	1.215									

Std Dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3d. Descriptive Statistics for Body Weight (g) at NF Stage 66 for Culled Animals.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	5	0.693	0.066	0.669	0.645	0.094	0.033	14.065	0.560	0.607	0.714	0.858
	B	5	0.734	0.081									
	C	5	0.635	0.141									
	D	5	0.590	0.106									
	E	5	0.624	0.130									
	F	5	0.654	0.173									
	G	5	0.858	0.139									
	H	5	0.560	0.105									
3.6	A	5	0.528	0.133	0.598	0.605	0.123	0.061	20.492	0.462	0.495	0.701	0.720
	B	5	0.682	0.150									
	C	5	0.462	0.056									
	D	5	0.720	0.149									
10.9	A	5	0.414	0.063	0.490	0.477	0.084	0.042	17.165	0.414	0.422	0.559	0.594
	B	5	0.524	0.097									
	C	5	0.594	0.076									
	D	5	0.430	0.101									
33	A	5	0.312	0.047	0.515	0.507	0.188	0.094	36.419	0.312	0.365	0.666	0.735
	B	5	0.419	0.088									
	C	5	0.735	0.042									
	D	5	0.596	0.166									
100	A	5	0.605	0.052	0.630	0.617	0.037	0.018	5.869	0.602	0.604	0.656	0.682
	B	5	0.682	0.038									
	C	5	0.602	0.092									
	D	5	0.629	0.101									

Std Dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3e. Descriptive Statistics for Snout-to-Vent Length (mm) at NF Stage 66 for Culled Animals.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	5	20.120	0.377	19.925	19.680	0.516	0.182	2.587	19.480	19.570	20.230	20.960
	B	5	20.960	0.832									
	C	5	19.740	1.664									
	D	5	19.540	1.214									
	E	5	19.620	1.511									
	F	5	20.340	1.842									
	G	5	19.600	2.420									
	H	5	19.480	0.672									
3.6	A	5	18.540	1.682	19.165	19.220	1.023	0.512	5.340	18.060	18.300	20.030	20.160
	B	5	20.160	1.504									
	C	5	18.060	0.918									
	D	5	19.900	2.215									
10.9	A	5	16.740	0.709	17.260	16.970	0.984	0.492	5.703	16.440	16.590	17.930	18.660
	B	5	16.440	1.214									
	C	5	18.660	0.451									
	D	5	17.200	1.463									
33	A	5	15.140	0.750	18.145	18.210	2.556	1.278	14.085	15.140	16.140	20.150	21.020
	B	5	17.140	1.195									
	C	5	21.020	0.295									
	D	5	19.280	1.089									
100	A	5	18.880	0.968	19.470	19.550	0.460	0.230	2.361	18.880	19.110	19.830	19.900
	B	5	19.900	0.570									
	C	5	19.760	0.904									
	D	5	19.340	1.067									

Std Dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3f. Descriptive Statistics for Female Body Weight (g) at Termination for Juvenile Samples.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	4	11.786	1.161	11.005	11.162	0.610	0.216	5.541	10.161	10.414	11.469	11.786
	B	5	11.321	0.468									
	C	2	10.523	0.251									
	D	5	10.305	0.172									
	E	5	11.585	0.132									
	F	8	11.004	0.580									
	G	2	10.161	0.038									
	H	4	11.352	0.542									
3.6	A	2	10.569	1.151	11.308	11.053	0.913	0.456	8.073	10.569	10.629	11.986	12.557
	B	4	11.416	0.297									
	C	4	10.690	0.984									
	D	2	12.557	1.042									
10.9	A	5	10.429	1.049	10.891	10.931	0.351	0.175	3.220	10.429	10.654	11.129	11.274
	B	3	10.878	0.863									
	C	7	10.984	1.019									
	D	6	11.274	0.747									
33	A	7	10.888	1.066	11.663	11.612	0.801	0.401	6.869	10.888	10.987	12.338	12.538
	B	4	12.138	0.772									
	C	4	12.538	1.006									
	D	4	11.086	0.332									
100	A	7	10.424	0.900	10.983	10.997	0.886	0.443	8.070	10.048	10.236	11.731	11.892
	B	5	10.048	0.859									
	C	6	11.569	1.651									
	D	7	11.892	0.955									

Std Dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3g. Descriptive Statistics for Male Body Weight (g) at Termination for Juvenile Samples.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	6	11.199	0.737	11.240	11.238	0.344	0.122	3.062	10.631	11.065	11.480	11.719
	B	5	10.986	0.553									
	C	8	11.344	0.783									
	D	5	11.277	0.686									
	E	5	11.719	0.365									
	F	2	11.145	1.059									
	G	8	10.631	0.360									
	H	6	11.616	0.937									
3.6	A	8	10.902	0.791	11.327	11.307	0.367	0.183	3.239	10.902	11.072	11.581	11.790
	B	6	11.242	1.004									
	C	6	11.372	0.836									
	D	8	11.790	0.775									
10.9	A	5	11.446	1.258	11.171	11.320	0.433	0.216	3.875	10.552	10.873	11.469	11.491
	B	7	11.194	0.915									
	C	3	10.552	1.385									
	D	4	11.491	0.938									
33	A	3	11.157	0.576	11.400	11.515	0.600	0.300	5.262	10.664	10.911	11.889	11.906
	B	6	10.664	1.127									
	C	6	11.873	0.836									
	D	6	11.906	0.903									
100	A	3	10.601	1.261	10.734	10.590	0.350	0.175	3.262	10.501	10.540	10.928	11.256
	B	5	10.501	0.717									
	C	4	11.256	0.504									
	D	3	10.579	1.169									

Std Dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3h. Descriptive Statistics for Female Snout-to-Vent Length (mm) at Termination for Juvenile Samples.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	4	34.425	1.780	31.383	31.263	1.867	0.660	5.949	28.700	30.175	32.530	34.425
	B	5	33.580	0.814									
	C	2	31.200	1.697									
	D	5	29.900	0.765									
	E	5	31.480	1.496									
	F	8	30.450	1.806									
	G	2	28.700	1.414									
	H	4	31.325	2.060									
3.6	A	2	31.350	2.758	32.513	32.225	1.383	0.691	4.253	31.350	31.400	33.625	34.250
	B	4	33.000	0.529									
	C	4	31.450	2.690									
	D	2	34.250	2.333									
10.9	A	5	33.620	3.361	34.206	34.267	0.544	0.272	1.590	33.620	33.743	34.669	34.671
	B	3	33.867	1.976									
	C	7	34.671	2.165									
	D	6	34.667	1.417									
33	A	7	33.229	2.891	35.170	35.000	1.861	0.930	5.291	33.229	33.702	36.638	37.450
	B	4	37.450	2.040									
	C	4	35.825	2.368									
	D	4	34.175	1.389									
100	A	7	38.157	2.287	37.304	37.887	2.023	1.012	5.424	34.400	36.008	38.600	39.043
	B	5	34.400	2.060									
	C	6	37.617	3.200									
	D	7	39.043	1.920									

Std Dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3i. Descriptive Statistics for Male Snout-to-Vent Length (mm) at Termination for Juvenile Samples.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	6	32.800	2.341	31.805	32.400	1.365	0.482	4.290	29.400	30.698	32.844	33.160
	B	5	33.160	1.746									
	C	8	32.888	1.438									
	D	5	32.600	2.131									
	E	5	30.620	1.031									
	F	2	29.400	1.980									
	G	8	30.775	1.291									
	H	6	32.200	2.421									
3.6	A	8	32.213	2.239	32.704	32.758	0.373	0.187	1.141	32.213	32.431	32.977	33.088
	B	6	32.650	2.608									
	C	6	32.867	1.643									
	D	8	33.088	1.873									
10.9	A	5	35.920	3.477	34.842	35.191	1.262	0.631	3.623	33.067	33.962	35.723	35.920
	B	7	34.857	1.510									
	C	3	33.067	4.210									
	D	4	35.525	1.793									
33	A	3	33.833	1.079	34.825	34.575	1.123	0.562	3.225	33.833	33.967	35.683	36.317
	B	6	34.100	2.720									
	C	6	35.050	1.529									
	D	6	36.317	2.406									
100	A	3	36.333	2.219	36.440	36.427	0.100	0.050	0.275	36.333	36.377	36.504	36.575
	B	5	36.420	1.998									
	C	4	36.575	1.348									
	D	3	36.433	1.644									

Std Dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3j. Descriptive Statistics for Female Liver-Somatic Index (LSI) at Termination for Juvenile Samples.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	4	0.064	0.003	0.065	0.065	0.002	0.001	2.634	0.063	0.064	0.066	0.068
	B	5	0.067	0.007									
	C	2	0.068	0.004									
	D	5	0.063	0.003									
	E	5	0.064	0.003									
	F	8	0.065	0.003									
	G	2	0.065	0.002									
	H	4	0.065	0.001									
3.6	A	2	0.065	0.003	0.063	0.064	0.002	0.001	3.765	0.060	0.061	0.064	0.065
	B	4	0.063	0.002									
	C	4	0.064	0.004									
	D	2	0.060	0.005									
10.9	A	5	0.065	0.005	0.064	0.064	0.001	0.001	1.943	0.062	0.063	0.065	0.065
	B	3	0.062	0.005									
	C	7	0.064	0.004									
	D	6	0.064	0.002									
33	A	7	0.065	0.005	0.061	0.061	0.003	0.001	4.692	0.059	0.059	0.063	0.065
	B	4	0.059	0.006									
	C	4	0.060	0.003									
	D	4	0.061	0.001									
100	A	7	0.063	0.006	0.065	0.065	0.002	0.001	2.529	0.063	0.064	0.067	0.067
	B	5	0.067	0.002									
	C	6	0.067	0.004									
	D	7	0.064	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 (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3k. Descriptive Statistics for Male Liver-Somatic Index (LSI) at Termination for Juvenile Samples.

Treatment (µg/L)	Replicate				Mean	Median	Std Dev	SEM	CV (%)	Min	Q1	Q3	Max
	ID	N	Mean	Std Dev									
0.0	A	6	0.064	0.006	0.064	0.064	0.002	0.001	3.064	0.061	0.063	0.066	0.067
	B	5	0.067	0.003									
	C	8	0.064	0.002									
	D	5	0.062	0.004									
	E	5	0.061	0.006									
	F	2	0.064	0.004									
	G	8	0.067	0.003									
	H	6	0.065	0.005									
3.6	A	8	0.062	0.004	0.063	0.063	0.002	0.001	3.923	0.059	0.061	0.065	0.065
	B	6	0.065	0.004									
	C	6	0.064	0.004									
	D	8	0.059	0.002									
10.9	A	5	0.063	0.004	0.062	0.062	0.001	0.001	2.307	0.060	0.061	0.063	0.063
	B	7	0.062	0.004									
	C	3	0.063	0.003									
	D	4	0.060	0.004									
33	A	3	0.069	0.005	0.064	0.064	0.005	0.002	7.667	0.060	0.060	0.069	0.069
	B	6	0.068	0.005									
	C	6	0.061	0.005									
	D	6	0.060	0.003									
100	A	3	0.065	0.006	0.067	0.067	0.003	0.001	3.859	0.064	0.065	0.069	0.070
	B	5	0.070	0.003									
	C	4	0.064	0.001									
	D	3	0.068	0.002									

Std Dev Standard deviation.
SEM Standard error of the mean.
CV(%) Coefficient of variation = (standard deviation / mean) × 100.
Min Minimum.
Q1 First quartile (25th percentile).
Q3 Third quartile (75th percentile).
Max Maximum.
Mean, Median, Std Dev, SEM, CV (%), Min, Q1, Q3, and Max calculated from the replicate means for each treatment (i.e., N=8 for control and N=4 for other treatment groups).

Table 3l. Phenotypic Sex and Genotypic Sex Summary.

Treatment (µg/L)	Phenotypic Sex	Genotypic Sex	
		Female	Male
0.0	Female	32	0
	Male	0	45
	Indeterminate	3	0
3.6	Female	11	0
	Male	0	28
	Indeterminate	1	0
10.9	Female	21	0
	Male	0	19
	Indeterminate	0	0
33	Female	17	0
	Male	0	19
	Indeterminate	2	2
100	Female	25	0
	Male	0	14
	Indeterminate	0	1

Table 4. Cox Proportional Hazard Model Analysis Results for Time to Metamorphosis (TTM, Days) at NF Stage 62 for Larval Sub-Samples.

Number of Concentrations Included	Slope Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Chi-Square Test P-value
5	-0.5648	0.0869	-0.7352	-0.3943	<.0001*
4	-0.9063	0.1210	-1.1435	-0.6691	<.0001*
3	-1.4684	0.1713	-1.8041	-1.1328	<.0001*
2**	-1.8364	0.2704	-2.3664	-1.3063	<.0001*

* Indicates statistically significant treatment effect.

** Indicates that the lowest observed effect concentration (LOEC) for TTM was at treatment group 2 (3.6 µg/L).

Note: The no observed effect concentration (NOEC) for TTM was not identified.

Table 5. Statistical Analysis Results for Continuous Endpoints.

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra step-down Test[4]	ANOVA Test with Post hoc Dunnett's Test[6]	Kruskal-Wallis Test with Post hoc Dunn's Test[7]
Body Weight (g) at NF Stage 62	Monotonic	NP	NP	Group 5 (0.0004) Group 4 (0.0070) Group 3 (0.0466)[5]	NP	NP
SVL (mm) at NF Stage 62	Monotonic	NP	NP	Group 5 (0.0003) Group 4 (0.0199) Group 3 (0.0367)[5]	NP	NP
Body Weight (g) at NF Stage 66	Non-Monotonic	Normal	Heterogeneous	NP	NP	NS
SVL (mm) at NF Stage 66	Non-Monotonic	Normal	Heterogeneous	NP	NP	NS
Female Body Weight (g) at Termination	Monotonic	NP	NP	NS	NP	NP
Male Body Weight (g) at Termination	Monotonic	NP	NP	NS	NP	NP
Female SVL (mm) at Termination	Monotonic	NP	NP	Group 5 (<0.0001) Group 4 (0.0007) Group 3 (0.0033)[5]	NP	NP
Male SVL (mm) at Termination	Monotonic	NP	NP	Group 5 (<0.0001) Group 4 (0.0017) Group 3 (0.0304)[5]	NP	NP
Female LSI at Termination	Non-Monotonic	Non-Normal	Homogeneous	NP	NP	NS
Male LSI at Termination	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 linear trend test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment linear trends were listed.
5. The lowest observed effect concentration (LOEC) was listed and the no observed effect concentration (NOEC) was the next lowest treatment group. For example, the LOEC for body weight at NF stage 62 was the treatment group 4 (33 µg/L) and the NOEC was the treatment group 3 (10.9 µg/L).
6. For non-monotonic, normally distributed, and homogeneous variance data, ANOVA test followed by Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 5. Only statistically significant pairwise comparisons were listed.
7. 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-values 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 5. Only statistically significant pairwise comparisons were listed.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for ANOVA test or Kruskal-Wallis Test. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 5 (100 µg/L).

Table 6. Summary of RSCABS Results (p-values) for Thyroid Histopathology at NF Stage 62.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Follicular Cell Hyperplasia	1	5	0.0169	0.4933	
Follicular Cell Hypertrophy	1	5	-0.5289	0.2984	
	2	**5**	-1.7037	0.0442	*
	2	4	-1.1067	0.1342	

* Statistically significant treatment effect at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:

5=5 highest concentration (all concentrations),

4=lowest 4 concentrations.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 7a. Summary of RSCABS Results (p-values) for Liver Histopathology at Termination, Female.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Cellular Infiltrate, Parenchymal, Focal	1	5	0.4377	0.3308	
	2	5	0.1046	0.4583	
Hepatocellular Vacuolation, Decreased	1	5	0.049	0.4804	
Hepatocellular Vacuolation, Increased	1	5	-1.5664	0.0586	

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations).

(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 7b. Summary of RSCABS Results (p-values) for Liver Histopathology at Termination, Male.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Cellular Infiltrate, Parenchymal, Focal	1	5	-1.2359	0.1082	
	2	5	-1.1298	0.1293	
Hepatocellular Vacuolation, Decreased	1	5	-0.5795	0.2811	
Hepatocellular Vacuolation, Increased	1	5	0.2686	0.3941	
Bile Duct, Dilated	1	5	-1.0499	0.1469	
	2	5	-1.0499	0.1469	
	3	5	-1.0499	0.1469	
	4	5	-1.0499	0.1469	

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations).

(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 8a. Summary of RSCABS Results for Kidney Histopathology at Termination, Female, Anterior Section.

Endpoint	Severity(1)	Treatment(2)	Test Statistic	P-Value	Significant
Fibrosis, Interstitial	1	5	0.8839	0.1884	
	2	5	0.0752	0.4700	
Mineralization	2	5	3.0673	0.0011	*
	2	4	3.0305	0.0012	*
	2	**3**	1.6973	0.0448	*
	2	2	1.0375	0.1497	
	3	5	-1.0049	0.1575	
Cell Infiltrate, Mononuclear Cell	1	**5**	2.0398	0.0207	*
	1	4	1.3948	0.0815	
Tubular Epithelium Cytoplasmic Pigment	1	5	-1.2089	0.1134	
Tubule Dilation	1	**5**	2.8346	0.0023	*
	1	4	0.2803	0.3896	
	2	**5**	1.9467	0.0258	*
Tubule Vacuolation	1	5	-1.2742	0.1013	

* Statistically significant treatment effect at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations),
4=lowest 4 concentrations,
3=lowest 3 concentrations,
2=lowest 2 concentrations.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 8b. Summary of RSCABS Results for Kidney Histopathology at Termination, Female, Middle Section.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Fibrosis, Interstitial	1	5	1.414	0.0787	
	2	5	-0.2806	0.3895	
Mineralization	2	5	-0.0252	0.4899	
	3	5	-1.4319	0.0761	
Cell Infiltrate, Mononuclear Cell	1	5	2.4264	0.0076	*
	1	**4**	2.2944	0.0109	*
	1	3	0.8514	0.1973	
	2	**5**	1.9467	0.0258	*
Tubule Dilation	1	**5**	3.5152	0.0002	*
	1	4	0.8117	0.2085	
	2	**5**	1.9467	0.0258	*
Tubule Vacuolation	1	5	-1.2602	0.1038	

* Statistically significant treatment effect at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations),
4=lowest 4 concentrations,
3=lowest 3 concentrations.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 8c. Summary of RSCABS Results for Kidney Histopathology at Termination, Female, Posterior Section.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Fibrosis, Interstitial	1	5	0.0752	0.4700	
Mineralization	2	5	1.5124	0.0652	
	3	5	-1.2137	0.1124	
Cell Infiltrate, Mononuclear Cell	1	5	0.6229	0.2667	
Tubule Dilation	1	5	1.0001	0.1586	
	2	**5**	1.659	0.0486	*

* Statistically significant treatment effect at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations).

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 8d. Summary of RSCABS Results for Kidney Histopathology at Termination, Male, Anterior Section.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Fibrosis, Interstitial	1	5	0.8395	0.2006	
	2	**5**	1.7799	0.0375	*
Mineralization	2	**5**	1.743	0.0407	*
	2	4	1.0037	0.1578	
	3	5	-0.9956	0.1597	
Cell Infiltrate, Mononuclear Cell	1	5	0.7732	0.2197	
	2	**5**	1.7004	0.0445	*
Tubule Dilation	1	5	0.5005	0.3083	
	2	5	-0.9956	0.1597	

* Statistically significant treatment effect at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations),
4=lowest 4 concentrations.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 8e. Summary of RSCABS Results for Kidney Histopathology at Termination, Male, Middle Section.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Fibrosis, Interstitial	1	5	0.7155	0.2372	
	2	**5**	1.7799	0.0375	*
Mineralization	2	5	0.0735	0.4707	
	3	5	-0.9956	0.1597	
Cell Infiltrate, Mononuclear Cell	1	5	0.6757	0.2496	
	2	5	-0.989	0.1613	
Tubule Dilation	1	5	0.0626	0.4751	
	2	5	-1.3144	0.0944	
Tubule Vacuolation	1	5	1.0859	0.1388	

* Statistically significant treatment effect at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations).

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 8f. Summary of RSCABS Results for Kidney Histopathology at Termination, Male, Posterior Section.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Mineralization	2	5	-0.3005	0.3819	
	3	5	-0.9956	0.1597	
Cell Infiltrate, Mononuclear Cell	1	5	0.7656	0.2220	
	2	**5**	1.7004	0.0445	*
Tubule Dilation	1	5	1.0101	0.1562	
	2	5	0.0278	0.4889	
Tubule Vacuolation	1	5	1.0859	0.1388	

* Statistically significant treatment effect at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations).

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 9a. Summary of RSCABS Results (p-values) for Gonad Histopathology at Termination, Female, Anterior Section.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Epithelial Cells, Cytoplasmic Inclusions	1	5	-0.891	0.1865	
Germ Cell Degeneration	1	**5**	-2.1492	0.0158	**
	1	4	-0.824	0.2050	
Mononuclear Cell Infiltrates	1	5	0.9114	0.1810	
	2	5	0.9423	0.1730	
Ovary Stage	3	5	0.8251	0.2047	
	4	**5**	-2.4504	0.0071	**
	4	4	-0.7129	0.2379	
Oviduct Stage	3	5	-0.198	0.4215	
Wolffian Duct Stage	2	5	-0.8293	0.2035	

** Statistically significant treatment effect of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations),
4=lowest 4 concentrations.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 9b. Summary of RSCABS Results (p-values) for Gonad Histopathology at Termination, Female, Middle Section.

Endpoint	Severity(1)	Treatment(2)	Test Statistics	P-Value	Significant
Epithelial Cells, Cytoplasmic Inclusions	1	5	0.0631	0.4748	
	2	5	0.0311	0.4876	
Germ Cell Degeneration	1	5	-0.6374	0.2619	
Mononuclear Cell Infiltrates	1	5	0.2247	0.4111	
	2	5	-0.7933	0.2138	
Ovary Stage	3	**5**	1.7047	0.0441	*
	3	4	1.5216	0.0640	
	4	**5**	-1.7671	0.0386	**
	4	4	0.3133	0.3770	
Oviduct Stage	3	5	0.6292	0.2646	
Wolffian Duct Stage	2	5	-1.2281	0.1097	

* Statistically significant treatment effect at the 0.05 level.

** Statistically significant treatment effect of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations),
4=lowest 4 concentrations.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 9c. Summary of RSCABS Results (p-values) for Gonad Histopathology at Termination, Female, Posterior Section.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Epithelial Cells Cytoplasmic Inclusions	1	5	-1.197	0.1157	
Germ Cell Degeneration	1	5	-0.4594	0.3230	
Mononuclear Cell Infiltrates	1	5	0.8434	0.1995	
	2	5	0.0595	0.4763	
Ovary Stage	3	5	1.197	0.1157	
	4	5	-3.0766	0.0010	**
	4	4	-1.6691	0.0475	**
	4	3	-2.8145	0.0024	**
	4	**2**	-2.5217	0.0058	**
Oviduct Stage	2	5	1.2267	0.1100	
Wolffian Duct Stage	2	5	-1.7442	0.0406	**
	2	**4**	-1.6862	0.0459	**
	2	3	-1.6289	0.0517	
	3	5	-1.3618	0.0866	

** Statistically significant treatment effect of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations),
4=lowest 4 concentrations,
3=lowest 3 concentrations,
2=lowest 2 concentrations.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 9d. Summary of RSCABS Results (p-values) for Gonad Histopathology at Termination, Male, Anterior Section.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Epithelial Cells, Cytoplasmic Inclusions	1	5	1.0885	0.1382	
Exfoliated Germ Cells	1	5	-0.75	0.2266	
	2	5	0.9256	0.1773	
Germ Cell Degeneration	1	5	-0.3134	0.3770	
	2	5	1.9644	0.0247	*
	2	**4**	3.1972	0.0007	*
Germ Cell Vacuolation	1	5	0.2942	0.3843	
	2	5	0.3724	0.3548	
Germinal Epthelium, Thinning and Dilation	1	5	-1.5065	0.0660	
	2	5	-1.5065	0.0660	
Mononuclear Cell Infiltrates	1	5	0.5255	0.2996	
	2	**5**	1.8047	0.0356	*
Oviduct Stage	2	5	2.8884	0.0019	*
	2	4	1.7055	0.0440	*
	2	3	2.5039	0.0061	*
	2	**2**	2.7656	0.0028	*
Testis Stage	2	5	-0.0232	0.4907	
	3	5	-0.0232	0.4907	
	4	5	-0.2641	0.3959	
	5	5	-2.7119	0.0033	**
	5	4	-3.2327	0.0006	**
	5	3	-3.1564	0.0008	**
	5	**2**	-3.6068	0.0002	**
Wolffian Duct Stage	2	5	-0.5423	0.2938	
	3	5	0.7591	0.2239	

* Statistically significant treatment effect at the 0.05 level.

** Statistically significant treatment effect of delay in development at the 0.05 level.

Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations),
4=lowest 4 concentrations,
3=lowest 3 concentrations,
2=lowest 2 concentrations.

Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 9e. Summary of RSCABS Results (p-values) for Gonad Histopathology at Termination, Male, Middle Section.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Epithelial Cells, Cytoplasmic Inclusions	1	5	-0.5691	0.2846	
	2	5	0.0612	0.4756	
Exfoliated Germ Cells	1	5	0.0827	0.4671	
	2	5	0.9544	0.1699	
Germ Cell Degeneration	1	5	-2.8012	0.0025	**
	1	4	-2.184	0.0145	**
	1	3	-3.3345	0.0004	**
	1	**2**	-4.1889	<0.0001	**
	2	5	0.2767	0.3910	
Germ Cell Vacuolation	1	5	-0.9542	0.1700	
Germinal Epthelium, Thinning and Dilation	1	5	-1.4782	0.0697	
	2	5	-1.0358	0.1501	
Gonad Phenotype Score	1	5	-1.0188	0.1542	
Mononuclear Cell Infiltrates	1	5	1.0736	0.1415	
	2	5	1.1166	0.1321	
Oviduct Stage	2	**5**	2.2307	0.0128	*
	2	4	1.5343	0.0625	
Testicular Oocytes	1	5	-1.0278	0.1520	
Testis Stage	2	5	-0.0841	0.4665	
	3	5	-0.0841	0.4665	
	4	5	0.2445	0.4034	
	5	5	-3.2595	0.0006	**
	5	4	-3.209	0.0007	**
	5	3	-3.5401	0.0002	**
	5	**2**	-4.0634	<0.0001	**
Wolffian Duct Stage	2	5	-1.343	0.0896	
	3	5	1.4776	0.0698	

* Statistically significant treatment effect at the 0.05 level.
** Statistically significant treatment effect of delay in development at the 0.05 level.
Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations),
4=lowest 4 concentrations,
3=lowest 3 concentrations,
2=lowest 2 concentrations.
Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L;

4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the 3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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 9f. Summary of RSCABS Results (p-values) for Gonad Histopathology at Termination, Male, Posterior Section.

Endpoint	Severity[1]	Treatment[2]	Test Statistics	P-Value	Significant
Epithelial Cells Cytoplasmic Inclusions	1	5	1.1063	0.1343	
Exfoliated Germ Cells	1	5	1.2556	0.1046	
	2	**5**	2.2427	0.0125	*
	2	4	1.0315	0.1511	
Germ Cell Degeneration	1	5	-0.1328	0.4472	
	2	5	1.1063	0.1343	
Germ Cell Vacuolation	1	5	0.3455	0.3648	
Germinal Epthelium Thinning and Dilation	1	5	-0.7128	0.2380	
	2	5	-0.9723	0.1654	
Gonad Phenotype Score	1	5	-0.9725	0.1654	
Mononuclear Cell Infiltrates	1	5	-0.0868	0.4654	
	2	5	1.083	0.1394	
Oviduct Stage	2	**5**	1.7391	0.0410	*
	2	4	1.3493	0.0886	
Testicular Oocytes	1	5	-0.9723	0.1654	
Testis Stage	2	5	0.2364	0.4065	
	3	5	-0.1549	0.4385	
	4	5	1.0335	0.1507	
	5	5	-1.4167	0.0783	
Wolffian Duct Stage	2	5	-2.635	0.0042	**
	2	4	-2.6563	0.0040	**
	2	3	-2.9549	0.0016	**
	2	**2**	-3.4353	0.0003	**
	3	5	0.1816	0.4280	

* Statistically significant treatment effect at the 0.05 level.
** Statistically significant treatment effect of delay in development at the 0.05 level.
Treatment: The number of concentrations (including the control) that were included in the RSCABS analysis:
5=5 highest concentrations (all concentrations),
4=lowest 4 concentrations,
3=lowest 3 concentrations,
2=lowest 2 concentrations.
Note: Bolded number under Treatment indicates LOEC (lowest observed effective concentration). For example, 5 indicates the LOEC was the 5th concentration, 100 µg/L; 4 indicates the LOEC was the 4th concentration, 33 µg/L; 3 indicates the LOEC was the

3rd concentration, 10.9 µg/L; and 2 indicates the LOEC was the 2nd concentration, 3.6 µg/L.

(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.

Appendix A

Statistical Analyses Performed on Data with Potential Statistical Outliers Removed

Table A-1a. Potential Statistical Outliers for TTM at NF Stage 62.

Treatment	Q1	Q3	IQD	LO	HI	Replicate	Days To NF Stage 62	Residual
0.0	-3.7669	3.0754	6.8423	-14.0305	13.3389	C	58	13.9337
3.6						A	36	-16.2319
						A	70	17.7681
						C	64	13.4621
						C	65	14.4621
10.9						B	40	-15.0030
						B	70	14.9970
						B	70	14.9970
						B	70	14.9970
100						A	67	13.8556
						A	67	13.8556

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-1b. Potential Statistical Outliers for Body Weight (g) at NF Stage 66.

Treatment	Q1	Q3	IQD	LO	HI	Replicate	Body Weight	Residual
33	-0.0927	0.0755	0.1682	-0.3451	0.3278	D	0.881	0.35401

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-1c. Potential Statistical Outliers for Female Body Weight (g) at Termination.

Treatment	Q1	Q3	IQD	LO	HI	Replicate	Body Weight	Residual
100	-0.7358	0.5793	1.3151	-2.7085	2.5519	C	14.389	3.26636

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-1d. Potential Statistical Outliers for Female Liver-Somatic Index (LSI) at Termination.

Treatment	Q1	Q3	IQD	LO	HI	Replicate	LSI	Residual
0.0	-0.0020	0.0020	0.0040	-0.0080	0.0080	B	0.075	0.010086
						B	0.074	0.009086
10.9						A	0.073	0.008952
						B	0.056	-0.008048
33						A	0.073	0.011105
100						A	0.050	-0.015000
						D	0.057	-0.008000

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. Cox Proportional Hazard Model Analysis Results for Time to Metamorphosis (TTM, Days) at NF Stage 62 for Larval Sub-Samples, Outliers Removed.

Number of Concentrations Included	Slope Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Chi-Square Test P-value
5	-0.6352	0.0881	-0.8078	-0.4626	<.0001*
4	-0.9935	0.1220	-1.2326	-0.7544	<.0001*
3	-1.5692	0.1756	-1.9134	-1.2250	<.0001*
2**	-1.8873	0.2764	-2.4291	-1.3455	<.0001*

* Indicates statistically significant treatment effect.

** Indicates that the lowest observed effect concentration (LOEC) for TTM was at treatment group 2 (3.6 µg/L).

Note: The no observed effect concentration (NOEC) for TTM was not identified.

Table A-3. Statistical Analysis Results for Continuous Endpoints, Outliers Removed

Endpoint	Monotonicity Assessment[1]	Normality Test[2]	Homogeneity of Variance Test[3]	Jonckheere-Terpstra step-down Test[4]	ANOVA Test with Post hoc Dunnett's Test[4]	Kruskal-Wallis Test with Post hoc Dunn's Test[5]
Body Weight (g) at NF Stage 66	Non-Monotonic	Normal	Heterogeneous	NP	NP	NS
Female Body Weight (g) at Termination	Monotonic	NP	NP	NS	NP	NP
Female LSI at Termination	Non-Monotonic	Non-Normal	Homogeneous	NP	NP	NS

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 contras was significant or not 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 linear trend test was performed on monotonic concentration-response data. Only statistically significant (at the 0.05 level) treatment linear trends were listed.
5. For non-monotonic, normally distributed, and homogeneous variance data, ANOVA test followed by Dunnett's test was used in the pairwise comparisons to control. Control is group 1 and test concentration groups are groups 2 to 5. Only statistically significant pairwise comparisons 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-values 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 5. Only statistically significant pairwise comparisons were listed.

NP Statistical test or comparison was not performed.

NS No statistically significant differences were found for Jonckheere-Terpstra, ANOVA, Kruskal-Wallis (KW) tests. Therefore, the no observed effect concentration (NOEC) was the highest treatment group, Group 5 (100 µg/L).

Appendix G.
Range-Finding Data (range-finding studies were not performed in a GLP-compliant manner per exception noted in Section 1)

GENERAL WATER CHEMISTRY

FEL

Client/Project-WO No: BATT01-00385 Test Species: 2-EHHB - LAGDA - X. Laevis

Analysis Date	Tech Initials	Sample ID	Temp (C)	pH (su)	DO (mg/L)
10/24/15	DJF	Control Renewal	22.3	7.6	7.9
10/24/15	DJF	0.001 mg/L Renewal	22.2	7.5	7.7
10/24/15	DJF	0.01 mg/L Renewal	22.2	7.5	7.8
10/24/15	DJF	0.1 mg/L Renewal	22.3	7.3	7.5
10/24/15	DJF	1.0 mg/L Renewal	22.2	7.3	7.6
10/24/15	DJF	5.0 mg/L Renewal	22.3	7.2	7.7
10/25/15	DJF	Control Renewal	22.2	7.5	7.8
10/25/15	DJF	0.001 mg/L Renewal	22.3	7.4	7.7
10/25/15	DJF	0.01 mg/L Renewal	22.2	7.3	7.5
10/25/15	DJF	0.1 mg/L Renewal	22.1	7.3	7.4
10/25/15	DJF	Control Spent	22.1	7.3	6.2
10/25/15	DJF	0.001 mg/L Spent	22.2	7.3	6.0
10/25/15	DJF	0.01 mg/L Spent	22.2	7.3	6.1
10/25/15	DJF	0.1 mg/L Spent	22.3	7.2	6.0
10/26/15	DJF	Control Renewal	22.2	7.5	7.8
10/26/15	DJF	0.001 mg/L Renewal	22.3	7.4	7.7
10/26/15	DJF	0.01 mg/L Renewal	22.4	7.3	7.6
10/26/15	DJF	0.1 mg/L Renewal	22.3	7.3	7.5
10/26/15	DJF	Control Spent	22.3	7.3	6.3
10/26/15	DJF	0.001 mg/L Spent	22.2	7.4	6.2
10/26/15	DJF	0.01 mg/L Spent	22.3	7.2	6.1
10/26/15	DJF	0.1 mg/L Spent	22.1	7.3	6.0
10/27/15	DJF	Control Renewal	22.2	7.4	7.7
10/27/15	DJF	0.001 mg/L Renewal	22.1	7.5	7.4
10/27/15	DJF	0.01 mg/L Renewal	22.2	7.6	7.6
10/27/15	DJF	0.1 mg/L Renewal	22.3	7.3	7.5
10/27/15	DJF	Control Spent	22.3	7.2	6.2
10/27/15	DJF	0.001 mg/L Spent	22.3	7.3	5.9
10/27/15	DJF	0.01 mg/L Spent	22.2	7.5	6.3
10/27/15	DJF	0.1 mg/L Spent	22.1	7.4	6.1
10/28/15	DJF	Control Renewal	22.3	7.5	7.4
10/28/15	DJF	0.001 mg/L Renewal	22.4	7.4	7.7
10/28/15	DJF	0.01 mg/L Renewal	22.3	7.5	7.8
10/28/15	DJF	0.1 mg/L Renewal	22.3	7.4	7.6
10/28/15	DJF	Control Spent	22.3	7.3	6.0
10/28/15	DJF	0.001 mg/L Spent	22.3	7.4	6.4
10/28/15	DJF	0.01 mg/L Spent	22.2	7.3	6.0
10/28/15	DJF	0.1 mg/L Spent	22.2	7.4	6.2
10/29/15	DJF	Control Renewal	22.1	7.6	7.5
10/29/15	DJF	0.001 mg/L Renewal	22.2	7.5	7.4
10/29/15	DJF	0.01 mg/L Renewal	22.3	7.5	7.6
10/29/15	DJF	0.1 mg/L Renewal	22.2	7.3	7.8
10/29/15	DJF	Control Spent	22.2	7.4	5.8
10/29/15	DJF	0.001 mg/L Spent	22.3	7.3	6.1
10/29/15	DJF	0.01 mg/L Spent	22.2	7.4	6.0
10/29/15	DJF	0.1 mg/L Spent	22.3	7.2	6.2
10/30/15	DJF	Control Renewal	22.4	7.4	7.7
10/30/15	DJF	0.001 mg/L Renewal	22.2	7.3	7.9
10/30/15	DJF	0.01 mg/L Renewal	22.3	7.2	7.8
10/30/15	DJF	0.1 mg/L Renewal	22.3	7.2	7.9
10/30/15	DJF	Control Spent	22.2	7.4	5.9
10/30/15	DJF	0.001 mg/L Spent	22.3	7.2	6.1
10/30/15	DJF	0.01 mg/L Spent	22.3	7.2	6.3
10/30/15	DJF	0.1 mg/L Spent	22.2	7.1	6.0
10/31/15	DJF	Control Spent	22.2	7.6	7.8
10/31/15	DJF	0.001 mg/L Spent	22.3	7.5	7.7
10/31/15	DJF	0.01 mg/L Spent	22.3	7.5	7.7
10/31/15	DJF	0.1 mg/L Spent	22.2	7.3	7.5

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FEL

CULTURE SURVIVAL/STAGE DATA SHEET

Client/Project-WO No: **BATT01-00385** Test Type: **LAGDA RF**

Sample No. / ID: **2-EHHB** Test No.: **1** Species: ***X. Laevis***

	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	10/24/15	DJF	10/10	10/10	10/10	10/10	10/10	10/10	Normal behaving and no abnormalities in Control - 5.0 mg/L
1	10/25/15	DJF	10/10	10/10	10/10	10/10	0/0	0/0	Normal behaving and no abnormalities in Control - 0.1 mg/L
2	10/26/15	DJF	10/10	10/10	10/10	10/10	0/0	0/0	Normal behaving and no abnormalities in Control - 0.1 mg/L
3	10/27/15	DJF	10/10	10/10	10/10	10/10	0/0	0/0	Normal behaving and no abnormalities in Control - 0.1 mg/L
4	10/28/15	DJF	10/10	10/10	10/10	10/10	0/0	0/0	Normal behaving and no abnormalities in Control - 0.1 mg/L
5	10/29/15	DJF	10/10	10/10	10/10	9/10	0/0	0/0	Normal behaving and no abnormalities in Control - 0.1 mg/L
6	10/30/15	DJF	10/10	10/10	10/10	9/10	0/0	0/0	Normal behaving and no abnormalities in Control - 0.1 mg/L
7	10/31/15	DJF	10/10	10/10	9/10	9/10	0/0	0/0	Normal behaving and no abnormalities in Control - 0.1 mg/L

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