

Supplemental Information for: "The effects of arsenic speciation on accumulation and toxicity of dietborne arsenic exposures to rainbow trout." Erickson, Mount, Highland, Hockett, Hoff, Je

Supplemental Table S1. Exposure, survival and growth information for each replicate chamber in live diet experiment (red cells denote variable not calculated because of uncertainty regarding g

Treatment ⁰	Replicate chamber	Diet Arsenic Concentration ¹ (µg/g dwt)	Initial Average Fish Weight (g)		Final Average Fish Weight (g)		Fish Mortality (n=8 @ Start)				Cumulative Growth (Dry Wt Basis) ⁶	Growth Rate (Dry Wt Basis) ⁷	28- Provided (g wwt)
			Wet ²	Dry ³	Wet ⁴	Est Dry ⁵	Mortality	Day	Wet Wt (g)	Est Dry Wt (g)	(%)	(%/d)	
CTRL	A	1.7 (n=8, 20%)	0.1836	0.02884	0.5626	0.0974	0				238	4.35	13.43
	B		0.1836	0.02884	0.4768	0.0798	0				177	3.64	13.41
	C		0.1836	0.02884	0.5020	0.0849	0				194	3.86	13.42
	D		0.1836	0.02884	0.5800	0.1011	0				250	4.48	13.45
AsIII	A	32.6 (n=8, 20%)	0.1836	0.02884	0.5497	0.0948	0				229	4.25	13.42
	B		0.1836	0.02884	0.5246	0.0896	0				211	4.05	13.42
	C		0.1836	0.02884	0.6011	0.1055	0				266	4.63	13.43
	D		0.1836	0.02884	0.5315	0.0910	0				215	4.10	13.44
AsV	A	37.9 (n=9, 31%)	0.1836	0.02884	0.5169	0.0880	0				205	3.98	13.36
	B		0.1836	0.02884	0.6322	0.1121	0				289	4.85	13.39
	C		0.1836	0.02884	0.5958	0.1044	0				262	4.59	13.37
	D		0.1836	0.02884	0.5282	0.0903	0				213	4.08	13.37
DMA	A	26.7 (n=8, 32%)	0.1836	0.02884	0.6265	0.1109	0				284	4.81	13.26
	B		0.1836	0.02884	0.5572	0.0963	1	22	0.2524	0.0366			12.80
	C		0.1836	0.02884	0.5698	0.0989	0				243	4.40	13.30
	D		0.1836	0.02884	0.5595	0.0968	0				236	4.32	13.29
MMA	A	108 (n=8, 10%)	0.1836	0.02884	0.5911	0.1034	1	25	0.3615	0.0570			13.07
	B		0.1836	0.02884	0.5572	0.0963	0				234	4.31	13.26
	C		0.1836	0.02884	0.5630	0.0975	0				238	4.35	13.28
	D		0.1836	0.02884	0.6328	0.1122	0				289	4.85	13.25
AsB	A	88 (d≤9)	0.1836	0.02884	0.5441	0.0936	0				225	4.20	13.40
	B	(n=9, 41%)	0.1836	0.02884	0.6806	0.1224	0				325	5.16	13.42
	C	65 (d>9)	0.1836	0.02884	0.5657	0.0981	0				240	4.37	13.42
	D	(n=12, 35%)	0.1836	0.02884	0.6078	0.1069	0				271	4.68	13.42

⁰ CTRL=control diet, AsIII=diet exposed to arsenite, AsV=diet exposed to arsenate, DMA=diet exposed to dimethylarsinate, MMA=diet exposed to monomethylarsonate, AsB=diet exposed to arsenobetaine

¹ Average of measured concentration across all diet samples, parentheses provide number of samples, relative standard deviation (%), and, for AsB, the time range for samples

² Initial wet weight based on individual measurements for sample of 20 fish from stock of fish put in experimental chambers; range = 0.0968-0.2576, standard deviation = 0.0431, estimated standard error for initial n=8 fish in chambers = 0.0152.

³ Initial dry weight based on oven drying pooled sample (n=20) of fish used for starting wet weight; total dry mass = 0.5767 g, or 0.2884 g/fish.

⁴ Final wet weight is average of individual wet weight measurements of surviving fish.

⁵ Final dry weight is the wet weight times an estimated fraction dry weight using the equation (Figure 1 of main text): fraction dry weight = 0.1934 + 0.0809 × log₁₀(wet weight (g))

⁶ Computed based on surviving fish, cumulative growth = 100×ln(final average dry weight-initial average dry weight)/initial average dry weight

⁷ Computed based on surviving fish, growth rate = 100×ln(final average dry weight/initial average dry weight)/28

⁸ The wet weight of the provided and leftover rations are the cumulative of daily measurements through the test, with consumed ration being calculated by difference and dry weight consumed equalling wet weight times 0.183, the average fraction

⁹ Consumption rate per weight fish is total consumption divided by the time-averaged weight of fish in the chamber divided by 28 d.

¹⁰ Conversion efficiency is increase in dry weight of fish in chamber divided by the total dry weight of diet consumed.

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growth/consumption due to dead test organism)

Food Ration and Consumption (per chamber) ⁸			Weight-normalized Consumption ⁹	Conversion Efficiency (Dry Wt Basis) ¹⁰
Leftover (g wwt)	Consumed (g wwt)	Consumed (g dwt)	%/d	%
0.65	12.78	2.34	18.5	23.5
1.05	12.36	2.26	20.1	18.0
1.50	11.92	2.18	18.7	20.6
0.13	13.32	2.44	18.9	23.7
0.42	13.00	2.38	19.2	22.2
0.39	13.03	2.38	19.8	20.4
0.36	13.07	2.39	18.0	25.7
1.07	12.37	2.26	18.7	22.0
1.85	11.51	2.10	17.7	22.5
0.11	13.28	2.43	17.7	27.4
0.64	12.73	2.33	17.7	26.0
1.14	12.23	2.24	18.5	22.0
0.11	13.16	2.40	17.6	27.3
0.69	12.11	2.21		
0.12	13.18	2.41	18.9	23.3
0.51	12.78	2.34	18.6	23.3
0.61	12.46	2.28		
0.75	12.51	2.29	18.2	23.6
0.32	12.96	2.37	18.8	23.2
0.35	12.90	2.36	17.2	28.3
0.16	13.24	2.42	19.6	21.4
0.00	13.42	2.45	16.9	30.5
0.28	13.14	2.40	19.0	23.1
0.00	13.42	2.45	18.4	25.5

ion dry weight of worms .