

ECOTOXICOLOGY

FATHEAD MINNOW SURVIVAL AND GROWTH TEST

Client Name: Golder Associates Ltd.Sample ID: VariousWeighing Dates: 2020 Jun 17, 2020 Jun 22Balance ID: bby2-0260Job / Sample #: C039804Drying Time (h): >24Drying Temp (°C): 60

Boat #	Conc. & Replicate	Initial # Of Fish	Boat Wt. (g)	Boat & Fish Wt. (g)	Wt. of Fish (mg)	Biomass/Replicate ¹ (mg)	Mean Biomass/Conc ¹ (mg)	SD
333	0-A	10	0.80753	0.81357	6.04	0.604	0.554	0.04
334	B	10	0.79958	0.80483	5.25	0.525		
335	C	10	0.79940	0.80473	5.33	0.533		
336	Site Ctrl-A	10	0.80069	0.80580	5.11	0.511	0.512	0.01
337	B	10	0.80624	0.81130	5.06	0.506		
338	C	10	0.79919	0.80438	5.19	0.519		
339	Soft Water Ctrl-A	10	0.80924	0.81460	5.36	0.536	0.566	0.03
340	B	10	0.80080	0.80640	5.60	0.560		
341	C	10	0.79555	0.80158	6.03	0.603		
342	MEL-02-05 100%-A	10	0.81810	0.82309	4.99	0.499	0.540	0.04
343	B	10	0.81632	0.82198	5.66	0.566		
344	C	10	0.80144	0.80698	5.54	0.554		
345	MEL-03-02 100%-A	10	0.79452	0.79923	4.71	0.471	0.508	0.04
346	B	10	0.79925	0.80436	5.11	0.511		
347	C	10	0.79903	0.80446	5.43	0.543		
348	MEL-04-05 100%-A	10	0.79742	0.80261	5.19	0.519	0.553	0.04
349	B	10	0.78833	0.79427	5.94	0.594		
350	C	10	0.80137	0.80684	5.47	0.547		
351	MEL-05-04 100%-A	10	0.79964	0.80504	5.40	0.540	0.525	0.02
352	B	10	0.80213	0.80720	5.07	0.507		
353	C	10	0.78768	0.79297	5.29	0.529		
354	QA/QC		0.79520	0.79534	0.14			
355	QA/QC		0.79277	0.79295	0.18			
333	0-A	10	0.80757	0.81355	5.98			
Analyst			NS	DML				

¹ Biomass is calculated as the weight of fish per replicate divided by the number of fish initially seeded into that replicate (i.e. **10** fish per replicate).

Average Dry Weight of Control Fish (Average dry weight of control fish must be ≥ 250 μg for test to be valid)

Boat #	Conc. & Replicate	# Surviving Fish	Wt. of Fish (mg)	Mean Wt./ Fish (μg)	Mean Dry Wt. (μg)
333	0-A	10	6.04	604	554
334	B	10	5.25	525	
335	C	10	5.33	533	

Client Name: Golder Associates Ltd.Sample ID: MEL-13-01Weighing Dates: 2020 June 17, 2020 Jun 20Balance ID: bby-0260Job / Sample #: C039804 XX3664Drying Time (h): >24Drying Temp (°C): 60

Boat #	Conc. & Replicate	Initial # Of Fish	Boat Wt. (g)	Boat & Fish Wt. (g)	Wt. of Fish (mg)	Biomass/Replicate ¹ (mg)	Mean Biomass/Conc ¹ (mg)	SD
275	0-A	10	0.80154	0.80641	4.87	0.487	0.497	0.03
276	B	10	0.80728	0.81255	5.27	0.527		
277	C	10	0.81578	0.82055	4.77	0.477		
278	Site Ctrl-A	10	0.80451	0.81020	5.69	0.569	0.560	0.02
279	B	10	0.79960	0.80499	5.39	0.539		
280	C	10	0.80923	0.81496	5.73	0.573		
281	1.56%-A	10	0.80425	0.80954	5.29	0.529	0.530	0.01
282	B	10	0.80329	0.80853	5.24	0.524		
283	C	10	0.82841	0.83379	5.38	0.538		
284	3.13%-A	10	0.82530	0.82985	4.55	0.455	0.516	0.06
285	B	10	0.80330	0.80911	5.81	0.581		
286	C	10	0.78898	0.79409	5.11	0.511		
287	6.25%-A	10	0.79284	0.79841	5.57	0.557	0.565	0.04
288	B	10	0.78756	0.79285	5.29	0.529		
289	C	10	0.79521	0.80129	6.08	0.608		
290	12.5%-A	10	0.78925	0.79380	4.55	0.455	0.510	0.05
291	B	10	0.79870	0.80428	5.58	0.558		
292	C	10	0.79851	0.80367	5.16	0.516		
293	25%-A	10	0.81684	0.82266	5.82	0.582	0.548	0.07
294	B	10	0.81718	0.82190	4.72	0.472		
295	C	10	0.79996	0.80585	5.89	0.589		
296	50%-A	10	0.81018	0.81504	4.86	0.486	0.526	0.04
297	B	10	0.81173	0.81704	5.31	0.531		
298	C	10	0.78729	0.79289	5.60	0.560		
299	100%-A	10	0.78313	0.78909	5.96	0.596	0.579	0.03
300	B	10	0.78252	0.78851	5.99	0.599		
301	C	10	0.79014	0.79555	5.41	0.541		
302	QA/QC		0.78708	0.78712	0.04			
303	QA/QC		0.80186	0.80178	-0.08			
275	0-A	10	0.80145	0.80645	5.00			
Analyst			NS	DML				

¹ Biomass is calculated as the weight of fish per replicate divided by the number of fish initially seeded into that replicate (i.e. 10 fish per replicate).

Average Dry Weight of Control Fish (Average dry weight of control fish must be $\geq 250 \mu\text{g}$ for test to be valid)

Boat #	Conc. & Replicate	# Surviving Fish	Wt. of Fish (mg)	Mean Wt./ Fish (μg)	Mean Dry Wt. (μg)
275	0-A	10	4.87	487	497
276	B	10	5.27	527	
277	C	10	4.77	477	

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FATHEAD MINNOW SURVIVAL AND GROWTH TEST

Client Name: Golder Associates Ltd.Sample ID: MEL-13-07Weighing Dates: 2020 June 17, 2020 Jun 20Balance ID: bby2-0260Job / Sample #: C039804 XX3664Drying Time (h): >24Drying Temp (°C): 60

Boat #	Conc. & Replicate	Initial # Of Fish	Boat Wt. (g)	Boat & Fish Wt. (g)	Wt. of Fish (mg)	Biomass/Replicate ¹ (mg)	Mean Biomass/Conc ¹ (mg)	SD
304	0-A	10	0.80144	0.80714	5.70	0.570	0.573	0.06
305	B	10	0.80493	0.81008	5.15	0.515		
306	C	10	0.80810	0.81443	6.33	0.633		
307	Site Ctrl-A	10	0.79177	0.79739	5.62	0.562	0.506	0.06
308	B	10	0.80906	0.81352	4.46	0.446		
309	C	10	0.81217	0.81727	5.10	0.510		
310	1.56%-A	10	0.81361	0.81948	5.87	0.587	0.517	0.07
311	B	10	0.80485	0.80999	5.14	0.514		
312	C	10	0.79729	0.80178	4.49	0.449		
313	3.13%-A	10	0.80236	0.80742	5.06	0.506	0.558	0.05
314	B	10	0.78473	0.79042	5.69	0.569		
315	C	10	0.82537	0.83136	5.99	0.599		
316	6.25%-A	10	0.81461	0.81904	4.43	0.443	0.546	0.09
317	B	10	0.79856	0.80429	5.73	0.573		
318	C	10	0.79863	0.80484	6.21	0.621		
319	12.5%-A	10	0.80023	0.80636	6.13	0.613	0.604	0.07
320	B	10	0.80637	0.81310	6.73	0.673		
321	C	10	0.79973	0.80500	5.27	0.527		
322	25%-A	10	0.79829	0.80361	5.32	0.532	0.554	0.02
323	B	10	0.78474	0.79050	5.76	0.576		
324	C	10	0.78370	0.78923	5.53	0.553		
325	50%-A	10	0.79626	0.80185	5.59	0.559	0.593	0.03
326	B	10	0.80695	0.81286	5.91	0.591		
327	C	10	0.79326	0.79954	6.28	0.628		
328	100%-A	10	0.80523	0.80956	4.33	0.433	0.493	0.07
329	B	10	0.80372	0.80853	4.81	0.481		
330	C	10	0.80518	0.81083	5.65	0.565		
331	QA/QC		0.79185	0.79201	0.16			
332	QA/QC		0.79620	0.79639	0.19			
304	0-A	10	0.80152	0.80738	5.86			
Analyst			NS	DML				

¹ Biomass is calculated as the weight of fish per replicate divided by the number of fish initially seeded into that replicate (i.e. 10 fish per replicate).

Average Dry Weight of Control Fish (Average dry weight of control fish must be $\geq 250 \mu\text{g}$ for test to be valid)

Boat #	Conc. & Replicate	# Surviving Fish	Wt. of Fish (mg)	Mean Wt./ Fish (μg)	Mean Dry Wt. (μg)
304	0-A	10	5.70	570	573
305	B	10	5.15	515	
306	C	10	6.33	633	