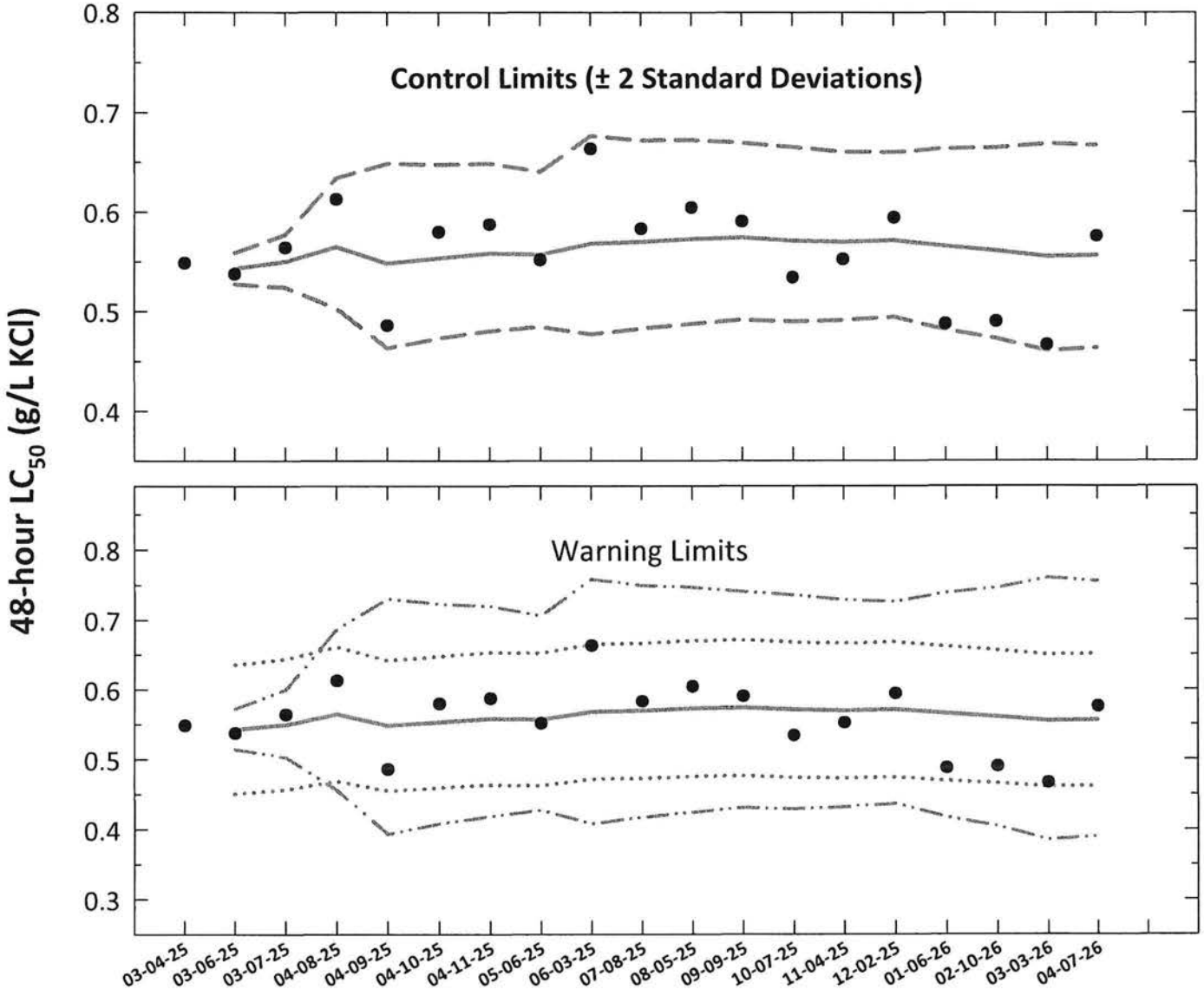
ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia
Acute Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.



- ● **48-hour LC_{50}** = median lethal concentration. An estimation of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).
- ——— **Central Tendency** (mean logarithmic LC_{50} converted to anti-logarithmic values)
- — — — **Control Limits** (mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values)
- —·—·— **Laboratory Warning Limits** (mean logarithmic LC_{50} ± 2 coefficent of variations converted to anti-logarithmic values)
- ····· **USEPA Warning Limits** (mean logarithmic $LC_{50} \pm S_{A.10}$ converted to anti-logarithmic values, $S_{A.10}$ = 10th percentile of CVs reported nationally by USEPA)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia
Acute Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.

Test number	Test date	48-hour LC_{50} ToxCal Determination (g/L KCl)	Log_{10} Conversion			Anti-logarithmic Values (g/L KCl)						
			48-hour LC_{50}	CT	S	CT	Control Limits		Laboratory Calculated CV Warning Limits		10th Percentile CV Warning Limits	
							CT - 2S	CT + 2S	CT - 2CV	CT + 2CV	CT - $S_{A.10}$	CT + $S_{A.10}$
1	03-04-25	0.5485	-0.2608									
2	03-06-25	0.5374	-0.2697	-0.2652	0.0063	0.5430	0.5275	0.5588	0.5145	0.5722	0.4506	0.6353
3	03-07-25	0.5640	-0.2487	-0.2597	0.0105	0.5499	0.5239	0.5772	0.5026	0.5995	0.4564	0.6434
4	04-08-25	0.6129	-0.2126	-0.2480	0.0251	0.5650	0.5034	0.6342	0.4559	0.6874	0.4689	0.6610
5	04-09-25	0.4860	-0.3134	-0.2610	0.0364	0.5482	0.4635	0.6484	0.3937	0.7310	0.4550	0.6414
6	04-10-25	0.5796	-0.2369	-0.2570	0.0341	0.5533	0.4730	0.6473	0.4082	0.7231	0.4593	0.6474
7	04-11-25	0.5872	-0.2312	-0.2533	0.0326	0.5581	0.4803	0.6484	0.4187	0.7200	0.4632	0.6529
8	05-06-25	0.5517	-0.2583	-0.2539	0.0302	0.5573	0.4849	0.6405	0.4273	0.7066	0.4625	0.6520
9	06-03-25	0.6631	-0.1784	-0.2455	0.0379	0.5681	0.4772	0.6763	0.4082	0.7586	0.4716	0.6647
10	07-08-25	0.5828	-0.2345	-0.2444	0.0359	0.5696	0.4829	0.6719	0.4174	0.7492	0.4728	0.6664
11	08-05-25	0.6040	-0.2189	-0.2421	0.0349	0.5726	0.4877	0.6724	0.4242	0.7469	0.4753	0.6700
12	09-09-25	0.5904	-0.2289	-0.2410	0.0335	0.5741	0.4921	0.6698	0.4312	0.7408	0.4765	0.6717
13	10-07-25	0.5341	-0.2724	-0.2434	0.0332	0.5709	0.4899	0.6653	0.4291	0.7362	0.4739	0.6680
14	11-04-25	0.5523	-0.2578	-0.2445	0.0321	0.5696	0.4912	0.6604	0.4320	0.7291	0.4727	0.6664
15	12-02-25	0.5941	-0.2261	-0.2432	0.0313	0.5712	0.4944	0.6598	0.4368	0.7264	0.4741	0.6683
16	01-06-26	0.4877	-0.3118	-0.2475	0.0348	0.5656	0.4818	0.6638	0.4175	0.7393	0.4694	0.6617
17	02-10-26	0.4901	-0.3098	-0.2512	0.0369	0.5608	0.4732	0.6647	0.4045	0.7461	0.4655	0.6562
18	03-03-26	0.4667	-0.3310	-0.2556	0.0404	0.5551	0.4608	0.6688	0.3852	0.7599	0.4607	0.6495
19	04-07-26	0.5755	-0.2399	-0.2548	0.0395	0.5562	0.4637	0.6670	0.3900	0.7555	0.4616	0.6507
20												

Note: **48-hour LC_{50}** = 48-hour median lethal concentration. An estimate of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).

CT = Central tendency of the LC_{50} values.

S = Standard deviation of the LC_{50} values.

Control Limits = Mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values.

Warning Limits = Mean logarithmic LC_{50} ± 2CV or $S_{A.10}$ converted to anti-logarithmic values.

$S_{A.10}$ = Standard deviation corresponding to the 10th percentile of CVs reported nationally by USEPA. ($S_{A.10}$ = 0.17).

CV = Coefficient of variation.

Entered and Reviewed by Jim Sumner

ETS

Acute LC_{50} Whole Effluent Toxicity Test, Species: *Americamysis bahia*
EPA-821-R-02-012, Method 2007.0

Americamysis bahia Potassium Chloride Acute Reference Toxicant Test

AbKClAC # 20

Dilution Preparation:

Test concentrations (mg/L KCl)	150	300	450	600	750
mL Stock solution	3.0	6.0	9.0	12	15
mL Dilution water	997	994	991	988	985
Total volume (mL)	1000	1000	1000	1000	1000

A stock solution was prepared by diluting 100 g KCl into 2000 mL deionized water. This 50,000 mg/L KCl stock solution was used to prepare the concentrations evaluated for toxicity.

Stock solution INSS #: 2465

Chemical Analyses:

		Hours		
		0	24	48
Concentration	Analyst	XL	XL	XL
Control, SaltSW	pH (S.U.)	8.04	8.02	7.89
	Dissolved oxygen (mg/L)	8.3	8.1	8.0
	*Salinity (ppt)	25.0	25.0	25.0
	*Alkalinity (mg/L $CaCO_3$)	110		
	*Temperature (°C)	25.3	25.0	24.9
150 mg/L	pH (S.U.)	8.04	8.03	7.87
	Dissolved oxygen (mg/L)	8.4	8.1	8.0
	*Salinity (ppt)	24.9	24.9	25.0
	*Temperature (°C)	25.4	24.8	24.6
300 mg/L	pH (S.U.)	8.04	8.03	7.92
	Dissolved oxygen (mg/L)	8.4	8.2	8.1
	*Salinity (ppt)	25.2	25.2	25.3
	*Temperature (°C)	25.5	25.3	24.6
450 mg/L	pH (S.U.)	8.03	8.03	7.90
	Dissolved oxygen (mg/L)	8.4	8.2	8.1
	*Salinity (ppt)	25.3	25.3	25.4
	*Temperature (°C)	25.5	25.1	24.8
600 mg/L	pH (S.U.)	8.04	8.04	7.92
	Dissolved oxygen (mg/L)	8.3	8.2	8.1
	*Salinity (ppt)	25.5	25.6	25.5
	*Temperature (°C)	25.5	25.0	24.7
750 mg/L	pH (S.U.)	8.04	8.03	
	Dissolved oxygen (mg/L)	8.3	8.1	
	*Salinity (ppt)	25.6	25.6	
	*Temperature (°C)	25.5	25.0	

20040826

*Analyst identified for each day, performed pH and dissolved oxygen measurements only. Temperature and salinity performed at the time of test initiation or termination by the analyst performing the toxicity test. Alkalinity performed by the analyst identified on the test specific bench sheet and transcribed to this bench sheet.

Chemical analyses:

Parameter	Reporting limit	Method number	Meter	Serial number
pH	0.1 S.U.	SM 4500-H+ B-2021	Accumet AR20	93312452
Dissolved oxygen	1.0 mg/L	SM 4500-O H-2021	HACH HQ430d Flexi	SN25010005030C
Salinity	1.0 ppt	SM 2520 B-2021	YSI PRO30	18D104324
Alkalinity	5.0 mg $CaCO_3$/L	SM 2320 B-2021	Accumet AR20	93312452
Temperature	0.1 °C	SM 2550B-2010	Digital Thermometer	13066470

ETC

Acute LC_{50} Whole Effluent Toxicity Test, Species: *Americamysis bahia*
EPA-821-R-02-012, Method 2007.0

Americamysis bahia Potassium Chloride Acute Reference Toxicant Test

AbKClAC # 20

Hours	Date	Feeding		Test Initiation or Termination		Location	Randomizing	SaltSW Batch
		Time	Analyst	Time	Analyst	Incubator/Shelf	Template	
0 Initiation	04-07-26	*1125	JP	1349	JP	1C	Yellow	03-30-26B
24	04-08-26			1355	JP			
48 Termination	04-09-26			1356	JP			

*Test organisms were fed in holding 2 to 5 hours prior to test initiation. Test organisms were not fed during the test.

Test Organism Information:

Organism Source:	Aquatic Indicators, Inc.
Batch (AI Batch Ab):	04-06-26
Age (1 to 5 days old):	1-2 Days
Date organisms were born:	04-05-26 1200 to 04-06-26 1130
Average transfer volume:	< 0.25 mL
Transfer bowl information:	pH (S.U.): ~~7.82~~ 7.99 JP 04-07-26
	Temperature (°C) 24.4°C

Survival Data **(number of living organisms):**

Hours	Control		150 mg/L		300 mg/L		450 mg/L		600 mg/L		750 mg/L	
	Replicate		Replicate		Replicate		Replicate		Replicate		Replicate	
	A	B	C	D	E	F	G	H	I	J	K	L
0 Initiation	10	10	10	10	10	10	10	10	10	10	10	10
24	10	10	10	10	10	10	10	10	3 7d	6 4d	0 10d	0 10d
48 Termination	10	10	10	10	10	10	10	10	3	5 7d	0	0
Mean Survival	100%		100%		100%		100%		40%		0%	

Comment codes: d = dead, u = unhealthy, s = stressed

Statistics:

Method	SK
Lower 95% confidence limit (mg KCl/L)	606.6
Upper 95% confidence limit (mg KCl/L)	544.2
48-hour LC_{50} (mg KCl/L)	575.5

Comments:

Test Reviewed by: JP

Statistical Analyses

Acute Mysid Test-24 Hr Survival

Start Date:	4/7/2026	Test ID:	AbKClAC	Sample ID:	REF-Ref Toxicant
End Date:	4/9/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	DMR-Discharge Monitoring Report
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2
D-Control	1.0000	1.0000
150	1.0000	1.0000
300	1.0000	1.0000
450	1.0000	1.0000
600	0.3000	0.6000
750	0.0000	0.0000

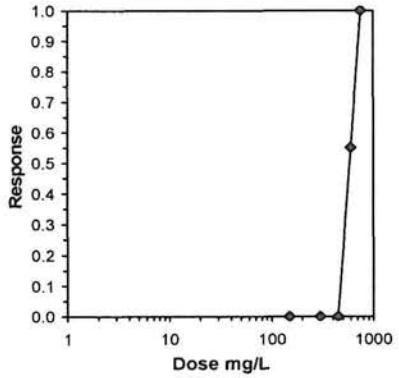
			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20
150	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.2762	0	20
300	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.2762	0	20
450	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.2762	0	20
*600	0.4500	0.4500	0.7329	0.5796	0.8861	29.567	2	7.009	2.850	0.2762	11	20
750	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2				20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

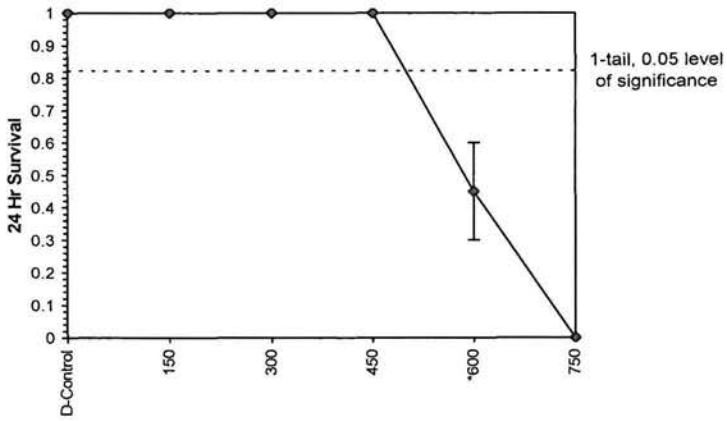
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	450	600	519.615		0.15255	0.15647	0.1845	0.00939	0.00293	4, 5
Treatments vs D-Control										

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	582.91	550.70	616.99
5.0%	583.10	547.45	621.08
10.0%	583.30	543.41	626.10
20.0%	583.68	531.54	640.95
Auto-0.0%	582.91	550.70	616.99



Dose-Response Plot



Statistical Analyses

Acute Mysid Test-48 Hr Survival

Start Date:	4/7/2026	Test ID:	AbKCIAC	Sample ID:	REF-Ref Toxicant
End Date:	4/9/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	DMR-Discharge Monitoring Report
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2
D-Control	1.0000	1.0000
150	1.0000	1.0000
300	1.0000	1.0000
450	1.0000	1.0000
600	0.3000	0.5000
750	0.0000	0.0000

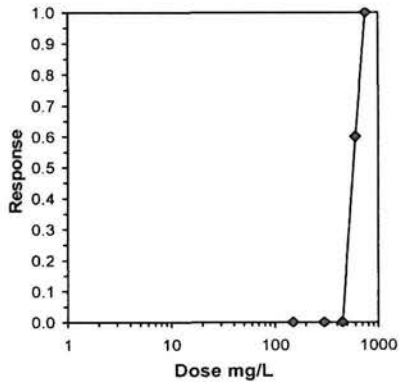
			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20
150	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.1854	0	20
300	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.1854	0	20
450	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.1854	0	20
*600	0.4000	0.4000	0.6825	0.5796	0.7854	21.317	2	11.212	2.850	0.1854	12	20
750	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2				20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

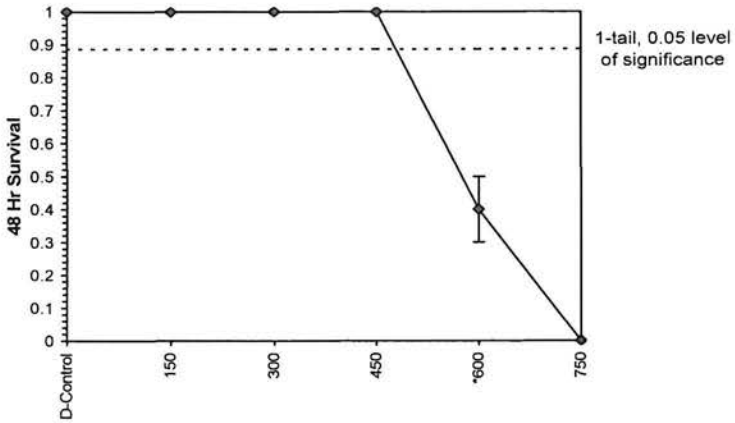
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	450	600	519.615		0.08888	0.09116	0.21287	0.00423	3.2E-04	4, 5
Treatments vs D-Control										

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	575.51	544.19	608.63
5.0%	574.97	540.41	611.74
10.0%	574.44	536.07	615.55
20.0%	573.41	524.62	626.73
Auto-0.0%	575.51	544.19	608.63



Dose-Response Plot



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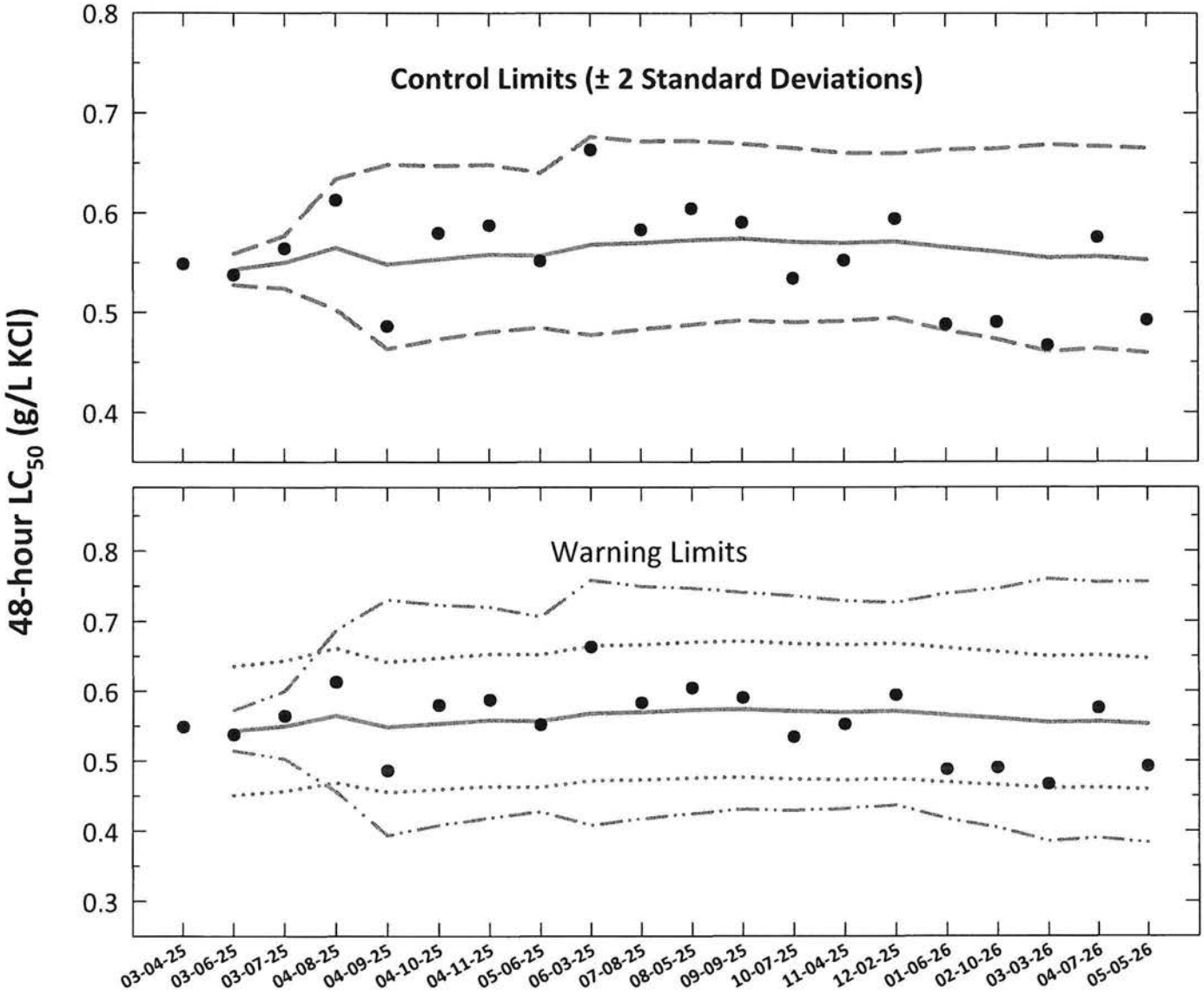

- ● **48-hour LC_{50}** = median lethal concentration. An estimation of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).
- ——— **Central Tendency** (mean logarithmic LC_{50} converted to anti-logarithmic values)
- – – – **Control Limits** (mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values)
- —·—·— **Laboratory Warning Limits** (mean logarithmic LC_{50} ± 2 coefficent of variations converted to anti-logarithmic values)
- ····· **USEPA Warning Limits** (mean logarithmic $LC_{50} \pm S_{A.10}$ converted to anti-logarithmic values, $S_{A.10}$ = 10th percentile of CVs reported nationally by USEPA)

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Test number	Test date	48-hour LC_{50} ToxCal Determination (g/L KCl)	Log_{10} Conversion			Anti-logarithmic Values (g/L KCl)						
			48-hour LC_{50}	CT	S	CT	Control Limits		Laboratory Calculated CV Warning Limits		10th Percentile CV Warning Limits	
							CT - 2S	CT + 2S	CT - 2CV	CT + 2CV	CT - $S_{A.10}$	CT + $S_{A.10}$
1	**03-04-25**	**0.5485**	-0.2608									
2	**03-06-25**	**0.5374**	-0.2697	-0.2652	0.0063	0.5430	0.5275	0.5588	0.5145	0.5722	0.4506	0.6353
3	**03-07-25**	**0.5640**	-0.2487	-0.2597	0.0105	0.5499	0.5239	0.5772	0.5026	0.5995	0.4564	0.6434
4	**04-08-25**	**0.6129**	-0.2126	-0.2480	0.0251	0.5650	0.5034	0.6342	0.4559	0.6874	0.4689	0.6610
5	**04-09-25**	**0.4860**	-0.3134	-0.2610	0.0364	0.5482	0.4635	0.6484	0.3937	0.7310	0.4550	0.6414
6	**04-10-25**	**0.5796**	-0.2369	-0.2570	0.0341	0.5533	0.4730	0.6473	0.4082	0.7231	0.4593	0.6474
7	**04-11-25**	**0.5872**	-0.2312	-0.2533	0.0326	0.5581	0.4803	0.6484	0.4187	0.7200	0.4632	0.6529
8	**05-06-25**	**0.5517**	-0.2583	-0.2539	0.0302	0.5573	0.4849	0.6405	0.4273	0.7066	0.4625	0.6520
9	**06-03-25**	**0.6631**	-0.1784	-0.2455	0.0379	0.5681	0.4772	0.6763	0.4082	0.7586	0.4716	0.6647
10	**07-08-25**	**0.5828**	-0.2345	-0.2444	0.0359	0.5696	0.4829	0.6719	0.4174	0.7492	0.4728	0.6664
11	**08-05-25**	**0.6040**	-0.2189	-0.2421	0.0349	0.5726	0.4877	0.6724	0.4242	0.7469	0.4753	0.6700
12	**09-09-25**	**0.5904**	-0.2289	-0.2410	0.0335	0.5741	0.4921	0.6698	0.4312	0.7408	0.4765	0.6717
13	**10-07-25**	**0.5341**	-0.2724	-0.2434	0.0332	0.5709	0.4899	0.6653	0.4291	0.7362	0.4739	0.6680
14	**11-04-25**	**0.5523**	-0.2578	-0.2445	0.0321	0.5696	0.4912	0.6604	0.4320	0.7291	0.4727	0.6664
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16	**01-06-26**	**0.4877**	-0.3118	-0.2475	0.0348	0.5656	0.4818	0.6638	0.4175	0.7393	0.4694	0.6617
17	**02-10-26**	**0.4901**	-0.3098	-0.2512	0.0369	0.5608	0.4732	0.6647	0.4045	0.7461	0.4655	0.6562
18	**03-03-26**	**0.4667**	-0.3310	-0.2556	0.0404	0.5551	0.4608	0.6688	0.3852	0.7599	0.4607	0.6495
19	**04-07-26**	**0.5755**	-0.2399	-0.2548	0.0395	0.5562	0.4637	0.6670	0.3900	0.7555	0.4616	0.6507
20	**05-05-26**	**0.4922**	-0.3078	-0.2574	0.0402	0.5528	0.4593	0.6652	0.3837	0.7562	0.4588	0.6468

Note: **48-hour LC_{50}** = 48-hour median lethal concentration. An estimate of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).

CT = Central tendency of the LC_{50} values.

S = Standard deviation of the LC_{50} values.

Control Limits = Mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values.

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CV = Coefficient of variation.

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EPA-821-R-02-012, Method 2007.0

Americamysis bahia Potassium Chloride Acute Reference Toxicant Test

AbKClAC # 21

Dilution Preparation:

Test concentrations (mg/L KCl)	150	300	450	600	750
mL Stock solution	3.0	6.0	9.0	12	15
mL Dilution water	997	994	991	988	985
Total volume (mL)	1000	1000	1000	1000	1000

A stock solution was prepared by diluting 100 g KCl into 2000 mL deionized water. This 50,000 mg/L KCl stock solution was used to prepare the concentrations evaluated for toxicity.

Stock solution INSS #: 2478

Chemical Analyses:

		Hours		
		0	24	48
Concentration	Analyst	✓	XL	XL
Control, SaltSW	pH (S.U.)	8.10	8.07	7.96
	Dissolved oxygen (mg/L)	8.2	8.0	7.9
	*Salinity (ppt)	25.1	25.3	25.4
	*Alkalinity (mg/L $CaCO_3$)	150		
	*Temperature (°C)	25.3	25.4	25.3
150 mg/L	pH (S.U.)	8.13	8.07	7.96
	Dissolved oxygen (mg/L)	8.1	8.1	7.9
	*Salinity (ppt)	25.3	26.1	26.2
	*Temperature (°C)	24.9	25.2	25.2
300 mg/L	pH (S.U.)	8.13	8.07	7.96
	Dissolved oxygen (mg/L)	8.1	8.0	7.9
	*Salinity (ppt)	25.3	25.6	25.7
	*Temperature (°C)	25.2	25.2	25.0
450 mg/L	pH (S.U.)	8.14	8.07	7.95
	Dissolved oxygen (mg/L)	8.1	8.0	7.9
	*Salinity (ppt)	25.4	25.9	26.1
	*Temperature (°C)	25.1	25.3	25.4
600 mg/L	pH (S.U.)	8.14	8.06	7.95
	Dissolved oxygen (mg/L)	8.1	8.0	7.8
	*Salinity (ppt)	25.4	25.9	26.1
	*Temperature (°C)	25.2	25.3	25.0
750 mg/L	pH (S.U.)	8.13	8.06	
	Dissolved oxygen (mg/L)	8.1	7.9	
	*Salinity (ppt)	25.4	25.7	
	*Temperature (°C)	25.3	25.2	

05-07-24 XL

*Analyst identified for each day, performed pH and dissolved oxygen measurements only. Temperature and salinity performed at the time of test initiation or termination by the analyst performing the toxicity test. Alkalinity performed by the analyst identified on the test specific bench sheet and transcribed to this bench sheet.

Chemical analyses:

Parameter	Reporting limit	Method number	Meter	Serial number
pH	0.1 S.U.	SM 4500-H+ B-2021	Accumet AR20	93312452
Dissolved oxygen	1.0 mg/L	SM 4500-O H-2021	HACH HQ430d Flexi	SN250100050300
Salinity	1.0 ppt	SM 2520 B-2021	YSI PRO30	18D104324
Alkalinity	5.0 mg $CaCO_3$/L	SM 2320 B-2021	Accumet AR20	93312452
Temperature	0.1 °C	SM 2550B-2010	Digital Thermometer	13066470

Acute LC_{50} Whole Effluent Toxicity Test, Species: *Americamysis bahia*
EPA-821-R-02-012, Method 2007.0

Americamysis bahia Potassium Chloride Acute Reference Toxicant Test

AbKClAC # 21

Hours	Date	Feeding		Test Initiation or Termination		Location	Randomizing	SaltSW Batch
		Time	Analyst	Time	Analyst	Incubator/Shelf	Template	
0 Initiation	05-03-26	* 1110	JP	1404	JP	6F	light + blue	04-28-26A
24	05-04-26			1406	JP			
48 Termination	05-05-26			1413	JP			

*Test organisms were fed in holding 2 to 5 hours prior to test initiation. Test organisms were not fed during the test.

Test Organism Information:

Organism Source:	Aquatic Indicators, Inc.
Batch (AI Batch Ab):	05-04-26
Age (1 to 5 days old):	1-2 DAYS
Date organisms were born:	05-03-26 1200 TO 05-04-26 1130
Average transfer volume:	< 0.25 mL
Transfer bowl information:	pH (S.U.): 8.11
	Temperature (°C) 25.0°C

Survival Data **(number of living organisms):**

Hours	Control		150 mg/L		300 mg/L		450 mg/L		600 mg/L		750 mg/L	
	Replicate		Replicate		Replicate		Replicate		Replicate		Replicate	
	A	B	C	D	E	F	G	H	I	J	K	L
0 Initiation	10	10	10	10	10	10	10	10	10	10	10	10
24	10	10	10	10	10	10	10	10	5 sd	5 sd	0 12d	0 12d
48 Termination	10	10	10	10	10	10	5 sd	7 3d	2 3d	3 2s	0	0
Mean Survival	100%		100%		100%		60%		25%		0%	

Comment codes: d = dead, u = unhealthy, s = stressed

Statistics:

Method	Probit
Lower 95% confidence limit (mg KCl/L)	445.7
Upper 95% confidence limit (mg KCl/L)	535.2
48-hour LC_{50} (mg KCl/L)	492.2

Comments:

Test Reviewed by:

Statistical Analyses

Acute Mysid Test-24 Hr Survival

Start Date:	5/5/2026	Test ID:	AbKCIAC	Sample ID:	REF-Ref Toxicant
End Date:	5/8/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	DMR-Discharge Monitoring Report
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2
D-Control	1.0000	1.0000
150	1.0000	1.0000
300	1.0000	1.0000
450	1.0000	1.0000
600	0.5000	0.5000
750	0.0000	0.0000

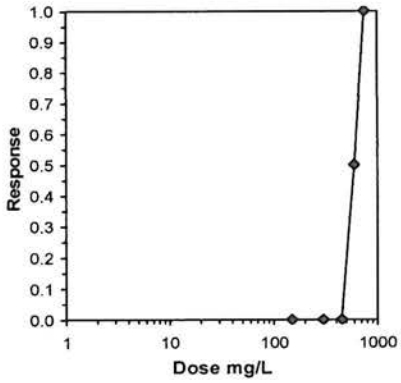
			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20
150	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.0285	0	20
300	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.0285	0	20
450	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.0285	0	20
*600	0.5000	0.5000	0.7854	0.7854	0.7854	0.000	2	62.662	2.850	0.0285	10	20
750	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2				20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

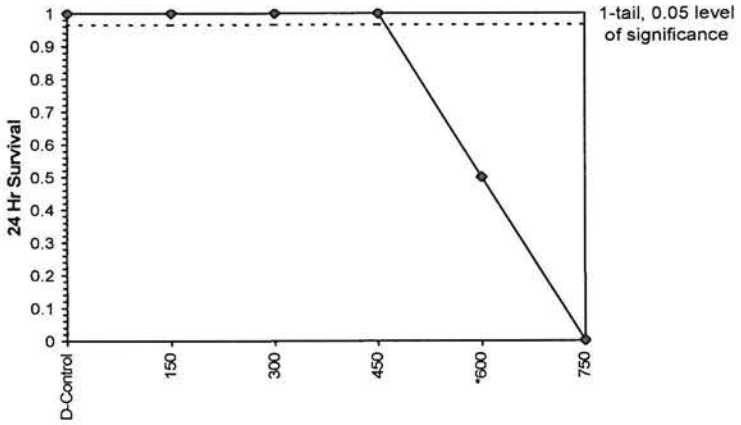
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	450	600	519.615		0.00967	0.00991	0.15706	0.0001	6.2E-08	4, 5
Treatments vs D-Control										

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	590.40	557.62	625.10
5.0%	591.35	554.95	630.14
10.0%	592.31	551.30	636.37
20.0%	594.22	539.23	654.82
Auto-0.0%	590.40	557.62	625.10



Dose-Response Plot



Statistical Analyses

Acute Mysid Test-48 Hr Survival

Start Date:	5/5/2026	Test ID:	AbKClAC	Sample ID:	REF-Ref Toxicant
End Date:	5/8/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	DMR-Discharge Monitoring Report
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2
D-Control	1.0000	1.0000
150	1.0000	1.0000
300	1.0000	1.0000
450	0.5000	0.7000
600	0.2000	0.3000
750	0.0000	0.0000

			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20
150	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.2129	0	20
300	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.2129	0	20
*450	0.6000	0.6000	0.8883	0.7854	0.9912	16.379	2	7.012	2.850	0.2129	8	20
*600	0.2500	0.2500	0.5216	0.4636	0.5796	15.723	2	11.920	2.850	0.2129	15	20
750	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2				20	20

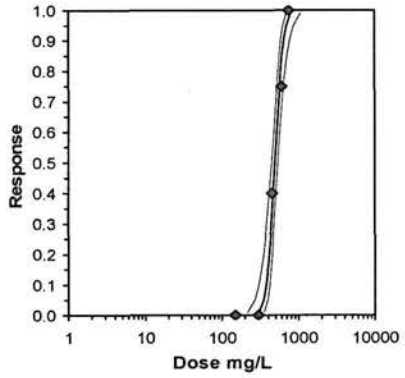
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	300	450	367.423		0.10688	0.10962	0.33356	0.00558	2.1E-04	4, 5
Treatments vs D-Control										

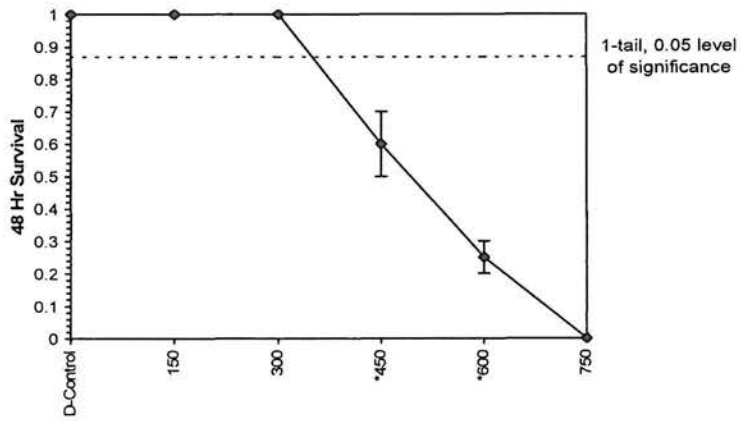
Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	10.9051	2.09382	6.80124	15.009	0	1.83532	7.81472	0.60728	2.69215	0.0917	5
Intercept	-24.358	5.68306	-35.497	-13.219							
TSCR											

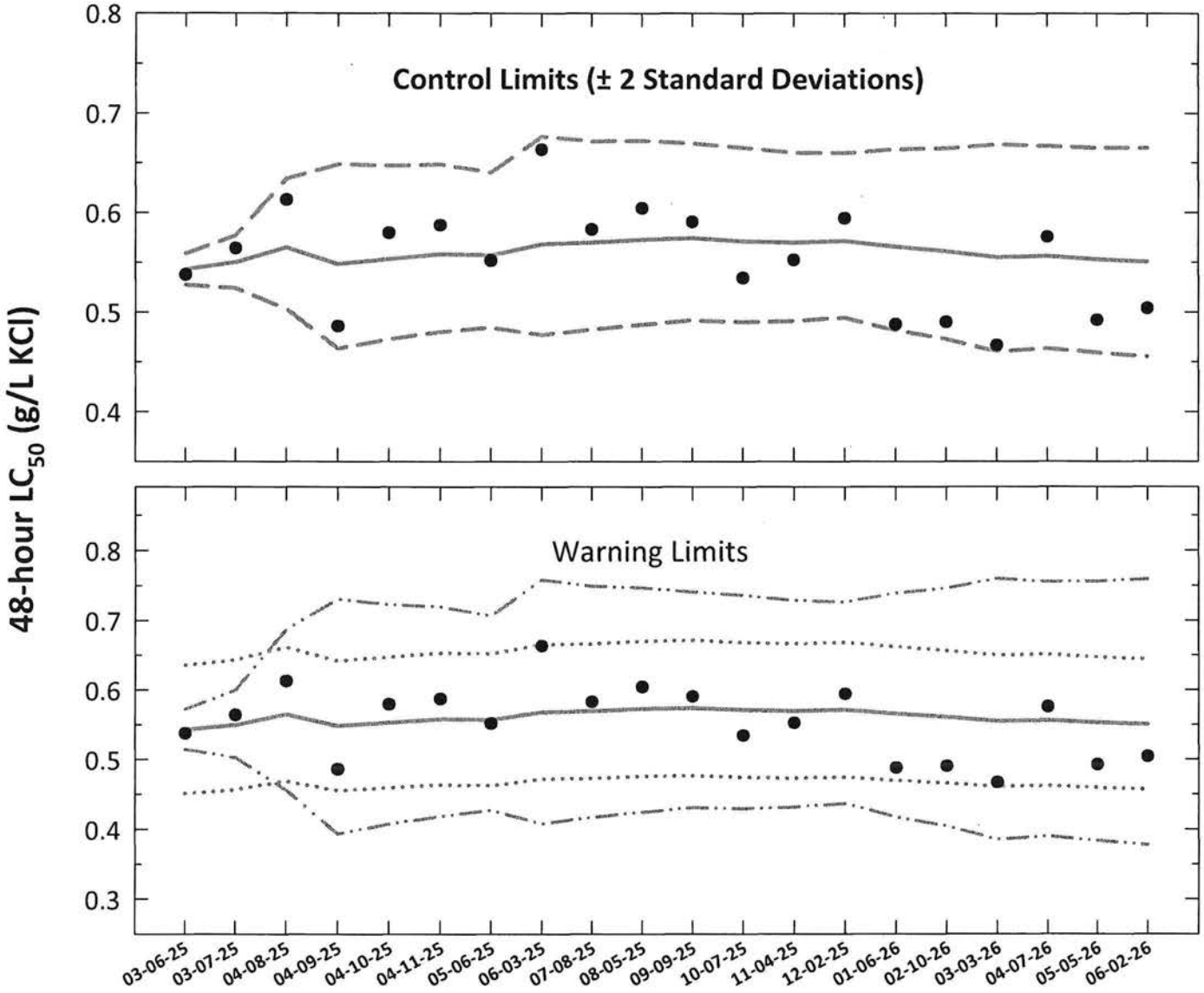
Point	Probits	mg/L	95% Fiducial Limits	
EC01	2.674	301.181	214.163	354.644
EC05	3.355	347.793	268.301	395.842
EC10	3.718	375.522	302.067	420.4
EC15	3.964	395.469	326.864	438.299
EC20	4.158	412.076	347.7	453.479
EC25	4.326	426.877	366.31	467.328
EC40	4.747	466.575	415.495	506.857
EC50	5.000	492.214	445.738	535.182
EC60	5.253	519.261	475.492	568.288
EC75	5.674	567.551	522.511	636.204
EC80	5.842	587.937	540.367	667.901
EC85	6.036	612.625	560.832	708.258
EC90	6.282	645.167	586.354	764.25
EC95	6.645	696.606	624.395	858.142
EC99	7.326	804.415	698.707	1072.34



Dose-Response Plot



Americamysis (Mysidopsis) bahia
Acute Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.



Test date

- ● **48-hour LC_{50}** = median lethal concentration. An estimation of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).
- ——— **Central Tendency** (mean logarithmic LC_{50} converted to anti-logarithmic values)
- – – – **Control Limits** (mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values)
- —·—·— **Laboratory Warning Limits** (mean logarithmic LC_{50} ± 2 coefficent of variations converted to anti-logarithmic values)
- ····· **USEPA Warning Limits** (mean logarithmic $LC_{50} \pm S_{A.10}$ converted to anti-logarithmic values, $S_{A.10}$ = 10th percentile of CVs reported nationally by USEPA)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia
Acute Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.

Test number	Test date	48-hour LC_{50} ToxCal Determination (g/L KCl)	Log_{10} Conversion			Anti-logarithmic Values (g/L KCl)						
			48-hour LC_{50}	CT	S	CT	Control Limits		Laboratory Calculated CV Warning Limits		10th Percentile CV Warning Limits	
							CT - 2S	CT + 2S	CT - 2CV	CT + 2CV	CT - $S_{A.10}$	CT + $S_{A.10}$
1	**03-06-25**	**0.5374**	-0.2697	-0.2652	0.0063	0.5430	0.5275	0.5588	0.5145	0.5722	0.4506	0.6353
2	**03-07-25**	**0.5640**	-0.2487	-0.2597	0.0105	0.5499	0.5239	0.5772	0.5026	0.5995	0.4564	0.6434
3	**04-08-25**	**0.6129**	-0.2126	-0.2480	0.0251	0.5650	0.5034	0.6342	0.4559	0.6874	0.4689	0.6610
4	**04-09-25**	**0.4860**	-0.3134	-0.2610	0.0364	0.5482	0.4635	0.6484	0.3937	0.7310	0.4550	0.6414
5	**04-10-25**	**0.5796**	-0.2369	-0.2570	0.0341	0.5533	0.4730	0.6473	0.4082	0.7231	0.4593	0.6474
6	**04-11-25**	**0.5872**	-0.2312	-0.2533	0.0326	0.5581	0.4803	0.6484	0.4187	0.7200	0.4632	0.6529
7	**05-06-25**	**0.5517**	-0.2583	-0.2539	0.0302	0.5573	0.4849	0.6405	0.4273	0.7066	0.4625	0.6520
8	**06-03-25**	**0.6631**	-0.1784	-0.2455	0.0379	0.5681	0.4772	0.6763	0.4082	0.7586	0.4716	0.6647
9	**07-08-25**	**0.5828**	-0.2345	-0.2444	0.0359	0.5696	0.4829	0.6719	0.4174	0.7492	0.4728	0.6664
10	**08-05-25**	**0.6040**	-0.2189	-0.2421	0.0349	0.5726	0.4877	0.6724	0.4242	0.7469	0.4753	0.6700
11	**09-09-25**	**0.5904**	-0.2289	-0.2410	0.0335	0.5741	0.4921	0.6698	0.4312	0.7408	0.4765	0.6717
12	**10-07-25**	**0.5341**	-0.2724	-0.2434	0.0332	0.5709	0.4899	0.6653	0.4291	0.7362	0.4739	0.6680
13	**11-04-25**	**0.5523**	-0.2578	-0.2445	0.0321	0.5696	0.4912	0.6604	0.4320	0.7291	0.4727	0.6664
14	**12-02-25**	**0.5941**	-0.2261	-0.2432	0.0313	0.5712	0.4944	0.6598	0.4368	0.7264	0.4741	0.6683
15	**01-06-26**	**0.4877**	-0.3118	-0.2475	0.0348	0.5656	0.4818	0.6638	0.4175	0.7393	0.4694	0.6617
16	**02-10-26**	**0.4901**	-0.3098	-0.2512	0.0369	0.5608	0.4732	0.6647	0.4045	0.7461	0.4655	0.6562
17	**03-03-26**	**0.4667**	-0.3310	-0.2556	0.0404	0.5551	0.4608	0.6688	0.3852	0.7599	0.4607	0.6495
18	**04-07-26**	**0.5755**	-0.2399	-0.2548	0.0395	0.5562	0.4637	0.6670	0.3900	0.7555	0.4616	0.6507
19	**05-05-26**	**0.4922**	-0.3078	-0.2574	0.0402	0.5528	0.4593	0.6652	0.3837	0.7562	0.4588	0.6468
20	**06-02-26**	**0.5040**	-0.2976	-0.2593	0.0412	0.5505	0.4553	0.6654	0.3776	0.7594	0.4569	0.6440

Note: **48-hour LC_{50}** = 48-hour median lethal concentration. An estimate of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).

CT = Central tendency of the LC_{50} values.

S = Standard deviation of the LC_{50} values.

Control Limits = Mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values.

Warning Limits = Mean logarithmic LC_{50} ± 2CV or $S_{A.10}$ converted to anti-logarithmic values.

$S_{A.10}$ = Standard deviation corresponding to the 10^{th} percentile of CVs reported nationally by USEPA. ($S_{A.10}$ = 0.17).

CV = Coefficient of variation.

Entered and Reviewed by Jim Sumner

ETS

Acute LC_{50} Whole Effluent Toxicity Test, Species: *Americamysis bahia*
EPA-821-R-02-012, Method 2007.0

Americamysis bahia Potassium Chloride Acute Reference Toxicant Test

AbKClAC # 22

Dilution Preparation:

Test concentrations (mg/L KCl)	150	300	450	600	750
mL Stock solution	3.0	6.0	9.0	12	15
mL Dilution water	997	994	991	988	985
Total volume (mL)	1000	1000	1000	1000	1000

A stock solution was prepared by diluting 100 g KCl into 2000 mL deionized water. This 50,000 mg/L KCl stock solution was used to prepare the concentrations evaluated for toxicity.

Stock solution INSS #: 2478

Chemical Analyses:

		Hours		
		0	24	48
Concentration	Analyst	XL	XL	XL
Control, SaltSW	pH (S.U.)	8.00	7.98	7.92
	Dissolved oxygen (mg/L)	8.4	7.9	7.8
	*Salinity (ppt)	25.0	25.5	26.3
	*Alkalinity (mg/L $CaCO_3$)	110		
	*Temperature (°C)	25.0	25.5	25.6
150 mg/L	pH (S.U.)	7.99	8.00	7.93
	Dissolved oxygen (mg/L)	8.5	8.0	7.8
	*Salinity (ppt)	25.4	26.0	26.4
	*Temperature (°C)	25.3	25.2	25.1
300 mg/L	pH (S.U.)	7.99	8.00	7.93
	Dissolved oxygen (mg/L)	8.5	8.0	7.8
	*Salinity (ppt)	25.2	25.5	26.1
	*Temperature (°C)	25.7	25.6	25.7
450 mg/L	pH (S.U.)	7.99	8.00	7.93
	Dissolved oxygen (mg/L)	8.5	7.9	7.8
	*Salinity (ppt)	25.3	26.1	27.0
	*Temperature (°C)	25.6	25.2	25.2
600 mg/L	pH (S.U.)	8.00	7.99	7.91
	Dissolved oxygen (mg/L)	8.5	7.8	7.7
	*Salinity (ppt)	25.4	25.9	26.6
	*Temperature (°C)	25.7	25.1	25.4
750 mg/L	pH (S.U.)	8.00	8.00	7.93
	Dissolved oxygen (mg/L)	8.5	7.8	7.7
	*Salinity (ppt)	25.5	25.7	26.2
	*Temperature (°C)	25.2	25.4	25.4

*Analyst identified for each day, performed pH and dissolved oxygen measurements only. Temperature and salinity performed at the time of test initiation or termination by the analyst performing the toxicity test. Alkalinity performed by the analyst identified on the test specific bench sheet and transcribed to this bench sheet.

Chemical analyses:

Parameter	Reporting limit	Method number	Meter	Serial number
pH	0.1 S.U.	SM 4500-H+ B-2021	Accumet AR20	93312452
Dissolved oxygen	1.0 mg/L	SM 4500-O H-2021	HACH HQ430d Flexi	SN250100050300
Salinity	1.0 ppt	SM 2520 B-2021	YSI PRO30	18D104324
Alkalinity	5.0 mg $CaCO_3$/L	SM 2320 B-2021	Accumet AR20	93312452
Temperature	0.1°C	SM 2550B-2010	Digital Thermometer	13066470

ETS

Acute LC_{50} Whole Effluent Toxicity Test, Species: *Americamysis bahia*
EPA-821-R-02-012, Method 2007.0

Americamysis bahia Potassium Chloride Acute Reference Toxicant Test

AbKClAC # 22

Hours	Date	Feeding		Test Initiation or Termination		Location	Randomizing	SaltSW Batch
		Time	Analyst	Time	Analyst	Incubator/Shelf	Template	
0 Initiation	06-02-26	* 1215	JH	1425	JP	6E	right side	05-27-26A
24	06-03-26			1444	JP			
48 Termination	06-04-26			1440	JP			

*Test organisms were fed in holding 2 to 5 hours prior to test initiation. Test organisms were not fed during the test.

Test Organism Information:

Organism Source:	Aquatic Indicators, Inc.
Batch (AI Batch Ab):	06-01-26
Age (1 to 5 days old):	1-2 DAYS
Date organisms were born:	05-31-26 1200 TO 06-01-26 1130
Average transfer volume:	< 0.25 mL
Transfer bowl information:	pH (S.U.): 8.12
	Temperature (°C) 24.8°C

Survival Data **(number of living organisms):**

Hours	Control		150 mg/L		300 mg/L		450 mg/L		600 mg/L		750 mg/L	
	Replicate		Replicate		Replicate		Replicate		Replicate		Replicate	
	A	B	C	D	E	F	G	H	I	J	K	L
0 Initiation	10	10	10	10	10	10	10	10	10	10	10	10
24	10	10	10	10	10	10	9 12	8 22	4 69	5 52	1 96	3 72
48 Termination	10	10	10	10	10	10	9	7 12	2 72	0 25	0 12	0 32
Mean Survival	100%		100%		100%		80%		10%		0%	

Comment codes: d = dead, u = unhealthy, s = stressed

Statistics:

Method	PROBIT
Lower 95% confidence limit (mg KCl/L)	468.5
Upper 95% confidence limit (mg KCl/L)	539.8
48-hour LC_{50} (mg KCl/L)	504.0

Comments:

Test Reviewed by: JH

Statistical Analyses

Acute Mysid Test-24 Hr Survival

Start Date:	6/2/2026	Test ID:	AbKClAC	Sample ID:	REF-Ref Toxicant
End Date:	6/4/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	DMR-Discharge Monitoring Report
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2
D-Control	1.0000	1.0000
150	1.0000	1.0000
300	1.0000	1.0000
450	0.9000	0.8000
600	0.4000	0.5000
750	0.1000	0.3000

			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20
150	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.830	0.2541	0	20
300	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.830	0.2541	0	20
450	0.8500	0.8500	1.1781	1.1071	1.2490	8.517	2	2.605	2.830	0.2541	3	20
*600	0.4500	0.4500	0.7351	0.6847	0.7854	9.685	2	7.538	2.830	0.2541	11	20
*750	0.2000	0.2000	0.4507	0.3218	0.5796	40.461	2	10.705	2.830	0.2541	16	20

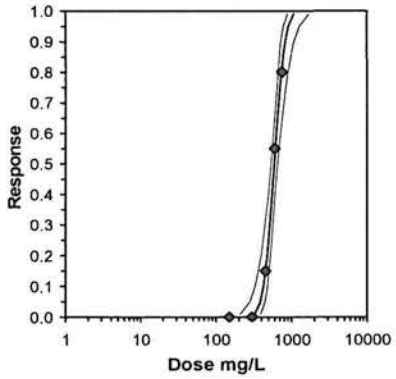
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	450	600	519.615		0.13603	0.13952	0.34118	0.00806	1.3E-04	5, 6
Treatments vs D-Control										

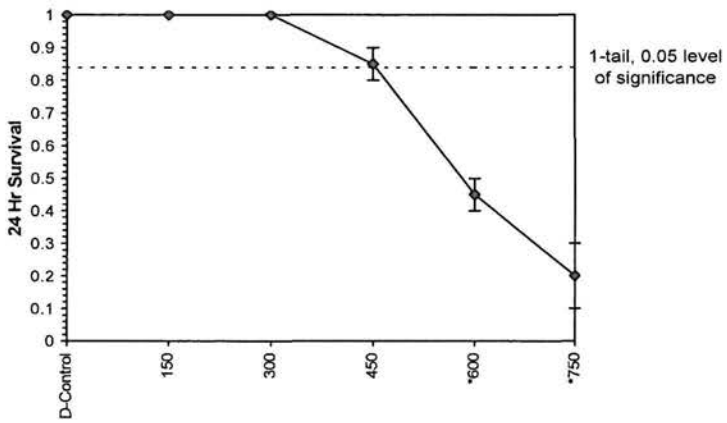
Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	8.84781	1.8705	5.18164	12.514	0	0.20554	7.81472	0.97669	2.7717	0.11302	3
Intercept	-19.523	5.17649	-29.669	-9.3776							
TSCR											

Point	Probits	mg/L	95% Fiducial Limits	
EC01	2.674	322.68	208.814	390.153
EC05	3.355	385.298	280.854	445.136
EC10	3.718	423.504	328.14	478.696
EC15	3.964	451.4	363.804	503.668
EC20	4.158	474.875	394.235	525.316
EC25	4.326	495.986	421.634	545.57
EC40	4.747	553.436	493.606	607.205
EC50	5.000	591.155	536.178	655.458
EC60	5.253	631.445	576.332	715.022
EC75	5.674	704.586	638.422	841.034
EC80	5.842	735.908	662.324	900.453
EC85	6.036	774.179	690.18	976.638
EC90	6.282	825.174	725.645	1083.59
EC95	6.645	906.998	779.837	1266.86
EC99	7.326	1083.01	889.209	1704.94



Dose-Response Plot



Statistical Analyses

Acute Mysid Test-48 Hr Survival

Start Date:	6/2/2026	Test ID:	AbKClAC	Sample ID:	REF-Ref Toxicant
End Date:	6/4/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	DMR-Discharge Monitoring Report
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2
D-Control	1.0000	1.0000
150	1.0000	1.0000
300	1.0000	1.0000
450	0.9000	0.7000
600	0.2000	0.0000
750	0.0000	0.0000

			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20
150	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.3599	0	20
300	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.850	0.3599	0	20
450	0.8000	0.8000	1.1201	0.9912	1.2490	16.280	2	2.312	2.850	0.3599	4	20
*600	0.1000	0.1000	0.3112	0.1588	0.4636	69.269	2	8.718	2.850	0.3599	18	20
750	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2				20	20

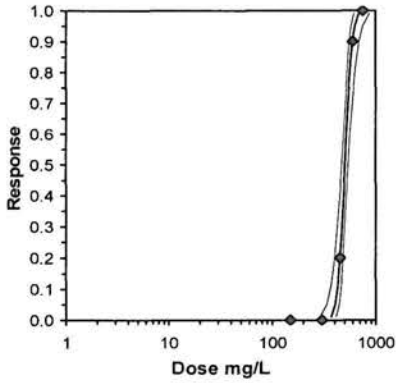
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	450	600	519.615		0.22074	0.2264	0.45452	0.01595	0.00123	4, 5
Treatments vs D-Control										

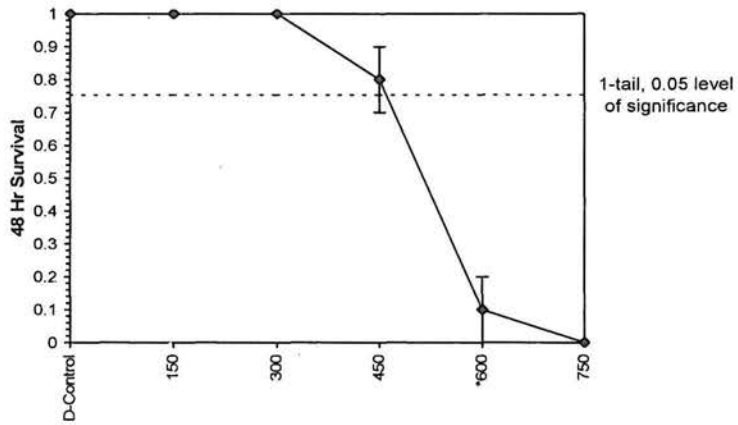
Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	17.2658	3.73884	9.93767	24.5939	0	0.03503	7.81472	0.99827	2.70245	0.05792	3
Intercept	-41.66	10.1236	-61.502	-21.818							
TSCR											

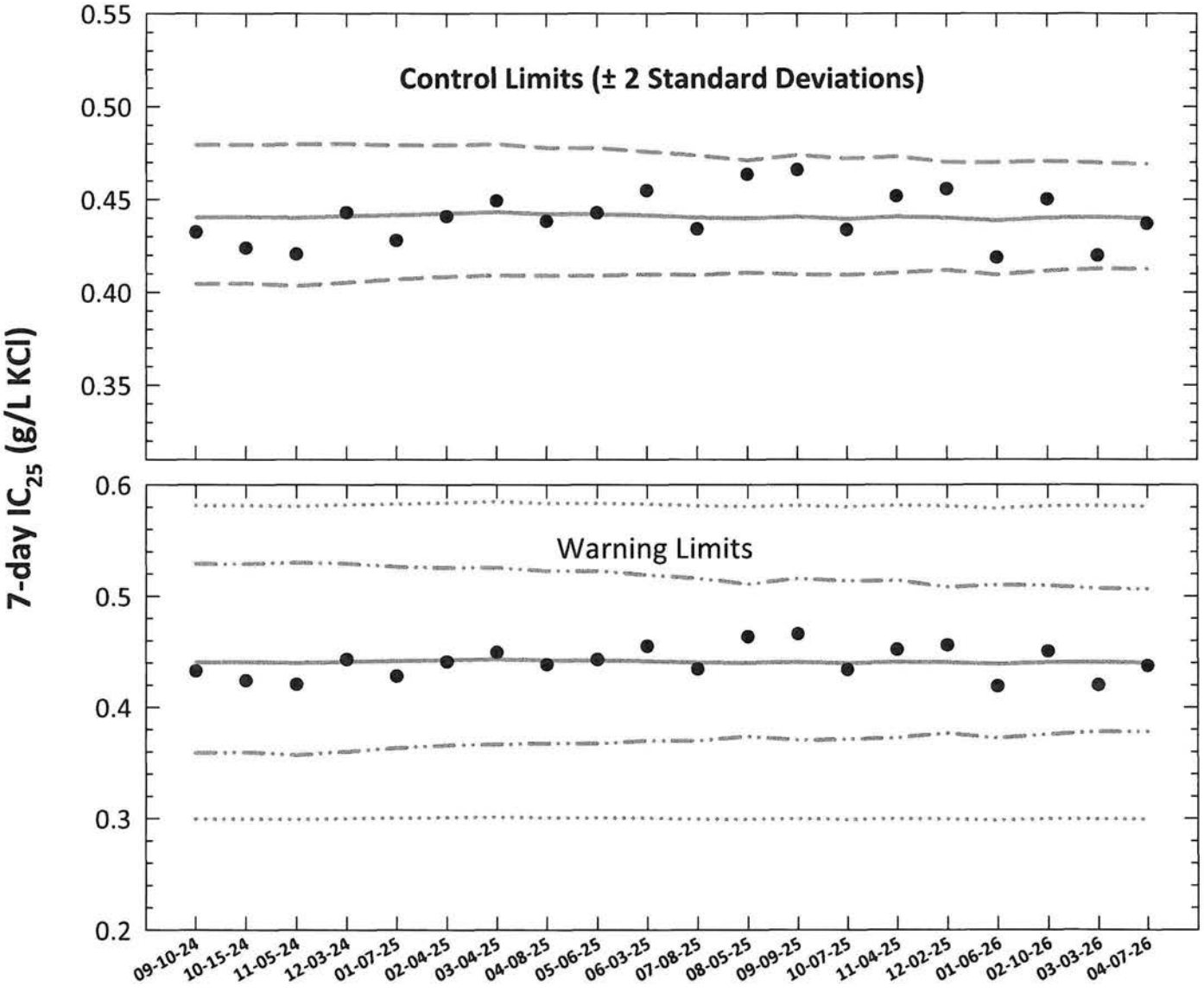
Point	Probits	mg/L	95% Fiducial Limits	
EC01	2.674	369.583	287.63	412.504
EC05	3.355	404.746	335.155	441.878
EC10	3.718	424.839	363.056	459.098
EC15	3.964	438.956	382.777	471.59
EC20	4.158	450.509	398.86	482.186
EC25	4.326	460.663	412.852	491.875
EC40	4.747	487.277	448.099	519.73
EC50	5.000	504.021	468.536	539.763
EC60	5.253	521.341	487.834	562.948
EC75	5.674	551.46	517.155	609.007
EC80	5.842	563.889	528.022	629.803
EC85	6.036	578.731	540.323	655.734
EC90	6.282	597.962	555.437	690.842
EC95	6.645	627.647	577.495	747.816
EC99	7.326	687.363	619.053	870.767



Dose-Response Plot



Americamysis (Mysidopsis) bahia
Chronic Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.



- ● **7-day IC_{25}** = 25% inhibition concentration. An estimation of the potassium chloride concentration which would cause a 25% reduction in *Americamysis* growth (calculated using ToxCalc).
- ——— **Central Tendency** (mean logarithmic IC_{25} converted to anti-logarithmic values)
- – – – **Control Limits** (mean logarithmic IC_{25} ± 2 standard deviations converted to anti-logarithmic values)
- —·—·— **Laboratory Warning Limits** (mean logarithmic IC_{25} ± 2 coefficent of variations converted to anti-logarithmic values)
- ····· **USEPA Warning Limits** (mean logarithmic $IC_{25} \pm S_{A.75}$ converted to anti-logarithmic values, $S_{A.75}$ = 75th percentile of CVs reported nationally by USEPA)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia
Chronic Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.

Test number	Test date	7-day IC_{25} ToxCal Determination (g/L KCl)	Log_{10} Conversion			Anti-logarithmic Values (g/L KCl)						
			7-day IC_{25}	CT	S	CT	Control Limits		Laboratory Calculated CV Warning Limits		75th Percentile CV Warning Limits	
							CT - 2S	CT + 2S	CT - 2CV	CT + 2CV	CT - $S_{A.75}$	CT + $S_{A.75}$
1	**09-10-24**	**0.4325**	-0.3640	-0.3561	0.0185	0.4405	0.4046	0.4796	0.3590	0.5292	0.2995	0.5814
2	**10-15-24**	**0.4238**	-0.3729	-0.3560	0.0184	0.4406	0.4048	0.4795	0.3594	0.5289	0.2996	0.5815
3	**11-05-24**	**0.4206**	-0.3761	-0.3565	0.0188	0.4401	0.4036	0.4798	0.3572	0.5304	0.2993	0.5809
4	**12-03-24**	**0.4428**	-0.3538	-0.3555	0.0184	0.4411	0.4053	0.4800	0.3600	0.5294	0.2999	0.5822
5	**01-07-25**	**0.4280**	-0.3686	-0.3549	0.0177	0.4417	0.4071	0.4792	0.3634	0.5266	0.3003	0.5830
6	**02-04-25**	**0.4408**	-0.3558	-0.3542	0.0173	0.4424	0.4085	0.4792	0.3657	0.5255	0.3008	0.5840
7	**03-04-25**	**0.4493**	-0.3474	-0.3534	0.0173	0.4432	0.4093	0.4799	0.3667	0.5260	0.3014	0.5850
8	**04-08-25**	**0.4382**	-0.3583	-0.3545	0.0169	0.4421	0.4091	0.4777	0.3674	0.5228	0.3006	0.5835
9	**05-06-25**	**0.4428**	-0.3538	-0.3545	0.0169	0.4421	0.4091	0.4778	0.3674	0.5228	0.3006	0.5836
10	**06-03-25**	**0.4548**	-0.3422	-0.3550	0.0162	0.4415	0.4098	0.4757	0.3696	0.5190	0.3002	0.5828
11	**07-08-25**	**0.4342**	-0.3624	-0.3562	0.0159	0.4404	0.4093	0.4738	0.3699	0.5162	0.2995	0.5813
12	**08-05-25**	**0.4634**	-0.3340	-0.3567	0.0149	0.4398	0.4107	0.4710	0.3736	0.5108	0.2991	0.5806
13	**09-09-25**	**0.4660**	-0.3316	-0.3559	0.0158	0.4407	0.4097	0.4740	0.3705	0.5162	0.2997	0.5817
14	**10-07-25**	**0.4336**	-0.3629	-0.3570	0.0155	0.4396	0.4093	0.4721	0.3708	0.5135	0.2989	0.5802
15	**11-04-25**	**0.4518**	-0.3451	-0.3557	0.0154	0.4408	0.4107	0.4732	0.3724	0.5143	0.2998	0.5819
16	**12-02-25**	**0.4557**	-0.3414	-0.3564	0.0143	0.4401	0.4121	0.4701	0.3764	0.5082	0.2993	0.5810
17	**01-06-26**	**0.4187**	-0.3781	-0.3579	0.0150	0.4387	0.4094	0.4700	0.3720	0.5100	0.2983	0.5790
18	**02-10-26**	**0.4500**	-0.3468	-0.3564	0.0146	0.4401	0.4116	0.4706	0.3753	0.5094	0.2993	0.5809
19	**03-03-26**	**0.4198**	-0.3770	-0.3561	0.0140	0.4404	0.4129	0.4698	0.3779	0.5071	0.2995	0.5814
20	**04-07-26**	**0.4370**	-0.3595	-0.3566	0.0140	0.4400	0.4126	0.4692	0.3777	0.5064	0.2992	0.5807

Note:

7-day IC_{25} = 25% inhibition concentration. An estimation of the potassium chloride concentration that would cause a 25% reduction in *Americamysis* growth (calculated using ToxCalc).

CT = Central tendency of the IC_{25} values.

S = Standard deviation of the IC_{25} values.

Control Limits = Mean logarithmic IC_{25} ± 2 standard deviations converted to anti-logarithmic values.

Warning Limits = Mean logarithmic IC_{25} ± 2CV or $S_{A.75}$ converted to anti-logarithmic values.

$S_{A.75}$ = Standard deviation corresponding to the 75th percentile of CVs reported nationally by USEPA ($S_{A.75}$ = 0.32).

CV = Coefficient of variation.

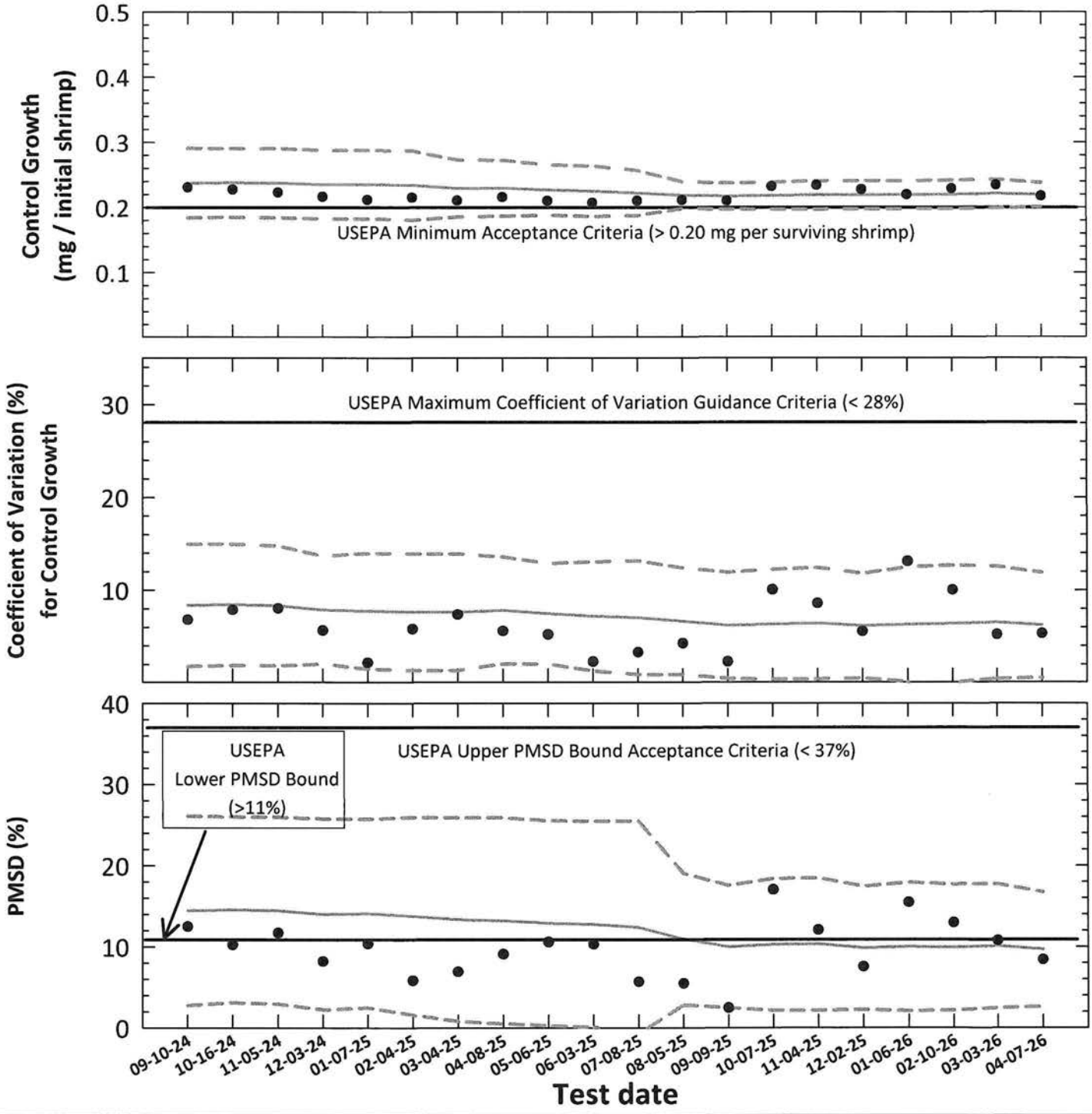
Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia

Chronic Reference Toxicant Testing, Test Acceptability Criteria

Organism Source: Aquatic Indicators, Inc.



- **Control Growth, Coefficient of Variation (CV) or Percent Minimum Significant Difference (PMSD)**
  PMSD is the percent minimum significant difference between the control and treatment that can be declared statistically significant. The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.

——— **Central Tendency** (mean Control Growth, CV or PMSD)

– – – **95% Confidence Interval** (mean Control Growth, CV or PMSD ± 2 Standard Deviations)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia
Chronic Reference Toxicant Testing, Test Acceptability Criteria
Source: Aquatic Indicators, Inc.

Test number	Test date	ToxCal Determination					Control Growth (mg/initial shrimp)			Control Growth CV (%)			Test PMSD (%)		
		Control Survival	Control Growth		Test			95% Confidence Interval			95% Confidence Interval			95% Confidence Interval	
		(%)	Mean (mg/initial shrimp)	CV (%)	MSD	PMSD (%)	CT	CT - 2S	CT + 2S	CT	CT - 2S	CT + 2S	CT	CT - 2S	CT + 2S
1	09-10-24	100	0.231	6.8	0.0288	12.5	0.238	0.184	0.291	8.4	1.8	15.0	14.4	2.8	26.1
2	10-16-24	100	0.228	7.9	0.0233	10.2	0.238	0.185	0.291	8.5	1.9	15.0	14.6	3.1	26.0
3	11-05-24	100	0.223	8.0	0.0261	11.7	0.237	0.184	0.291	8.3	1.9	14.8	14.4	2.9	26.0
4	12-03-24	100	0.216	5.7	0.0177	8.2	0.235	0.182	0.288	7.9	2.0	13.7	14.0	2.2	25.8
5	01-07-25	100	0.212	2.2	0.0219	10.4	0.235	0.183	0.288	7.7	1.5	14.0	14.1	2.5	25.7
6	02-04-25	100	0.215	5.8	0.0125	5.8	0.234	0.181	0.287	7.6	1.3	13.9	13.7	1.5	25.9
7	03-04-25	100	0.211	7.4	0.0146	6.9	0.229	0.185	0.273	7.6	1.3	13.9	13.3	0.8	25.9
8	04-08-25	100	0.216	5.6	0.0196	9.1	0.230	0.187	0.273	7.8	2.1	13.6	13.2	0.5	25.9
9	05-06-25	100	0.210	5.2	0.0222	10.6	0.227	0.188	0.265	7.5	2.0	12.9	12.9	0.3	25.5
10	06-03-25	100	0.207	2.3	0.0213	10.3	0.225	0.186	0.264	7.2	1.3	13.1	12.8	0.1	25.4
11	07-08-25	100	0.210	3.3	0.0119	5.7	0.222	0.188	0.257	7.0	0.9	13.2	12.4	-0.7	25.5
12	08-05-25	100	0.211	4.3	0.0115	5.5	0.219	0.198	0.239	6.6	0.9	12.4	10.9	2.8	19.0
13	09-09-25	100	0.210	2.3	0.0052	2.5	0.218	0.198	0.237	6.2	0.5	11.9	10.0	2.5	17.5
14	10-07-25	100	0.232	10.0	0.0395	17.0	0.218	0.197	0.239	6.3	0.4	12.2	10.2	2.1	18.4
15	11-04-25	100	0.234	8.6	0.0282	12.1	0.219	0.197	0.241	6.4	0.4	12.4	10.3	2.1	18.4
16	12-02-25	100	0.228	5.6	0.0171	7.5	0.219	0.197	0.241	6.2	0.5	11.8	9.8	2.2	17.4
17	01-06-26	100	0.220	13.1	0.0339	15.4	0.219	0.198	0.241	6.3	0.1	12.5	10.0	2.0	17.9
18	02-10-26	100	0.229	10.0	0.0296	12.9	0.220	0.198	0.242	6.4	0.0	12.7	9.9	2.1	17.6
19	03-03-26	100	0.234	5.2	0.0252	10.8	0.221	0.199	0.243	6.5	0.5	12.6	10.1	2.4	17.7
20	04-07-26	100	0.218	5.3	0.0183	8.4	0.220	0.201	0.238	6.2	0.6	11.9	9.7	2.6	16.7

Note:

Control Survival = USEPA minimum test acceptability criteria ≥ 80% survival.

Control Mean Growth = USEPA minimum test acceptability criteria ≥ 0.20 mg/surviving shrimp.

CV = Coefficient of variation for control growth.
USEPA maximum CV guidance criteria (90th percentile) < 28%

MSD = Minimum significant difference.

PMSD = Percent minimum significant difference.
PMSD is a measure of test precision. The PMSD is the minimum percent difference between the control and treatment that can be declared statistically significant in a whole effluent toxicity test.
Lower PMSD bound determined by USEPA (10th percentile) > 11%.
The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.
Upper PMSD bound acceptance criteria determined by USEPA (90th percentile) < 37%.

CT = Central tendency of the growth, CV or PMSD values.

S = Standard deviation of the growth, CV or PMSD values.

Entered and Reviewed by Jim Surmer

ETS
Environmental Testing Solutions, Inc.

Potassium Chloride Chronic Reference Toxicant Test (EPA-821-R-02-014, Method 1007.0)

Species: *Americamysis (Mysidopsis) bahia*

AbKClCR Test Number: 274

Dilution preparation information:						***Comments:***
KCl Stock INSS number:		INSS 2465				
Stock preparation:		50 g KCl/L: Dissolve 50 g KCl in 1-L Deionized water				
Dilution prep (mg/L)	250	375	500	750	1000	
Stock volume (mL)	10	15	20	30	40	
Diluent volume (mL)	1990	1985	1980	1970	1960	
Total volume (mL)	2000	2000	2000	2000	2000	

Test organism information:		***Test information:***	
Organism age:	7-days old	Randomizing template:	Grey
Date and times organisms were born between:	03-31-26 1200 to 04-01-26 1130	Incubator number and shelf location:	SB
Organism source:	AI Batch Ab: 04-01-26	*Artemia* CHM number:	CHM1432
		Drying information for weight determination:	
Transfer bowl information:	pH = 8.00 S.U. Temperature = 25.1 °C	Date / Time in oven:	04.14.26 1155
		*Initial oven temperature:	60°C
Average transfer volume:	< 0.25 mL	Date / Time out of oven:	04.15.26 1155
		*Final oven temperature:	60°C
		Total drying time:	24 HOURS

*60°C Oven, Thermometer SN: 14-985B5

Daily feeding and renewal information:

Day	Date	Morning feeding		Afternoon feeding		Test initiation, renewal, or termination		Salt SW batch used
		Time	Analyst	Time	Analyst	Time	Analyst	
0	04-07-26	1125	JH	1420	JH	1240	JH	03-30-26B
1	04-08-26	0500	JH	1400	JH	0830	JH	↓
2	04-09-26	0500	JH	1730	JH	0915	JH	04-08-26 A
3	04-10-26	0500	JH	1100	JH	0800	JH	04-08-26 B
4	04-11-26	0600	JH	1235	JH	0940	JH	04.09.26
5	04-12-26	0600	JH	1100	JH	0840	JH	04.10.26
6	04-13-26	0600	JH	1100	JH	0856	JH	↓
7	04-14-26					1040	JH	

Chemical analyses:

Parameter	Reporting Limit	Method number	Meter	Serial number
pH	0.1 S.U.	SM 4500-H+ B-2021	Accumet AR20	93312452
Dissolved Oxygen (D.O.)	1.0 mg/L	SM 4500-O H-2021	HACH HQ430d Flexi	SN250100050300
Salinity	1.0 ppt	SM 2520 B-2021	YSI PRO30	18D104324
Alkalinity	5.0 mg $CaCO_3$/L	SM 2320 B-2021	Accumet AR20	93312452
Temperature	0.1 °C	SM 2550B-2010	Digital Thermometer	13066685

Control information:		Acceptance criteria	***Summary of test endpoints:***	
% Mortality:	07.	≤ 20%	**7-day LC_{50}** (mg/L KCl)	523.9
Average weight per initial shrimp:	0.218		**NOEC** (mg/L KCl)	375
Average weight per surviving shrimp:	0.218	≥ 0.20 mg/shrimp	**LOEC** (mg/L KCl)	500
			ChV (mg/L KCl)	433.0
			IC_{25} (mg/L KCl)	437.0

Environmental Testing Solutions, Inc.

AbKClCR Test Number: **274**

Survival and Growth Data

Day	CONTROL								250 mg KCl/L							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
3	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
4	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
5	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
6	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
7	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
# females with eggs in brood sac																
# females with developing ova in oviducts																
# immature females																
# males																04.14.26
*A = Pan weight (mg) Tray color code: Turquoise Analyst: XL Date: 04.13.26	9.92	10.43	10.25	13.82	13.57	13.81	12.99	13.97	10.11	9.40	10.08	10.67	10.42	9.60	9.49	10.34
*B = Pan + Shrimp weight (mg) Analyst: XL Date: 04.21.26	11.03	11.61	11.40	14.89	14.57	14.85	14.07	15.04	11.20	10.49	11.28	11.72	11.60	10.61	10.52	11.54
C = Shrimp weight (mg) = B – A Hand calculated Analyst: XL	1.11	1.18	1.15	1.07	1.00	1.04	1.08	1.07	1.09	1.09	1.20	1.05	1.18	1.01	1.03	1.20
Weight per initial number of shrimp (mg) = C / Initial number of shrimp Hand calculated Analyst: XL	0.222	0.236	0.230	0.214	0.200	0.208	0.216	0.214	0.218	0.218	0.240	0.210	0.236	0.202	0.206	0.240
	Average weight per initial number of shrimp (mg) 0.218								Average weight per initial number of shrimp (mg) 0.221				Percent reduction from control (%) -1.7%			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

FTS
Environmental Testing Solutions, Inc.

AbKClCR Test Number: 274

Survival and Growth Data

Day	375 mg KCl/L								500 mg KCl/L							
	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF
0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
3	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	4 1d
4	S	S	S	S	S	S	S	S	S	4 1d2	S	S	S	4 1d	4 1d	4
5	S	S	S	S	S	S	S	S	4 1d	3 1d	4 1d	4 1d	3 2d	4	3 1d2	2 2d
6	S	S	S	S	S	S	S	S	4	3	4	4	3	4	3	2
7	S	S	S	S	S	S	S	S	3 1d	2 1d	3 1d	3 1d	3	3 1d	3	2
# females with eggs in brood sac																
# females with developing ova in oviducts																
# immature females																
# males																1 09.14.26
*A = Pan weight (mg) Tray color code: Turquoise Analyst: XL Date: 03.17.26	13.42	14.25	12.30	13.49	10.30	11.85	10.52	15.58	12.44	12.25	8.89	11.16	13.16	12.31	13.15	15.05
*B = Pan + Shrimp weight (mg) Analyst: JL Date: 09.21.26	14.47	15.40	13.39	14.71	11.47	13.04	11.72	16.77	13.07	12.71	9.41	11.76	13.83	12.85	13.84	15.34
C = Shrimp weight (mg) = B – A Hand calculated Analyst: JL	1.05	1.15	1.09	1.22	1.17	1.19	1.20	1.19	0.63	0.46	0.52	0.60	0.67	0.57	0.69	0.29
Weight per initial number of shrimp (mg) = C / Initial number of shrimp Hand calculated Analyst: JL	0.210	0.230	0.218	0.244	0.234	0.238	0.240	0.238	0.126	0.092	0.104	0.120	0.134	0.114	0.138	0.058
	Average weight per initial number of shrimp (mg) 0.232				Percent reduction from control (%) -6.47.				Average weight per initial number of shrimp (mg) 0.111				Percent reduction from control (%) 49.17			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

Environmental Testing Solutions, Inc.

AbKClCR Test Number: **274**

Survival and Growth Data

Day	750 mg KCl/L								1000 mg KCl/L							
	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV
0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol
2																
3																
4																
5																
6																
7																
# females with eggs in brood sac																
# females with developing ova in oviducts																
# immature females																
# males																
*A = Pan weight (mg) Tray color code: _____ Analyst: _____ Date: _____																
*B = Pan + Shrimp weight (mg) Analyst: _____ Date: _____																
C = Shrimp weight (mg) = B – A Hand calculated Analyst: _____															04.01.11	
Weight per initial number of shrimp (mg) = C / initial number of shrimp Hand calculated Analyst: _____	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Average weight per initial number of shrimp (mg) 0				Percent reduction from control (%) 100%				Average weight per initial number of shrimp (mg) 0				Percent reduction from control (%) 100%			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

Environmental Testing Solutions, Inc.

Americamysis bahia Chronic Reference Toxicant Test
EPA-821-R-02-014, Method 1007.0

Quality Control
Verification of Data Entry, Calculations, and Statistical Analyses

Test number: 27

Test dates: April 07-14, 202

Concentration (mg/L KCl)	Replicate	Initial number of larvae	Final number of larvae	A = Pan weight (mg)	B = Pan + Larvae weight (mg)	Larvae weight (mg) = B - A	Weight / Initial number of larvae (mg)	Mean survival (%)	Mean weight (mg)	Coefficient of variation (%)	Percent reduction from control (%)
Control	A	5	5	9.92	11.03	1.11	0.222	100.0	0.218	5.3	Not applicable
	B	5	5	10.43	11.61	1.18	0.236				
	C	5	5	10.25	11.40	1.15	0.230				
	D	5	5	13.82	14.89	1.07	0.214				
	E	5	5	13.57	14.57	1.00	0.200				
	F	5	5	13.81	14.85	1.04	0.208				
	G	5	5	12.99	14.07	1.08	0.216				
	H	5	5	13.97	15.04	1.07	0.214				
250	I	5	5	10.11	11.20	1.09	0.218	100.0	0.221	7.0	-1.7
	J	5	5	9.40	10.49	1.09	0.218				
	K	5	5	10.08	11.28	1.20	0.240				
	L	5	5	10.67	11.72	1.05	0.210				
	M	5	5	10.42	11.60	1.18	0.236				
	N	5	5	9.60	10.61	1.01	0.202				
	O	5	5	9.49	10.52	1.03	0.206				
	P	5	5	10.34	11.54	1.20	0.240				
375	Q	5	5	13.42	14.47	1.05	0.210	100.0	0.232	5.1	-6.4
	R	5	5	14.25	15.40	1.15	0.230				
	S	5	5	12.30	13.39	1.09	0.218				
	T	5	5	13.49	14.71	1.22	0.244				
	U	5	5	10.30	11.47	1.17	0.234				
	V	5	5	11.85	13.04	1.19	0.238				
	W	5	5	10.52	11.72	1.20	0.240				
	X	5	5	15.58	16.77	1.19	0.238				
500	Y	5	3	12.44	13.07	0.63	0.126	55.0	0.111	23.6	49.1
	Z	5	2	12.25	12.71	0.46	0.092				
	AA	5	3	8.89	9.41	0.52	0.104				
	BB	5	3	11.16	11.76	0.60	0.120				
	CC	5	3	13.16	13.83	0.67	0.134				
	DD	5	3	12.31	12.88	0.57	0.114				
	EE	5	3	13.15	13.84	0.69	0.138				
	FF	5	2	15.05	15.34	0.29	0.058				
750	GG	5	0	0.00	0.00	0.00	0.000	0.0	0.000	0.0	100.0
	HH	5	0	0.00	0.00	0.00	0.000				
	II	5	0	0.00	0.00	0.00	0.000				
	JJ	5	0	0.00	0.00	0.00	0.000				
	KK	5	0	0.00	0.00	0.00	0.000				
	LL	5	0	0.00	0.00	0.00	0.000				
	MM	5	0	0.00	0.00	0.00	0.000				
	NN	5	0	0.00	0.00	0.00	0.000				
1000	OO	5	0	0.00	0.00	0.00	0.000	0.0	0.000	0.0	100.0
	PP	5	0	0.00	0.00	0.00	0.000				
	QQ	5	0	0.00	0.00	0.00	0.000				
	RR	5	0	0.00	0.00	0.00	0.000				
	SS	5	0	0.00	0.00	0.00	0.000				
	TT	5	0	0.00	0.00	0.00	0.000				
	UU	5	0	0.00	0.00	0.00	0.000				
	VV	5	0	0.00	0.00	0.00	0.000				

Dunnett's MSD value: 0.0183

PMSD: 8.4

MSD = Minimum Significant Difference

PMSD = Percent Minimum Significant Difference

PMSD is a measure of test precision. The PMSD is the minimum percent difference between the control and treatment that can be declared statistically significant in a whole effluent toxicity test.

Lower PMSD bound determined by USEPA (10th percentile) = 11%.
Upper PMSD bound determined by USEPA (90th percentile) = 37%.
Lower and upper PMSD bounds were determined from the 10th and 90th percentile, respectively, of PMSD data from EPA's WET Interlaboratory Variability Study (USEPA, 2001a; USEPA, 2001b). The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.

USEPA. 2001a, 2001b. Final Report: Interlaboratory Variability Study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods, Volumes 1 and 2-Appendix. EPA-821-B-01-004 and EPA-821-B-01-005. US Environmental Protection Agency, Cincinnati, OH.

Reviewed and Reviewed by Jim Bonner

ETS Environmental Testing Solutions, Inc.

Statistical Analyses

Entered and Reviewed by Jim Sumner

Mysid Survival and Growth Test-7 Day Survival

Start Date:	4/7/2026	Test ID:	AbKCICR	Sample ID:	REF-Ref Toxicant
End Date:	4/14/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	SWCHR-EPA-821-R-02-014	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2	3	4	5	6	7	8
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
250	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
375	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
500	0.6000	0.4000	0.6000	0.6000	0.6000	0.6000	0.6000	0.4000
750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

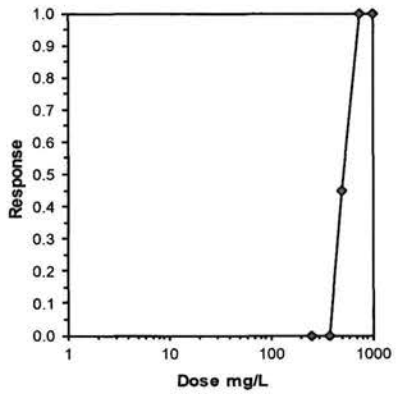
			Transform: Arcsin Square Root					Rank	1-Tailed	Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Resp	Number
D-Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	8			0	40
250	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	8	68.00	48.00	0	40
375	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	8	68.00	48.00	0	40
*500	0.5500	0.5500	0.8357	0.6847	0.8861	11.153	8	36.00	48.00	18	40
750	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	8			40	40
1000	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	8			40	40

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.55437	0.904	-2.4246	7.66092
Equality of variance cannot be confirmed				

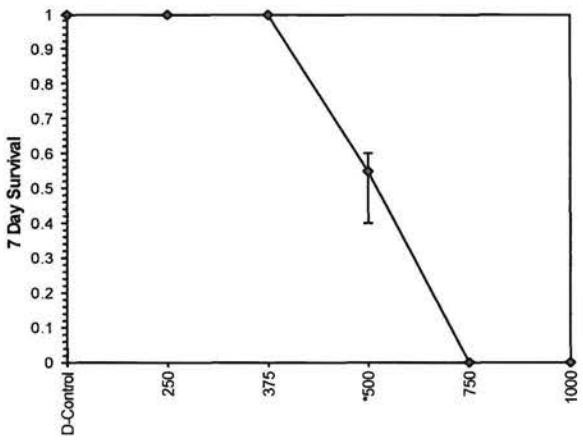
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	375	500	433.013	
Treatments vs D-Control				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	523.94	496.14	553.30
5.0%	523.31	492.54	556.00
10.0%	522.68	488.20	559.59
20.0%	521.43	475.93	571.27
Auto-0.0%	523.94	496.14	553.30



Dose-Response Plot



ETS
Environmental Testing Solutions, Inc.

Statistical Analyses

Entered and Reviewed by Jim Sumner

Mysid Survival and Growth Test-Growth-Weight

Start Date:	4/7/2026	Test ID:	AbKCICR	Sample ID:	REF-Ref Toxicant
End Date:	4/14/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	SWCHR-EPA-821-R-02-014	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2	3	4	5	6	7	8
D-Control	0.2220	0.2360	0.2300	0.2140	0.2000	0.2080	0.2160	0.2140
250	0.2180	0.2180	0.2400	0.2100	0.2360	0.2020	0.2060	0.2400
375	0.2100	0.2300	0.2180	0.2440	0.2340	0.2380	0.2400	0.2380
500	0.1260	0.0920	0.1040	0.1200	0.1340	0.1140	0.1380	0.0580
750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

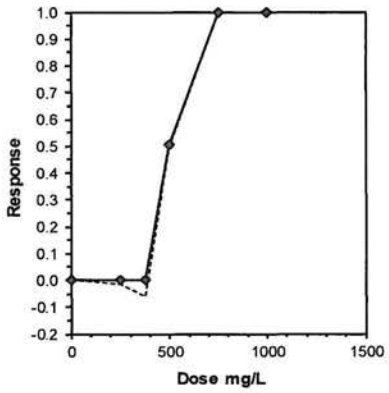
			Transform: Untransformed						1-Tailed		Isotonic	
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	0.2175	1.0000	0.2175	0.2000	0.2360	5.334	8				0.2234	1.0000
250	0.2213	1.0172	0.2213	0.2020	0.2400	6.984	8	-0.574	2.799	0.0183	0.2234	1.0000
375	0.2315	1.0644	0.2315	0.2100	0.2440	5.074	8	-2.145	2.799	0.0183	0.2234	1.0000
500	0.1108	0.5092	0.1108	0.0580	0.1380	23.623	8				0.1108	0.4957
750	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	8				0.0000	0.0000
1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	8				0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.95214	0.884	-0.0728	-1.042
Bartlett's Test indicates equal variances (p = 0.70)	0.72701	9.21035		

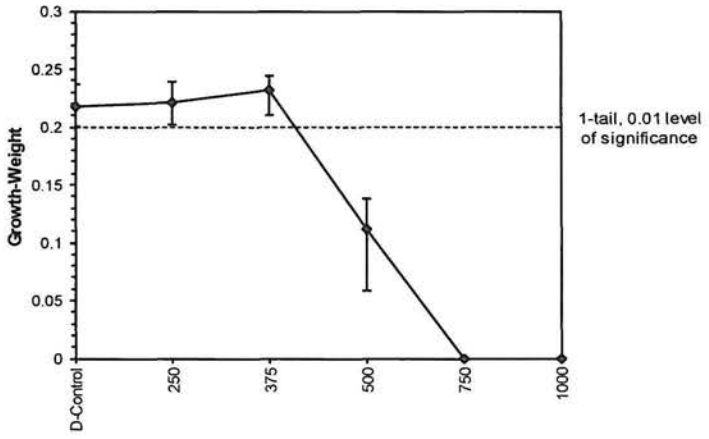
Hypothesis Test (1-tail, 0.01)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	375	>375			0.01827	0.08399	0.00042	0.00017	0.10924	2, 21
Treatments vs D-Control										

Linear Interpolation (200 Resamples)

Point	mg/L	SD	95% CL		Skew
IC05	387.39	1.14	384.89	389.21	-0.6626
IC10	399.79	2.03	395.57	403.42	-0.0325
IC15	412.18	2.99	406.44	417.63	0.0345
IC20	424.57	3.97	417.49	431.84	0.0531
IC25	436.97	4.96	428.14	446.09	0.0627
IC40	474.15	7.95	460.02	489.69	0.0785
IC50	498.94	12.98	481.28	528.58	0.4419



Dose-Response Plot



Environmental Testing Solutions, Inc.

AbKClCR Test Number: **274**

Daily Chemistry:

Temperatures performed at the time of test initiation, renewal or termination by the analyst identified in the Daily Renewal Information table located on Page 1. Alkalinity performed by the analyst identified on the bench sheet specific for this analysis and transcribed to this bench sheet.

Conc.	Parameter	Day (Analyst identified for each day, performed pH, D.O. and salinity measurements only.) 0		1		2	
	Analyst	XL	XL	XL	XL	XL	XL
CONTROL, Salt SW	**pH** (S.U.)	8.04	8.02	8.10	7.97	8.10	7.99
	DO (mg/L)	8.3	8.0	8.3	8.0	8.3	8.0
	Salinity (ppt)	25.0	25.0	25.0	25.0	25.0	25.0
	Alkalinity (mg $CaCO_3$/L)	110				110	
	Temperature (°C)	25.1	25.3	25.2	25.4	25.2	25.3
250 mg KCl/L	**pH** (S.U.)	8.06	8.03	8.07	7.96	8.07	7.97
	DO (mg/L)	8.3	8.1	8.2	8.0	8.2	8.0
	Salinity (ppt)	25.1	25.2	25.1	25.1	25.0	25.0
	Temperature (°C)	25.2	25.1	25.1	25.6	25.2	25.2
375 mg KCl/L	**pH** (S.U.)	8.06	8.03	8.07	7.96	8.06	7.98
	DO (mg/L)	8.4	8.1	8.2	7.9	8.3	8.0
	Salinity (ppt)	25.2	25.2	25.2	25.2	25.2	25.3
	Temperature (°C)	25.2	25.1	25.1	25.6	25.3	25.2
500 mg KCl/L	**pH** (S.U.)	8.07	8.04	8.04	7.97	8.06	7.97
	DO (mg/L)	8.4	8.0	8.1	8.0	8.3	7.8
	Salinity (ppt)	25.3	25.4	25.3	25.3	25.2	25.4
	Temperature (°C)	25.2	25.1	25.2	25.5	25.2	25.2
750 mg KCl/L	**pH** (S.U.)	8.07	8.02				
	DO (mg/L)	8.4	7.9				
	Salinity (ppt)	25.4	25.6				
	Temperature (°C)	25.2	25.2				
1000 mg KCl/L	**pH** (S.U.)	8.07	8.03				
	DO (mg/L)	8.4	7.9				
	Salinity (ppt)	25.6	25.4				
	Temperature (°C)	25.4	25.2				
		Initial	**Final**	**Initial**	**Final**	**Initial**	**Final**

Environmental Testing Solutions, Inc.

AbKClCR Test Number: 274

Conc.	Parameter	Day (Analyst identified for each day, performed pH, D.O. and salinity measurements only.) 3		4		5		6	
	Analyst	XL	BSL	BSL	BSL	BSL	XL	XL	M
CONTROL, Salt SW	pH (S.U.)	8.06	7.93	8.06	7.94	8.08	7.93	8.07	7.57
	DO (mg/L)	8.2	8.0	8.3	7.6	8.2	7.9	8.3	5.3
	Salinity (ppt)	25.0	25.1	25.0	24.9	25.1	25.2	25.0	25.1
	Alkalinity (mg $CaCO_3$/L)	120		120		120		→	
	Temperature (°C)	25.1	25.6	25.2	25.5	25.2	25.6	25.3	25.6
250 mg KCl/L	pH (S.U.)	8.09	7.93	8.09	7.97	8.13	7.95	8.09	7.61
	DO (mg/L)	8.2	8.0	8.4	7.7	8.2	8.0	8.3	5.3
	Salinity (ppt)	25.2	25.2	25.2	25.3	25.1	25.0	24.9	25.1
	Temperature (°C)	25.2	25.3	25.3	25.6	25.2	25.6	25.2	25.5
375 mg KCl/L	pH (S.U.)	8.08	7.93	8.10	7.96	8.14	7.97	8.09	7.63
	DO (mg/L)	8.3	8.0	8.4	7.7	8.2	8.0	8.3	6.1
	Salinity (ppt)	25.2	25.3	25.3	25.4	25.0	25.1	25.1	25.2
	Temperature (°C)	25.2	25.3	25.3	25.6	25.2	25.5	25.3	25.5
500 mg KCl/L	pH (S.U.)	8.09	7.93	8.10	7.96	8.13	7.99	8.09	7.79
	DO (mg/L)	8.2	8.0	8.4	7.7	8.2	8.0	8.2	6.2
	Salinity (ppt)	25.4	25.5	25.4	25.4	25.1	25.2	25.2	25.2
	Temperature (°C)	25.2	25.4	25.3	25.4	25.2	25.5	25.3	25.4
750 mg KCl/L	pH (S.U.)								
	DO (mg/L)								
	Salinity (ppt)								
	Temperature (°C)								
1000 mg KCl/L	pH (S.U.)								
	DO (mg/L)								
	Salinity (ppt)								
	Temperature (°C)								
		Initial	Final	Initial	Final	Initial	Final	Initial	Final

04.08.26

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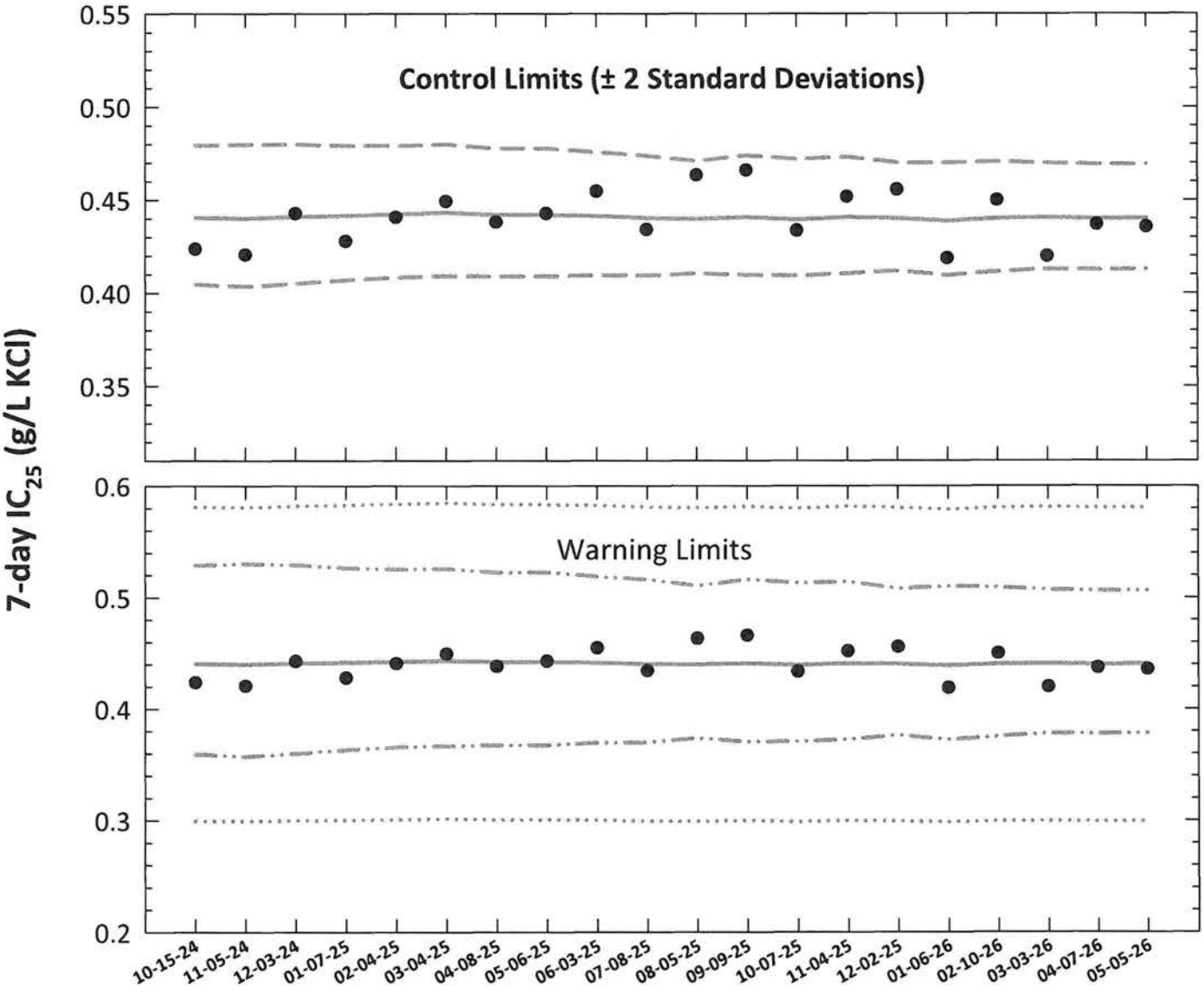
Americamysis (Mysidopsis) bahia
Chronic Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.



Test date

- ● **7-day IC_{25}** = 25% inhibition concentration. An estimation of the potassium chloride concentration which would cause a 25% reduction in *Americamysis* growth (calculated using ToxCalc).
- ——— **Central Tendency** (mean logarithmic IC_{25} converted to anti-logarithmic values)
- – – – **Control Limits** (mean logarithmic IC_{25} ± 2 standard deviations converted to anti-logarithmic values)
- —·—·— **Laboratory Warning Limits** (mean logarithmic IC_{25} ± 2 coefficent of variations converted to anti-logarithmic values)
- ····· **USEPA Warning Limits** (mean logarithmic IC_{25} ± $S_{A.75}$ converted to anti-logarithmic values, $S_{A.75}$ = 75th percentile of CVs reported nationally by USEPA)

Entered and Reviewed by Jim Sumner

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Americamysis (Mysidopsis) bahia

Chronic Reference Toxicant Control Chart

Source: Aquatic Indicators, Inc.

Test number	Test date	7-day IC_{25} ToxCal Determination (g/L KCl)	Log_{10} Conversion			Anti-logarithmic Values (g/L KCl)						
			7-day IC_{25}	CT	S	CT	Control Limits		Laboratory Calculated CV Warning Limits		75th Percentile CV Warning Limits	
							CT - 2S	CT + 2S	CT - 2CV	CT + 2CV	CT - $S_{A.75}$	CT + $S_{A.75}$
1	10-15-24	0.4238	-0.3729	-0.3560	0.0184	0.4406	0.4048	0.4795	0.3594	0.5289	0.2996	0.5815
2	11-05-24	0.4206	-0.3761	-0.3565	0.0188	0.4401	0.4036	0.4798	0.3572	0.5304	0.2993	0.5809
3	12-03-24	0.4428	-0.3538	-0.3555	0.0184	0.4411	0.4053	0.4800	0.3600	0.5294	0.2999	0.5822
4	01-07-25	0.4280	-0.3686	-0.3549	0.0177	0.4417	0.4071	0.4792	0.3634	0.5266	0.3003	0.5830
5	02-04-25	0.4408	-0.3558	-0.3542	0.0173	0.4424	0.4085	0.4792	0.3657	0.5255	0.3008	0.5840
6	03-04-25	0.4493	-0.3474	-0.3534	0.0173	0.4432	0.4093	0.4799	0.3667	0.5260	0.3014	0.5850
7	04-08-25	0.4382	-0.3583	-0.3545	0.0169	0.4421	0.4091	0.4777	0.3674	0.5228	0.3006	0.5835
8	05-06-25	0.4428	-0.3538	-0.3545	0.0169	0.4421	0.4091	0.4778	0.3674	0.5228	0.3006	0.5836
9	06-03-25	0.4548	-0.3422	-0.3550	0.0162	0.4415	0.4098	0.4757	0.3696	0.5190	0.3002	0.5828
10	07-08-25	0.4342	-0.3624	-0.3562	0.0159	0.4404	0.4093	0.4738	0.3699	0.5162	0.2995	0.5813
11	08-05-25	0.4634	-0.3340	-0.3567	0.0149	0.4398	0.4107	0.4710	0.3736	0.5108	0.2991	0.5806
12	09-09-25	0.4660	-0.3316	-0.3559	0.0158	0.4407	0.4097	0.4740	0.3705	0.5162	0.2997	0.5817
13	10-07-25	0.4336	-0.3629	-0.3570	0.0155	0.4396	0.4093	0.4721	0.3708	0.5135	0.2989	0.5802
14	11-04-25	0.4518	-0.3451	-0.3557	0.0154	0.4408	0.4107	0.4732	0.3724	0.5143	0.2998	0.5819
15	12-02-25	0.4557	-0.3414	-0.3564	0.0143	0.4401	0.4121	0.4701	0.3764	0.5082	0.2993	0.5810
16	01-06-26	0.4187	-0.3781	-0.3579	0.0150	0.4387	0.4094	0.4700	0.3720	0.5100	0.2983	0.5790
17	02-10-26	0.4500	-0.3468	-0.3564	0.0146	0.4401	0.4116	0.4706	0.3753	0.5094	0.2993	0.5809
18	03-03-26	0.4198	-0.3770	-0.3561	0.0140	0.4404	0.4129	0.4698	0.3779	0.5071	0.2995	0.5814
19	04-07-26	0.4370	-0.3595	-0.3566	0.0140	0.4400	0.4126	0.4692	0.3777	0.5064	0.2992	0.5807
20	05-05-26	0.4356	-0.3609	-0.3564	0.0139	0.4401	0.4128	0.4692	0.3781	0.5062	0.2993	0.5810

Note:

7-day IC_{25} = 25% inhibition concentration. An estimation of the potassium chloride concentration that would cause a 25% reduction in *Americamysis* growth (calculated using ToxCalc).

CT = Central tendency of the IC_{25} values.

S = Standard deviation of the IC_{25} values.

Control Limits = Mean logarithmic IC_{25} ± 2 standard deviations converted to anti-logarithmic values.

Warning Limits = Mean logarithmic IC_{25} ± 2CV or $S_{A.75}$ converted to anti-logarithmic values.

$S_{A.75}$ = Standard deviation corresponding to the 75th percentile of CVs reported nationally by USEPA ($S_{A.75}$ = 0.32).

CV = Coefficient of variation.

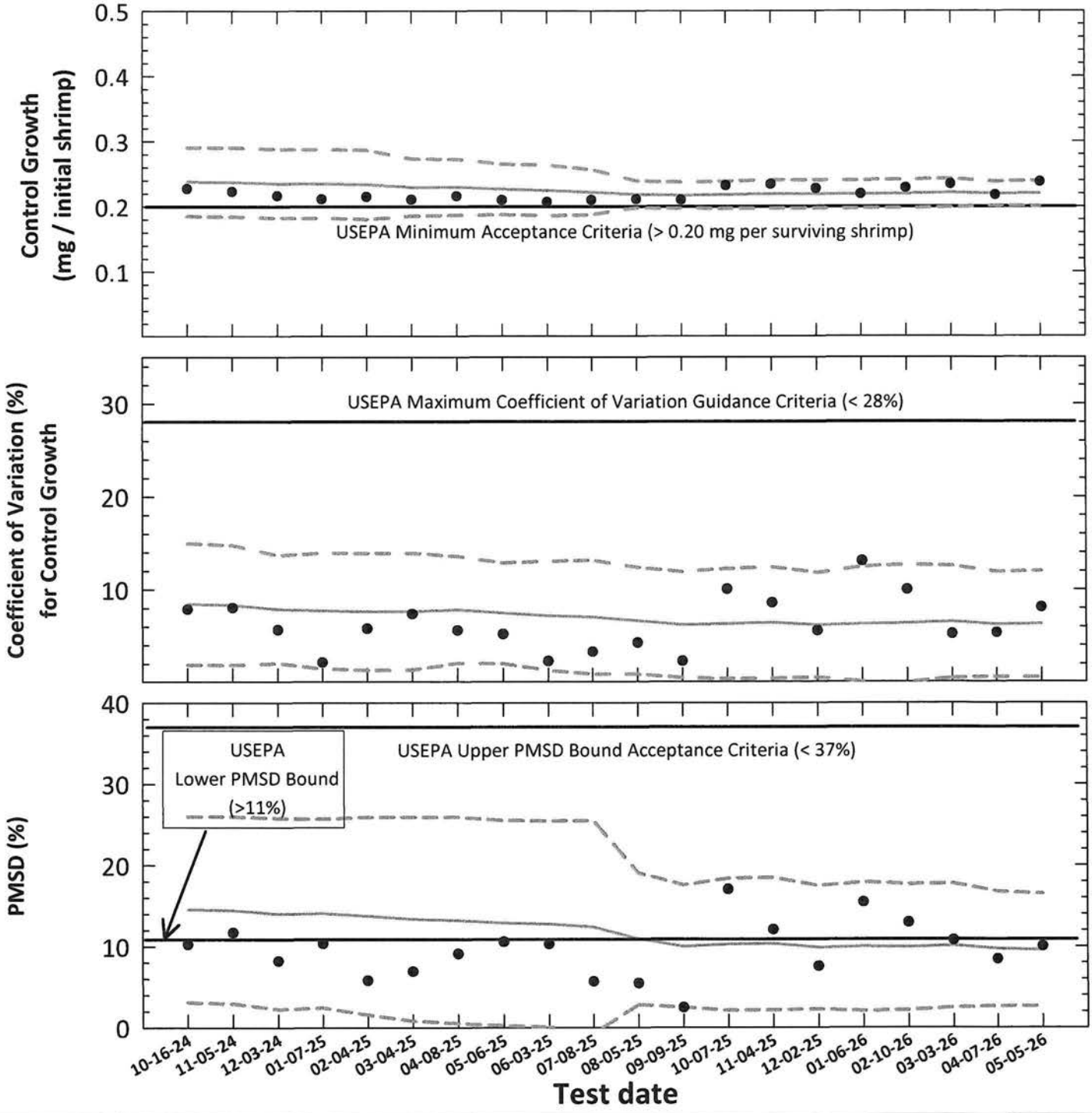
Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia

Chronic Reference Toxicant Testing, Test Acceptability Criteria

Organism Source: Aquatic Indicators, Inc.



- **Control Growth, Coefficient of Variation (CV) or Percent Minimum Significant Difference (PMSD)**
  PMSD is the percent minimum significant difference between the control and treatment that can be declared statistically significant. The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.

——— **Central Tendency** (mean Control Growth, CV or PMSD)

– – – **95% Confidence Interval** (mean Control Growth, CV or PMSD ± 2 Standard Deviations)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia
Chronic Reference Toxicant Testing, Test Acceptability Criteria
Source: Aquatic Indicators, Inc.

Test number	Test date	ToxCal Determination					Control Growth (mg/initial shrimp)			Control Growth CV (%)			Test PMSD (%)		
		Control Survival	Control Growth		Test			95% Confidence Interval			95% Confidence Interval			95% Confidence Interval	
			Mean	CV	MSD	PMSD	CT	CT - 2S	CT + 2S	CT	CT - 2S	CT + 2S	CT	CT - 2S	CT + 2S
		(%)	(mg/initial shrimp)	(%)		(%)									
1	10-16-24	100	0.228	7.9	0.0233	10.2	0.238	0.185	0.291	8.5	1.9	15.0	14.6	3.1	26.0
2	11-05-24	100	0.223	8.0	0.0261	11.7	0.237	0.184	0.291	8.3	1.9	14.8	14.4	2.9	26.0
3	12-03-24	100	0.216	5.7	0.0177	8.2	0.235	0.182	0.288	7.9	2.0	13.7	14.0	2.2	25.8
4	01-07-25	100	0.212	2.2	0.0219	10.4	0.235	0.183	0.288	7.7	1.5	14.0	14.1	2.5	25.7
5	02-04-25	100	0.215	5.8	0.0125	5.8	0.234	0.181	0.287	7.6	1.3	13.9	13.7	1.5	25.9
6	03-04-25	100	0.211	7.4	0.0146	6.9	0.229	0.185	0.273	7.6	1.3	13.9	13.3	0.8	25.9
7	04-08-25	100	0.216	5.6	0.0196	9.1	0.230	0.187	0.273	7.8	2.1	13.6	13.2	0.5	25.9
8	05-06-25	100	0.210	5.2	0.0222	10.6	0.227	0.188	0.265	7.5	2.0	12.9	12.9	0.3	25.5
9	06-03-25	100	0.207	2.3	0.0213	10.3	0.225	0.186	0.264	7.2	1.3	13.1	12.8	0.1	25.4
10	07-08-25	100	0.210	3.3	0.0119	5.7	0.222	0.188	0.257	7.0	0.9	13.2	12.4	-0.7	25.5
11	08-05-25	100	0.211	4.3	0.0115	5.5	0.219	0.198	0.239	6.6	0.9	12.4	10.9	2.8	19.0
12	09-09-25	100	0.210	2.3	0.0052	2.5	0.218	0.198	0.237	6.2	0.5	11.9	10.0	2.5	17.5
13	10-07-25	100	0.232	10.0	0.0395	17.0	0.218	0.197	0.239	6.3	0.4	12.2	10.2	2.1	18.4
14	11-04-25	100	0.234	8.6	0.0282	12.1	0.219	0.197	0.241	6.4	0.4	12.4	10.3	2.1	18.4
15	12-02-25	100	0.228	5.6	0.0171	7.5	0.219	0.197	0.241	6.2	0.5	11.8	9.8	2.2	17.4
16	01-06-26	100	0.220	13.1	0.0339	15.4	0.219	0.198	0.241	6.3	0.1	12.5	10.0	2.0	17.9
17	02-10-26	100	0.229	10.0	0.0296	12.9	0.220	0.198	0.242	6.4	0.0	12.7	9.9	2.1	17.6
18	03-03-26	100	0.234	5.2	0.0252	10.8	0.221	0.199	0.243	6.5	0.5	12.6	10.1	2.4	17.7
19	04-07-26	100	0.218	5.3	0.0183	8.4	0.220	0.201	0.238	6.2	0.6	11.9	9.7	2.6	16.7
20	05-05-26	100	0.238	8.1	0.0238	10.0	0.220	0.200	0.240	6.3	0.6	12.0	9.5	2.6	16.5

Note:

Control Survival = USEPA minimum test acceptability criteria ≥ 80% survival.

Control Mean Growth = USEPA minimum test acceptability criteria ≥ 0.20 mg/surviving shrimp.

CV = Coefficient of variation for control growth.

USEPA maximum CV guidance criteria (90th percentile) < 28%

MSD = Minimum significant difference.

PMSD = Percent minimum significant difference.

PMSD is a measure of test precision. The PMSD is the minimum percent difference between the control and treatment that can be declared statistically significant in a whole effluent toxicity test.

Lower PMSD bound determined by USEPA (10th percentile) > 11%.

The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.

Upper PMSD bound acceptance criteria determined by USEPA (90th percentile) < 37%.

CT = Central tendency of the growth, CV or PMSD values.

S = Standard deviation of the growth, CV or PMSD values.

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Potassium Chloride Chronic Reference Toxicant Test (EPA-821-R-02-014, Method 1007.0)
Species: *Americamysis (Mysidopsis) bahia*

AbKClCR Test Number: 275

Dilution preparation information:						***Comments:***
KCl Stock INSS number:		INSS 2478				
Stock preparation:		50 g KCl/L: Dissolve 50 g KCl in 1-L Deionized water				
Dilution prep (mg/L)	250	375	500	750	1000	
Stock volume (mL)	10	15	20	30	40	
Diluent volume (mL)	1990	1985	1980	1970	1960	
Total volume (mL)	2000	2000	2000	2000	2000	

Test organism information:		***Test information:***	
Organism age:	7-days old	Randomizing template:	ORANGE
Date and times organisms were born between:	04-28-26 1200 to 04-29-26 1130	Incubator number and shelf location:	LB
Organism source:	AI Batch Ab: 04-29-26	*Artemia* CHM number:	CHM1432
		Drying information for weight determination:	
Transfer bowl information:	pH = 8.02 S.U. Temperature = 25.0 °C	Date / Time in oven:	05.12.26 1045
		*Initial oven temperature:	60 °C
Average transfer volume:	< 0.25 mL	Date / Time out of oven:	05.13.26 1045
		*Final oven temperature:	60 °C
		Total drying time:	24 HOURS

*60°C Oven, Thermometer SN: 14-985B5

Daily feeding and renewal information:

Day	Date	Morning feeding		Afternoon feeding		Test initiation, renewal, or termination		Salt SW batch used
		Time	Analyst	Time	Analyst	Time	Analyst	
0	05-05-26	1110	JH	1425	JH	1220	JH	04.25.26 A
1	05-06-26	0500	JH	1300	JH	0900	JH	↓
2	05-07-26	0500	JH	1300	JH	1230	JH	04.25.26 B
3	05-08-26	0500	JH	1110	JH	0900	JH	↓
4	05-09-26	0600	JH	1200	JH	1130	JH	05.06.26
5	05-10-26	0600	JH	1100	JH	0900	JH	↓
6	05-11-26	0500	JH	1200	JH	0850	JH	
7	05-12-26					1020	JH	

Chemical analyses:

Parameter	Reporting Limit	Method number	Meter	Serial number
pH	0.1 S.U.	SM 4500-H+ B-2021	Accumet AR20	93312452
Dissolved Oxygen (D.O.)	1.0 mg/L	SM 4500-O H-2021	HACH HQ430d Flexi	SN250100050300
Salinity	1.0 ppt	SM 2520 B-2021	YSI PRO30	18D104324
Alkalinity	5.0 mg $CaCO_3$/L	SM 2320 B-2021	Accumet AR20	93312452
Temperature	0.1 °C	SM 2550B-2010	Digital Thermometer	130664685

Control information:		Acceptance criteria	***Summary of test endpoints:***	
% Mortality:	0%	≤ 20%	**7-day LC_{50}** (mg/L KCl)	533.1
Average weight per initial shrimp:	0.238		**NOEC** (mg/L KCl)	375
Average weight per surviving shrimp:	0.238	≥ 0.20 mg/shrimp	**LOEC** (mg/L KCl)	500
			ChV (mg/L KCl)	433.0
			IC_{25} (mg/L KCl)	435.6

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Environmental Testing Solutions, Inc.

AbKCICR Test Number: **275**

Survival and Growth Data

Day	CONTROL								250 mg KCl/L							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
3	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
4	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
5	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
6	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
7	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
# females with eggs in brood sac																
# females with developing ova in oviducts																
# immature females																
# males															4 05.11.26	
*A = Pan weight (mg) Tray color code: TURQUOISE Analyst: BM Date: 04-27-26	10.70	13.11	12.78	12.56	13.87	10.10	13.13	9.51	14.59	12.19	14.26	13.47	9.34	11.52	13.31	8.91
*B = Pan + Shrimp weight (mg) Analyst: JT Date: 05.14.26	11.93	14.44	13.79	13.78	14.98	11.28	14.31	10.76	15.86	13.46	15.36	14.78	10.60	12.74	14.62	10.00
C = Shrimp weight (mg) = B – A Hand calculated Analyst: JK	1.23	1.33	1.01	1.22	1.11	1.18	1.18	1.25	1.27	1.27	1.10	1.31	1.26	1.22	1.31	1.09
Weight per initial number of shrimp (mg) = C / Initial number of shrimp Hand calculated Analyst: JK	0.246	0.266	0.202	0.244	0.222	0.236	0.236	0.250	0.254	0.254	0.220	0.262	0.252	0.244	0.262	0.218
	Average weight per initial number of shrimp (mg) 0.238								Average weight per initial number of shrimp (mg) 0.246				Percent reduction from control (%) -3.42			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

ETS
Environmental Testing Solutions, Inc.

AbKClCR Test Number: **275**

Survival and Growth Data

Day	375 mg KCl/L								500 mg KCl/L							
	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF
0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
2	S	S	S	S	S	S	S	S	S	S	4 1d	4 1d	4 1d	4 1d	4 1d	4 1d
3	S	S	S	S	S	S	S	S	4 1d	4 1d	4	4	4	4	3 1d	4
4	S	S	S	S	S	S	S	S	4	4	4	4	3 1d	4	3	4
5	S	S	S	S	S	S	S	S	4	4	3 1d	4	2 1d	4	3	3
6	S	S	S	S	S	S	S	S	4	4	3	4	2	4	3	3
7	S	S	S	S	S	S	S	S	3 1d	3 1d	3	3 1d	2	4	3	3
# females with eggs in brood sac																
# females with developing ova in oviducts																
# immature females																
# males																4 05.12
*A = Pan weight (mg) Tray color code: Turq Voise Analyst: EM Date: 05-27-26	12.62	8.96	9.40	13.85	14.64	14.41	14.62	12.51	14.40	14.70	9.57	13.74	9.49	14.15	14.88	11.93
*B = Pan + Shrimp weight (mg) Analyst: JH Date: 05.14.26	13.67	10.11	10.52	14.93	15.84	15.59	15.85	13.56	15.06	15.44	10.21	14.42	9.87	14.91	15.58	12.7
C = Shrimp weight (mg) = B – A Hand calculated Analyst: JH	1.05	1.15	1.12	1.08	1.20	1.18	1.23	1.05	0.66	0.74	0.64	0.68	0.38	0.76	0.70	0.77
Weight per initial number of shrimp (mg) = C / Initial number of shrimp Hand calculated Analyst: JH	0.210	0.230	0.224	0.216	0.240	0.236	0.246	0.210	0.132	0.148	0.128	0.136	0.076	0.152	0.140	0.154
	Average weight per initial number of shrimp (mg) 0.227				Percent reduction from control (%) 4.77.				Average weight per initial number of shrimp (mg) 0.133				Percent reduction from control (%) 44.07.			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

ETS
Environmental Testing Solutions, Inc.

AbKClCR Test Number: **275**

Survival and Growth Data

Day	750 mg KCl/L								1000 mg KCl/L							
	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV
0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd	0 sd
2																
3																
4																
5																
6																
7																
# females with eggs in brood sac																
# females with developing ova in oviducts																
# immature females																
# males																
*A = Pan weight (mg) Tray color code: _____ Analyst:_____ Date: _____																
*B = Pan + Shrimp weight (mg) Analyst:_____ Date: _____																
C = Shrimp weight (mg) = B – A Hand calculated Analyst:_____																
Weight per initial number of shrimp (mg) = C / Initial number of shrimp Hand calculated Analyst:_____	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Average weight per initial number of shrimp (mg) 0				Percent reduction from control (%) 100%				Average weight per initial number of shrimp (mg) 0				Percent reduction from control (%) 100%			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

Environmental Testing Solutions, Inc.

Americamysis bahia Chronic Reference Toxicant Test
EPA-821-R-02-014, Method 1007.0

Quality Control
Verification of Data Entry, Calculations, and Statistical Analyses

Test number: 275

Test dates: May 05-12, 2026

Concentration (mg/L KCl)	Replicate	Initial number of larvae	Final number of larvae	A = Pan weight (mg)	B = Pan + Larvae weight (mg)	Larvae weight (mg) = B - A	Weight / Initial number of larvae (mg)	Mean survival (%)	Mean weight (mg)	Coefficient of variation (%)	Percent reduction from control (%)
Control	A	5	5	10.70	11.93	1.23	0.246	100.0	0.238	8.1	Not applicable
	B	5	5	13.11	14.44	1.33	0.266				
	C	5	5	12.78	13.79	1.01	0.202				
	D	5	5	12.56	13.78	1.22	0.244				
	E	5	5	13.87	14.98	1.11	0.222				
	F	5	5	10.10	11.28	1.18	0.236				
	G	5	5	13.13	14.31	1.18	0.236				
	H	5	5	9.51	10.76	1.25	0.250				
250	I	5	5	14.59	15.86	1.27	0.254	100.0	0.246	7.1	-3.4
	J	5	5	12.19	13.46	1.27	0.254				
	K	5	5	14.26	15.36	1.10	0.220				
	L	5	5	13.47	14.78	1.31	0.262				
	M	5	5	9.34	10.60	1.26	0.252				
	N	5	5	11.52	12.74	1.22	0.244				
	O	5	5	13.31	14.62	1.31	0.262				
	P	5	5	8.91	10.00	1.09	0.218				
375	Q	5	5	12.62	13.67	1.05	0.210	100.0	0.227	6.1	4.7
	R	5	5	8.96	10.11	1.15	0.230				
	S	5	5	9.40	10.52	1.12	0.224				
	T	5	5	13.85	14.93	1.08	0.216				
	U	5	5	14.64	15.84	1.20	0.240				
	V	5	5	14.41	15.59	1.18	0.236				
	W	5	5	14.62	15.85	1.23	0.246				
	X	5	5	12.51	13.56	1.05	0.210				
500	Y	5	3	14.40	15.06	0.66	0.132	60.0	0.133	18.7	44.0
	Z	5	3	14.70	15.44	0.74	0.148				
	AA	5	3	9.57	10.21	0.64	0.128				
	BB	5	3	13.74	14.42	0.68	0.136				
	CC	5	2	9.49	9.87	0.38	0.076				
	DD	5	4	14.15	14.91	0.76	0.152				
	EE	5	3	14.88	15.58	0.70	0.140				
	FF	5	3	11.93	12.70	0.77	0.154				
750	GG	5	0	0.00	0.00	0.00	0.000	0.0	0.000	0.0	100.0
	HH	5	0	0.00	0.00	0.00	0.000				
	II	5	0	0.00	0.00	0.00	0.000				
	JJ	5	0	0.00	0.00	0.00	0.000				
	KK	5	0	0.00	0.00	0.00	0.000				
	LL	5	0	0.00	0.00	0.00	0.000				
	MM	5	0	0.00	0.00	0.00	0.000				
	NN	5	0	0.00	0.00	0.00	0.000				
1000	OO	5	0	0.00	0.00	0.00	0.000	0.0	0.000	0.0	100.0
	PP	5	0	0.00	0.00	0.00	0.000				
	QQ	5	0	0.00	0.00	0.00	0.000				
	RR	5	0	0.00	0.00	0.00	0.000				
	SS	5	0	0.00	0.00	0.00	0.000				
	TT	5	0	0.00	0.00	0.00	0.000				
	UU	5	0	0.00	0.00	0.00	0.000				
	VV	5	0	0.00	0.00	0.00	0.000				

Dunnett's MSD value: 0.0238

PMSD: 10.0

MSD = Minimum Significant Difference

PMSD = Percent Minimum Significant Difference

PMSD is a measure of test precision. The PMSD is the minimum percent difference between the control and treatment that can be declared statistically significant in a whole effluent toxicity test.

Lower PMSD bound determined by USEPA (10th percentile) = 11%.
Upper PMSD bound determined by USEPA (90th percentile) = 37%.
Lower and upper PMSD bounds were determined from the 10th and 90th percentile, respectively, of PMSD data from EPA's WET Interlaboratory Variability Study (USEPA, 2001a; USEPA, 2001b). The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.

USEPA. 2001a, 2001b. Final Report: Interlaboratory Variability Study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods, Volumes 1 and 2-Appendix. EPA-821-B-01-004 and EPA-821-B-01-005. US Environmental Protection Agency, Cincinnati, OH.

ETS Environmental Testing Solutions, Inc.

Statistical Analyses

Entered and Reviewed by Jim Sumner

Mysid Survival and Growth Test-7 Day Survival

Start Date:	5/5/2026	Test ID:	AbKCICR	Sample ID:	REF-Ref Toxicant
End Date:	5/12/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	SWCHR-EPA-821-R-02-014	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2	3	4	5	6	7	8
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
250	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
375	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
500	0.6000	0.6000	0.6000	0.6000	0.4000	0.8000	0.6000	0.6000
750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

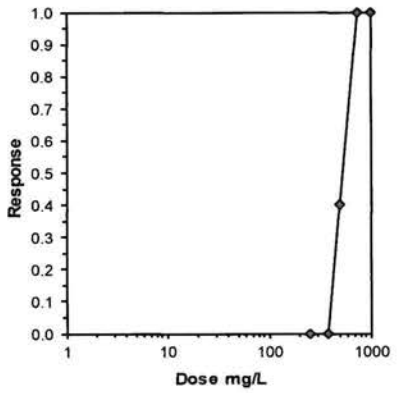
			Transform: Arcsin Square Root					Rank	1-Tailed	Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Resp	Number
D-Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	8			0	40
250	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	8	68.00	48.00	0	40
375	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	8	68.00	48.00	0	40
*500	0.6000	0.6000	0.8885	0.6847	1.1071	12.716	8	36.00	48.00	16	40
750	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	8			40	40
1000	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	8			40	40

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.3625	0.904	0.44003	15.5766
Equality of variance cannot be confirmed				

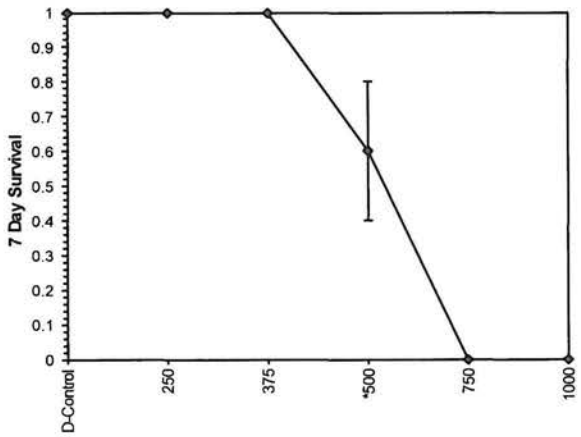
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	375	500	433.013	
Treatments vs D-Control				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	533.10	505.23	562.51
5.0%	533.38	502.42	566.25
10.0%	533.65	498.69	571.07
20.0%	534.18	486.77	586.22
Auto-0.0%	533.10	505.23	562.51



Dose-Response Plot



ETS
Environmental Testing Solutions, Inc.

Statistical Analyses

Entered and Reviewed by Jim Sumner

Mysid Survival and Growth Test-Growth-Weight

Start Date:	5/5/2026	Test ID:	AbKCICR	Sample ID:	REF-Ref Toxicant
End Date:	5/12/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	SWCHR-EPA-821-R-02-014	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2	3	4	5	6	7	8
D-Control	0.2460	0.2660	0.2020	0.2440	0.2220	0.2360	0.2360	0.2500
250	0.2540	0.2540	0.2200	0.2620	0.2520	0.2440	0.2620	0.2180
375	0.2100	0.2300	0.2240	0.2160	0.2400	0.2360	0.2460	0.2100
500	0.1320	0.1480	0.1280	0.1360	0.0760	0.1520	0.1400	0.1540
750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

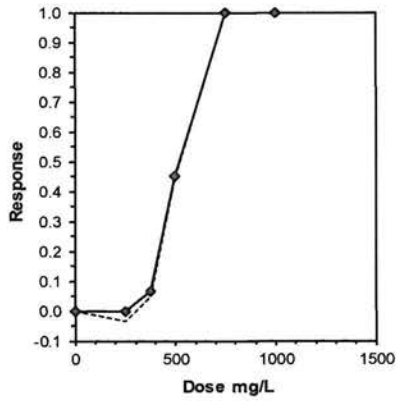
			Transform: Untransformed						1-Tailed		Isotonic	
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	0.2378	1.0000	0.2378	0.2020	0.2660	8.087	8				0.2418	1.0000
250	0.2458	1.0336	0.2458	0.2180	0.2620	7.114	8	-0.942	2.799	0.0238	0.2418	1.0000
375	0.2265	0.9527	0.2265	0.2100	0.2460	6.077	8	1.325	2.799	0.0238	0.2265	0.9369
500	0.1333	0.5605	0.1333	0.0760	0.1540	18.728	8				0.1333	0.5512
750	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	8				0.0000	0.0000
1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	8				0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.953	0.884	-0.581	-0.2637
Bartlett's Test indicates equal variances (p = 0.69)	0.73979	9.21035		

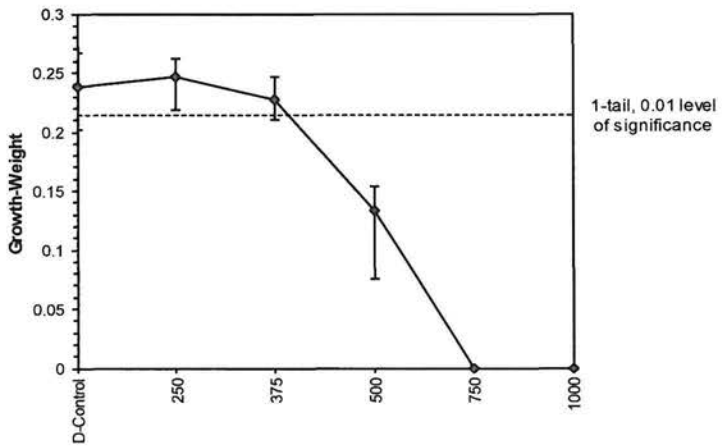
Hypothesis Test (1-tail, 0.01)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test Treatments vs D-Control	375	>375			0.02376	0.09992	0.00075	0.00029	0.09832	2, 21

Linear Interpolation (200 Resamples)

Point	mg/L	SD	95% CL		Skew
IC05	349.08	30.46	285.72	383.65	-0.9122
IC10	386.96	10.62	357.18	398.93	-2.7104
IC15	403.17	7.19	387.55	414.19	-0.3413
IC20	419.37	7.02	403.83	430.64	-0.2710
IC25	435.57	7.14	420.09	447.72	-0.1907
IC40	484.18	9.02	465.78	501.82	0.0300
IC50	523.22	12.52	493.58	543.19	-0.3611



Dose-Response Plot



Environmental Testing Solutions, Inc.

AbKClCR Test Number: **275**

Daily Chemistry:

Temperatures performed at the time of test initiation, renewal or termination by the analyst identified in the Daily Renewal Information table located on Page 1. Alkalinity performed by the analyst identified on the bench sheet specific for this analysis and transcribed to this bench sheet.

Conc.	Parameter	Day (Analyst identified for each day, performed pH, D.O. and salinity measurements only.) 0		1		2	
	Analyst	[illegible]	XL	XL	XL	XL	XL
CONTROL, Salt SW	pH (S.U.)	8.10	8.00	8.05	7.91	8.00	7.95
	DO (mg/L)	8.2	8.0	8.2	7.9	8.2	8.0
	Salinity (ppt)	25.1	25.2	25.0	25.1	~~25.2~~ 25.0	25.3
	Alkalinity (mg $CaCO_3$/L)	130				130	
	Temperature (°C)	25.3	25.6	25.1	25.6	25.1	25.6
250 mg KCl/L	pH (S.U.)	8.10	7.99	8.05	7.90	8.00	7.96
	DO (mg/L)	8.1	8.0	8.2	7.9	8.2	8.0
	Salinity (ppt)	25.2	25.4	25.3	25.7	25.2	25.4
	Temperature (°C)	25.4	25.3	25.1	25.2	25.1	25.5
375 mg KCl/L	pH (S.U.)	8.10	8.06	8.05	7.92	8.00	7.97
	DO (mg/L)	8.1	8.0	8.2	7.9	8.2	8.0
	Salinity (ppt)	25.2	25.5	25.5	25.7	25.2	25.6
	Temperature (°C)	25.4	25.3	25.2	25.2	25.1	25.5
500 mg KCl/L	pH (S.U.)	8.12	8.01	8.05	7.93	8.00	7.97
	DO (mg/L)	8.1	8.0	8.1	7.8	8.1	8.0
	Salinity (ppt)	25.3	25.7	25.5	25.6	25.4	25.6
	Temperature (°C)	25.4	25.2	25.2	25.3	25.1	25.3
750 mg KCl/L	pH (S.U.)	8.12	8.01				
	DO (mg/L)	8.1	7.9				
	Salinity (ppt)	25.3	26.0				
	Temperature (°C)	25.2	25.2				
1000 mg KCl/L	pH (S.U.)	8.12	8.01				
	DO (mg/L)	8.1	7.9				
	Salinity (ppt)	25.4	26.1				
	Temperature (°C)	25.2	25.3				
		Initial	Final	Initial	Final	Initial	Final

ETS
Environmental Testing Solutions, Inc.

AbKClCR Test Number: **275**

Conc.	Parameter	Day (Analyst identified for each day, performed pH, D.O. and salinity measurements only.) 3		4		5		6	
	Analyst	XL	BSL	BSL	BSL	BSL	XL	XL	XL
CONTROL, Salt SW	pH (S.U.)	8.10	8.00	8.12	8.02	8.11	7.97	8.08	7.84
	DO (mg/L)	8.2	7.8	8.1	7.6	8.0	7.9	8.1	6.8
	Salinity (ppt)	25.0	25.2	25.1	25.7	25.0	25.0	25.0	25.1
	Alkalinity (mg $CaCO_3$/L)	R OS-23-24 N		130				K OS-25-26 N	
	Temperature (°C)	25.2	25.4	25.1	25.8	25.2	25.7	25.2	25.4
250 mg KCl/L	pH (S.U.)	8.09	7.96	8.11	7.94	8.16	8.00	8.08	7.84
	DO (mg/L)	8.3	7.8	8.1	7.6	8.0	7.9	8.1	6.4
	Salinity (ppt)	25.2	25.5	25.3	26.0	25.3	25.2	25.2	25.2
	Temperature (°C)	25.3	25.2	25.2	25.7	25.2	25.6	25.2	25.2
375 mg KCl/L	pH (S.U.)	8.08	8.01	8.11	8.00	8.17	7.99	8.08	7.91
	DO (mg/L)	8.2	7.8	8.1	7.6	8.1	7.9	8.1	6.9
	Salinity (ppt)	25.3	25.6	25.4	25.6	25.4	25.4	25.3	25.4
	Temperature (°C)	25.3	25.2	25.2	25.6	25.3	25.6	25.3	25.2
500 mg KCl/L	pH (S.U.)	8.08	7.96	8.12	7.96	8.17	7.98	8.08	7.90
	DO (mg/L)	8.3	7.8	8.1	7.6	8.1	7.8	8.1	6.6
	Salinity (ppt)	25.4	25.4	25.3	25.6	25.5	25.4	25.3	25.5
	Temperature (°C)	25.3	25.3	25.2	25.6	25.3	25.6	25.3	25.6
750 mg KCl/L	pH (S.U.)								
	DO (mg/L)								
	Salinity (ppt)								
	Temperature (°C)								
1000 mg KCl/L	pH (S.U.)								
	DO (mg/L)								
	Salinity (ppt)								
	Temperature (°C)								
		Initial	Final	Initial	Final	Initial	Final	Initial	Final

R OS-05-06-16

ETS
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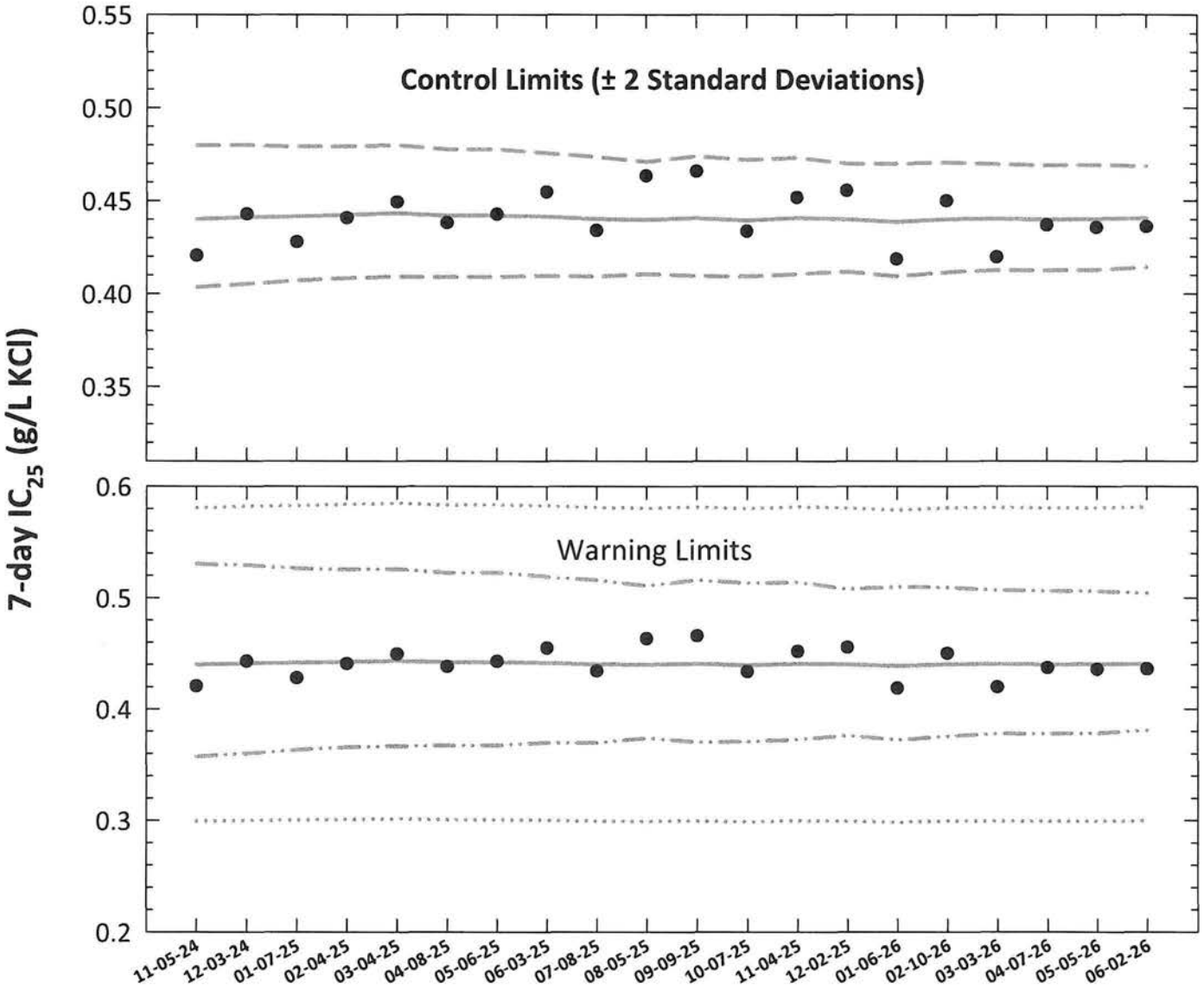
Americamysis (Mysidopsis) bahia
Chronic Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.



- ● **7-day IC_{25}** = 25% inhibition concentration. An estimation of the potassium chloride concentration which would cause a 25% reduction in *Americamysis* growth (calculated using ToxCalc).
- ——— **Central Tendency** (mean logarithmic IC_{25} converted to anti-logarithmic values)
- – – – **Control Limits** (mean logarithmic IC_{25} ± 2 standard deviations converted to anti-logarithmic values)
- —·—·— **Laboratory Warning Limits** (mean logarithmic IC_{25} ± 2 coefficent of variations converted to anti-logarithmic values)
- ····· **USEPA Warning Limits** (mean logarithmic $IC_{25} \pm S_{A.75}$ converted to anti-logarithmic values, $S_{A.75}$ = 75th percentile of CVs reported nationally by USEPA)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia

Chronic Reference Toxicant Control Chart

Source: Aquatic Indicators, Inc.

Test number	Test date	7-day IC_{25} ToxCal Determination (g/L KCl)	Log_{10} Conversion			Anti-logarithmic Values (g/L KCl)						
			7-day IC_{25}	CT	S	CT	Control Limits		Laboratory Calculated CV Warning Limits		75th Percentile CV Warning Limits	
							CT - 2S	CT + 2S	CT - 2CV	CT + 2CV	CT - $S_{A.75}$	CT + $S_{A.75}$
1	11-05-24	0.4206	-0.3761	-0.3565	0.0188	0.4401	0.4036	0.4798	0.3572	0.5304	0.2993	0.5809
2	12-03-24	0.4428	-0.3538	-0.3555	0.0184	0.4411	0.4053	0.4800	0.3600	0.5294	0.2999	0.5822
3	01-07-25	0.4280	-0.3686	-0.3549	0.0177	0.4417	0.4071	0.4792	0.3634	0.5266	0.3003	0.5830
4	02-04-25	0.4408	-0.3558	-0.3542	0.0173	0.4424	0.4085	0.4792	0.3657	0.5255	0.3008	0.5840
5	03-04-25	0.4493	-0.3474	-0.3534	0.0173	0.4432	0.4093	0.4799	0.3667	0.5260	0.3014	0.5850
6	04-08-25	0.4382	-0.3583	-0.3545	0.0169	0.4421	0.4091	0.4777	0.3674	0.5228	0.3006	0.5835
7	05-06-25	0.4428	-0.3538	-0.3545	0.0169	0.4421	0.4091	0.4778	0.3674	0.5228	0.3006	0.5836
8	06-03-25	0.4548	-0.3422	-0.3550	0.0162	0.4415	0.4098	0.4757	0.3696	0.5190	0.3002	0.5828
9	07-08-25	0.4342	-0.3624	-0.3562	0.0159	0.4404	0.4093	0.4738	0.3699	0.5162	0.2995	0.5813
10	08-05-25	0.4634	-0.3340	-0.3567	0.0149	0.4398	0.4107	0.4710	0.3736	0.5108	0.2991	0.5806
11	09-09-25	0.4660	-0.3316	-0.3559	0.0158	0.4407	0.4097	0.4740	0.3705	0.5162	0.2997	0.5817
12	10-07-25	0.4336	-0.3629	-0.3570	0.0155	0.4396	0.4093	0.4721	0.3708	0.5135	0.2989	0.5802
13	11-04-25	0.4518	-0.3451	-0.3557	0.0154	0.4408	0.4107	0.4732	0.3724	0.5143	0.2998	0.5819
14	12-02-25	0.4557	-0.3414	-0.3564	0.0143	0.4401	0.4121	0.4701	0.3764	0.5082	0.2993	0.5810
15	01-06-26	0.4187	-0.3781	-0.3579	0.0150	0.4387	0.4094	0.4700	0.3720	0.5100	0.2983	0.5790
16	02-10-26	0.4500	-0.3468	-0.3564	0.0146	0.4401	0.4116	0.4706	0.3753	0.5094	0.2993	0.5809
17	03-03-26	0.4198	-0.3770	-0.3561	0.0140	0.4404	0.4129	0.4698	0.3779	0.5071	0.2995	0.5814
18	04-07-26	0.4370	-0.3595	-0.3566	0.0140	0.4400	0.4126	0.4692	0.3777	0.5064	0.2992	0.5807
19	05-05-26	0.4356	-0.3609	-0.3564	0.0139	0.4401	0.4128	0.4692	0.3781	0.5062	0.2993	0.5810
20	06-02-26	0.4362	-0.3603	-0.3558	0.0134	0.4408	0.4144	0.4688	0.3809	0.5044	0.2997	0.5818

Note:

7-day IC_{25} = 25% inhibition concentration. An estimation of the potassium chloride concentration that would cause a 25% reduction in *Americamysis* growth (calculated using ToxCalc).

CT = Central tendency of the IC_{25} values.

S = Standard deviation of the IC_{25} values.

Control Limits = Mean logarithmic IC_{25} ± 2 standard deviations converted to anti-logarithmic values.

Warning Limits = Mean logarithmic IC_{25} ± 2CV or $S_{A.75}$ converted to anti-logarithmic values.

$S_{A.75}$ = Standard deviation corresponding to the 75th percentile of CVs reported nationally by USEPA ($S_{A.75}$ = 0.32).

CV = Coefficient of variation.

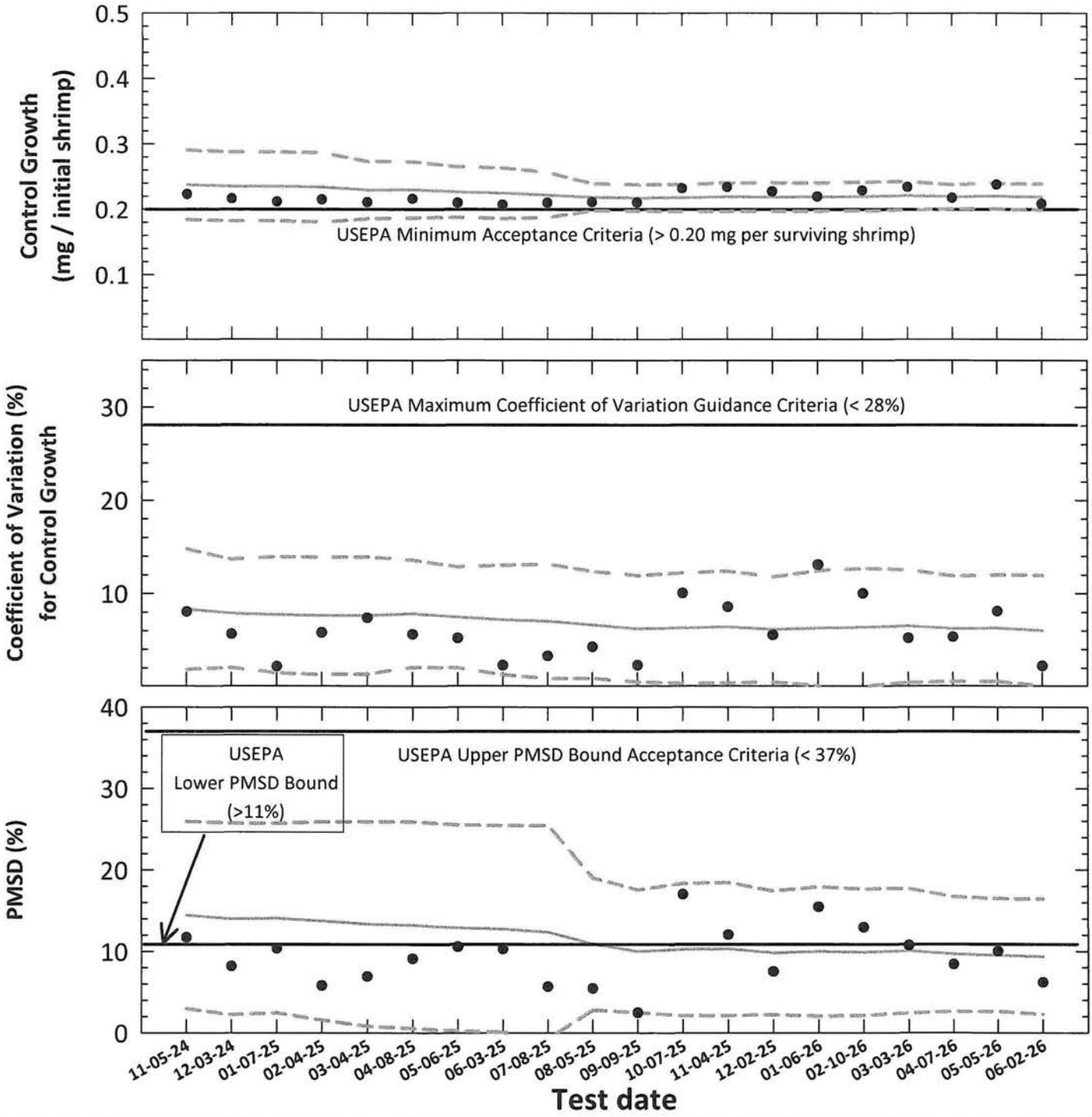
Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia

Chronic Reference Toxicant Testing, Test Acceptability Criteria

Organism Source: Aquatic Indicators, Inc.



- **Control Growth, Coefficient of Variation (CV) or Percent Minimum Significant Difference (PMSD)**
  PMSD is the percent minimum significant difference between the control and treatment that can be declared statistically significant. The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.

Central Tendency (mean Control Growth, CV or PMSD)

95% Confidence Interval (mean Control Growth, CV or PMSD ± 2 Standard Deviations)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Americamysis (Mysidopsis) bahia
Chronic Reference Toxicant Testing, Test Acceptability Criteria
Source: Aquatic Indicators, Inc.

Test number	Test date	ToxCal Determination					Control Growth (mg/initial shrimp)			Control Growth CV (%)			Test PMSD (%)		
		Control Survival	Control Growth		Test			95% Confidence Interval			95% Confidence Interval			95% Confidence Interval	
		(%)	Mean (mg/initial shrimp)	CV (%)	MSD	PMSD (%)	CT	CT - 2S	CT + 2S	CT	CT - 2S	CT + 2S	CT	CT - 2S	CT + 2S
1	11-05-24	100	0.223	8.0	0.0261	**11.7**	0.237	0.184	0.291	8.3	1.9	14.8	14.4	2.9	26.0
2	12-03-24	100	0.216	5.7	0.0177	**8.2**	0.235	0.182	0.288	7.9	2.0	13.7	14.0	2.2	25.8
3	01-07-25	100	0.212	2.2	0.0219	**10.4**	0.235	0.183	0.288	7.7	1.5	14.0	14.1	2.5	25.7
4	02-04-25	100	0.215	5.8	0.0125	**5.8**	0.234	0.181	0.287	7.6	1.3	13.9	13.7	1.5	25.9
5	03-04-25	100	0.211	7.4	0.0146	**6.9**	0.229	0.185	0.273	7.6	1.3	13.9	13.3	0.8	25.9
6	04-08-25	100	0.216	5.6	0.0196	**9.1**	0.230	0.187	0.273	7.8	2.1	13.6	13.2	0.5	25.9
7	05-06-25	100	0.210	5.2	0.0222	**10.6**	0.227	0.188	0.265	7.5	2.0	12.9	12.9	0.3	25.5
8	06-03-25	100	0.207	2.3	0.0213	**10.3**	0.225	0.186	0.264	7.2	1.3	13.1	12.8	0.1	25.4
9	07-08-25	100	0.210	3.3	0.0119	**5.7**	0.222	0.188	0.257	7.0	0.9	13.2	12.4	-0.7	25.5
10	08-05-25	100	0.211	4.3	0.0115	**5.5**	0.219	0.198	0.239	6.6	0.9	12.4	10.9	2.8	19.0
11	09-09-25	100	0.210	2.3	0.0052	**2.5**	0.218	0.198	0.237	6.2	0.5	11.9	10.0	2.5	17.5
12	10-07-25	100	0.232	10.0	0.0395	**17.0**	0.218	0.197	0.239	6.3	0.4	12.2	10.2	2.1	18.4
13	11-04-25	100	0.234	8.6	0.0282	**12.1**	0.219	0.197	0.241	6.4	0.4	12.4	10.3	2.1	18.4
14	12-02-25	100	0.228	5.6	0.0171	**7.5**	0.219	0.197	0.241	6.2	0.5	11.8	9.8	2.2	17.4
15	01-06-26	100	0.220	13.1	0.0339	**15.4**	0.219	0.198	0.241	6.3	0.1	12.5	10.0	2.0	17.9
16	02-10-26	100	0.229	10.0	0.0296	**12.9**	0.220	0.198	0.242	6.4	0.0	12.7	9.9	2.1	17.6
17	03-03-26	100	0.234	5.2	0.0252	**10.8**	0.221	0.199	0.243	6.5	0.5	12.6	10.1	2.4	17.7
18	04-07-26	100	0.218	5.3	0.0183	**8.4**	0.220	0.201	0.238	6.2	0.6	11.9	9.7	2.6	16.7
19	05-05-26	100	0.238	8.1	0.0238	**10.0**	0.220	0.200	0.240	6.3	0.6	12.0	9.5	2.6	16.5
20	06-02-26	100	0.209	2.2	0.0129	**6.2**	0.219	0.199	0.239	6.0	0.1	12.0	9.3	2.3	16.4

Note:

Control Survival = USEPA minimum test acceptability criteria ≥ 80% survival.

Control Mean Growth = USEPA minimum test acceptability criteria ≥ 0.20 mg/surviving shrimp.

CV = Coefficient of variation for control growth.
USEPA maximum CV guidance criteria (90th percentile) < 28%

MSD = Minimum significant difference.

PMSD = Percent minimum significant difference.
PMSD is a measure of test precision. The PMSD is the minimum percent difference between the control and treatment that can be declared statistically significant in a whole effluent toxicity test.
Lower PMSD bound determined by USEPA (10th percentile) > 11%.
The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.
Upper PMSD bound acceptance criteria determined by USEPA (90th percentile) < 37%.

CT = Central tendency of the growth, CV or PMSD values.

S = Standard deviation of the growth, CV or PMSD values.

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Potassium Chloride Chronic Reference Toxicant Test (EPA-821-R-02-014, Method 1007.0)
Species: *Americamysis (Mysidopsis) bahia*

AbKClCR Test Number: **276**

Dilution preparation information:						***Comments:***
KCl Stock INSS number:		INSS 2478				
Stock preparation:		50 g KCl/L: Dissolve 50 g KCl in 1-L Deionized water				
Dilution prep (mg/L)	250	375	500	750	1000	
Stock volume (mL)	10	15	20	30	40	
Diluent volume (mL)	1990	1985	1980	1970	1960	
Total volume (mL)	2000	2000	2000	2000	2000	

Test organism information:		***Test information:***	
Organism age:	7-days old	Randomizing template:	ORANGE
Date and times organisms were born between:	05-26-26 1200 to 05-27-26 1130	Incubator number and shelf location:	6B
Organism source:	AI Batch Ab: 05-27-26	*Artemia* CHM number:	CHM1432
		Drying information for weight determination:	
Transfer bowl information:	pH = 7.94 S.U.	Date / Time in oven:	06-09-26 1130
	Temperature = 25.0 °C	*Initial oven temperature:	60°C
Average transfer volume:	< 0.25 mL	Date / Time out of oven:	06-10-26 1130
		*Final oven temperature:	60°C
		Total drying time:	24 HOURS

*60°C Oven, Thermometer SN: 14-98585

Daily feeding and renewal information:

Day	Date	Morning feeding		Afternoon feeding		Test initiation, renewal, or termination		Salt SW batch used
		Time	Analyst	Time	Analyst	Time	Analyst	
0	06-02-26	1215	JK	1500	JK	1245	JK	05-27-26 A
1	06-03-26	0500	JK	1345	JK	0900	JK	↓
2	06-04-26	0500	JK	1230	JK	0900	JK	06-01-26
3	06-05-26	0500	JK	1100	JK	0800	JK	↓
4	06-06-26	0700	JK	1215	JK	0945	JK	06-04-26
5	06-07-26	0600	JK	1100	JK	0900	JK	↓
6	06-08-26	0500	JK	1100	JK	0845	JK	↓
7	06-09-26					1049	JK	

Chemical analyses:

Parameter	Reporting Limit	Method number	Meter	Serial number
pH	0.1 S.U.	SM 4500-H+ B-2021	Accumet AR20	93312452
Dissolved Oxygen (D.O.)	1.0 mg/L	SM 4500-O H-2021	HACH HQ430d Flexi	SN250100050300
Salinity	1.0 ppt	SM 2520 B-2021	YSI PRO30	18D104324
Alkalinity	5.0 mg $CaCO_3$/L	SM 2320 B-2021	Accumet AR20	93312452
Temperature	0.1 °C	SM 2550B-2010	Digital Thermometer	130604685

Control information:		Acceptance criteria	***Summary of test endpoints:***	
% Mortality:	07.	≤ 20%	**7-day LC_{50}** (mg/L KCl)	523.9
Average weight per initial shrimp:	0.209		**NOEC** (mg/L KCl)	375
Average weight per surviving shrimp:	0.209	≥ 0.20 mg/shrimp	**LOEC** (mg/L KCl)	500
			ChV (mg/L KCl)	433.0
			IC_{25} (mg/L KCl)	436.2

ETS
Environmental Testing Solutions, Inc.

AbKClCR Test Number: **276**

Survival and Growth Data

Day	CONTROL								250 mg KCl/L							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
3	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
4	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
5	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
6	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
7	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
# females with eggs in brood sac																
# females with developing ova in oviducts																
# immature females																
# males																
*A = Pan weight (mg) Tray color code: Grey Analyst: JP Date: 05-22-26	11.57	13.18	14.04	14.16	13.93	10.47	12.73	14.16	14.06	14.64	15.83	11.94	12.73	13.43	14.22	13.84
*B = Pan + Shrimp weight (mg) Analyst: JP Date: 06-11-26	12.59	14.20	15.08	15.22	14.97	11.44	13.82	15.19	15.11	15.83	16.89	12.99	13.90	14.56	15.29	14.95
C = Shrimp weight (mg) = B – A Hand calculated Analyst: JP	1.02	1.02	1.04	1.06	1.04	1.04	1.09	1.03	1.05	1.19	1.06	1.05	1.17	1.13	1.07	1.11
Weight per initial number of shrimp (mg) = C / Initial number of shrimp Hand calculated Analyst: JP	0.204	0.204	0.208	0.212	0.208	0.208	0.218	0.206	0.210	0.238	0.212	0.210	0.234	0.226	0.214	0.222
	Average weight per initial number of shrimp (mg) 0.209								Average weight per initial number of shrimp (mg) 0.221				Percent reduction from control (%) -5.97.			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

Environmental Testing Solutions, Inc.

AbKClCR Test Number: **276**

Survival and Growth Data

Day	375 mg KCl/L								500 mg KCl/L							
	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF
0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
2	S	S	S	S	S	S	S	S	4 1d	4 1d	4 1d	4 1d	3 2d	3 2d	4 1d	4 1d
3	S	S	S	S	S	S	S	S	4	4	4	4	3	3	4	3 1d
4	S	S	S	S	S	S	S	S	3 1d	3 1d	4	3 1d	3	3	4	3
5	S	S	S	S	S	S	S	S	3	3	4	3	3	3	4	3
6	S	S	S	S	S	S	0	S	3	3	4	3	3	3	4	3
7	S	S	S	S	S	S	S	S	3	3	3 2d	3	3	2 1d	3 1d	2 1d
# females with eggs in brood sac																
# females with developing ova in oviducts																
# immature females																
# males																0k 1d
*A = Pan weight (mg) Tray color code: GRE-1 Analyst: JO Date: 05.22.26	12.20	13.97	13.86	14.88	14.17	13.51	14.61	13.26	14.11	12.58	13.85	12.63	15.44	13.41	14.17	12.59
*B = Pan + Shrimp weight (mg) Analyst: JH Date: 06.11.26	13.26	15.05	15.00	15.92	15.27	14.63	15.80	14.30	14.82	13.14	14.38	13.23	16.00	13.79	14.68	12.9
C = Shrimp weight (mg) = B – A Hand calculated Analyst: JH	1.06	1.08	1.14	1.04	1.10	1.12	1.19	1.04	0.71	0.56	0.53	0.60	0.56	0.38	0.51	0.38
Weight per initial number of shrimp (mg) = C / initial number of shrimp Hand calculated Analyst: JH	0.212	0.216	0.228	0.208	0.220	0.224	0.238	0.208	0.142	0.112	0.106	0.120	0.112	0.076	0.102	0.076
	Average weight per initial number of shrimp (mg) 0.219				Percent reduction from control (%) -5.27.				Average weight per initial number of shrimp (mg) 0.106				Percent reduction from control (%) 49.37.			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

Environmental Testing Solutions, Inc.

AbKClCR Test Number: **276**

Survival and Growth Data

Day	750 mg KCl/L								1000 mg KCl/L							
	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV
0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sol	0 Sd	0 Sd	0 Sd
2																
3																
4																
5																
6																
7																
# females with eggs in brood sac																
# females with developing ova in oviducts																
# immature females																
# males																
*A = Pan weight (mg) Tray color code: _____ Analyst:_____ Date: _____																
*B = Pan + Shrimp weight (mg) Analyst:_____ Date: _____																
C = Shrimp weight (mg) = B – A Hand calculated Analyst:_____																06.03.U
Weight per initial number of shrimp (mg) = C / Initial number of shrimp Hand calculated Analyst:_____	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Average weight per initial number of shrimp (mg) 0				Percent reduction from control (%) 100%				Average weight per initial number of shrimp (mg) 0				Percent reduction from control (%) 100%			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

Environmental Testing Solutions, Inc.

Americamysis bahia Chronic Reference Toxicant Test
EPA-821-R-02-014, Method 1007.0

Quality Control
Verification of Data Entry, Calculations, and Statistical Analyses

Test number: 276

Test dates: June 02-09, 2026

Concentration (mg/L KCl)	Replicate	Initial number of larvae	Final number of larvae	A = Pan weight (mg)	B = Pan + Larvae weight (mg)	Larvae weight (mg) = B - A	Weight / Initial number of larvae (mg)	Mean survival (%)	Mean weight (mg)	Coefficient of variation (%)	Percent reduction from control (%)
Control	A	5	5	11.57	12.59	1.02	0.204	100.0	0.209	2.2	Not applicable
	B	5	5	13.18	14.20	1.02	0.204				
	C	5	5	14.04	15.08	1.04	0.208				
	D	5	5	14.16	15.22	1.06	0.212				
	E	5	5	13.93	14.97	1.04	0.208				
	F	5	5	10.40	11.44	1.04	0.208				
	G	5	5	12.73	13.82	1.09	0.218				
	H	5	5	14.16	15.19	1.03	0.206				
250	I	5	5	14.06	15.11	1.05	0.210	100.0	0.221	5.0	-5.9
	J	5	5	14.64	15.83	1.19	0.238				
	K	5	5	15.83	16.89	1.06	0.212				
	L	5	5	11.94	12.99	1.05	0.210				
	M	5	5	12.73	13.90	1.17	0.234				
	N	5	5	13.43	14.56	1.13	0.226				
	O	5	5	14.22	15.29	1.07	0.214				
	P	5	5	13.84	14.95	1.11	0.222				
375	Q	5	5	12.20	13.26	1.06	0.212	100.0	0.219	4.8	-5.2
	R	5	5	13.97	15.05	1.08	0.216				
	S	5	5	13.86	15.00	1.14	0.228				
	T	5	5	14.88	15.92	1.04	0.208				
	U	5	5	14.17	15.27	1.10	0.220				
	V	5	5	13.51	14.63	1.12	0.224				
	W	5	5	14.61	15.80	1.19	0.238				
	X	5	5	13.26	14.30	1.04	0.208				
500	Y	5	3	14.11	14.82	0.71	0.142	55.0	0.106	20.8	49.3
	Z	5	3	12.58	13.14	0.56	0.112				
	AA	5	3	13.85	14.38	0.53	0.106				
	BB	5	3	12.63	13.23	0.60	0.120				
	CC	5	3	15.44	16.00	0.56	0.112				
	DD	5	2	13.41	13.79	0.38	0.076				
	EE	5	3	14.17	14.68	0.51	0.102				
	FF	5	2	12.59	12.97	0.38	0.076				
750	GG	5	0	0.00	0.00	0.00	0.000	0.0	0.000	0.0	100.0
	HH	5	0	0.00	0.00	0.00	0.000				
	II	5	0	0.00	0.00	0.00	0.000				
	JJ	5	0	0.00	0.00	0.00	0.000				
	KK	5	0	0.00	0.00	0.00	0.000				
	LL	5	0	0.00	0.00	0.00	0.000				
	MM	5	0	0.00	0.00	0.00	0.000				
	NN	5	0	0.00	0.00	0.00	0.000				
1000	OO	5	0	0.00	0.00	0.00	0.000	0.0	0.000	0.0	100.0
	PP	5	0	0.00	0.00	0.00	0.000				
	QQ	5	0	0.00	0.00	0.00	0.000				
	RR	5	0	0.00	0.00	0.00	0.000				
	SS	5	0	0.00	0.00	0.00	0.000				
	TT	5	0	0.00	0.00	0.00	0.000				
	UU	5	0	0.00	0.00	0.00	0.000				
	VV	5	0	0.00	0.00	0.00	0.000				

Dunnett's MSD value: 0.0129

PMSD: 6.2

MSD = Minimum Significant Difference

PMSD = Percent Minimum Significant Difference

PMSD is a measure of test precision. The PMSD is the minimum percent difference between the control and treatment that can be declared statistically significant in a whole effluent toxicity test.

Lower PMSD bound determined by USEPA (10th percentile) = 11%.
Upper PMSD bound determined by USEPA (90th percentile) = 37%.
Lower and upper PMSD bounds were determined from the 10th and 90th percentile, respectively, of PMSD data from EPA's WET Interlaboratory Variability Study (USEPA, 2001a; USEPA, 2001b). The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.

USEPA. 2001a, 2001b. Final Report: Interlaboratory Variability Study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods, Volumes 1 and 2-Appendix. EPA-821-B-01-004 and EPA-821-B-01-005. US Environmental Protection Agency, Cincinnati, OH.

ETS
Environmental Testing Solutions, Inc.

Statistical Analyses

Entered and Reviewed by Jim Sumner

Mysid Survival and Growth Test-7 Day Survival

Start Date:	6/2/2026	Test ID:	AbKCICR	Sample ID:	REF-Ref Toxicant
End Date:	6/9/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	SWCHR-EPA-821-R-02-014	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2	3	4	5	6	7	8
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
250	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
375	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
500	0.6000	0.6000	0.6000	0.6000	0.6000	0.4000	0.6000	0.4000
750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

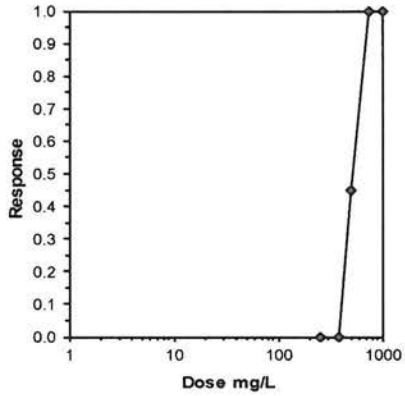
			Transform: Arcsin Square Root					Rank	1-Tailed	Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Resp	Number
D-Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	8			0	40
250	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	8	68.00	48.00	0	40
375	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	8	68.00	48.00	0	40
*500	0.5500	0.5500	0.8357	0.6847	0.8861	11.153	8	36.00	48.00	18	40
750	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	8			40	40
1000	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	8			40	40

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.55437	0.904	-2.4246	7.66092
Equality of variance cannot be confirmed				

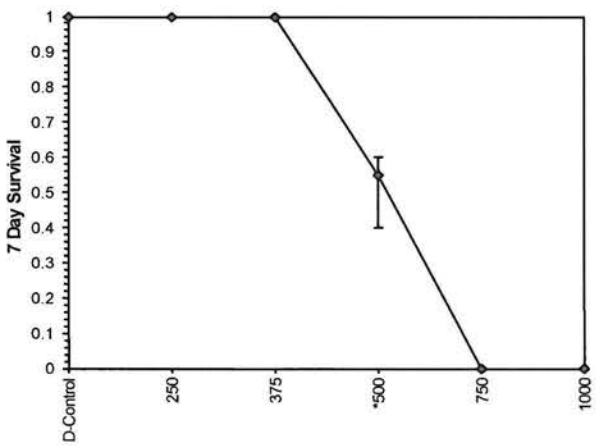
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	375	500	433.013	
Treatments vs D-Control				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	523.94	496.14	553.30
5.0%	523.31	492.54	556.00
10.0%	522.68	488.20	559.59
20.0%	521.43	475.93	571.27
Auto-0.0%	523.94	496.14	553.30



Dose-Response Plot



ETS
Environmental Testing Solutions, Inc.

Statistical Analyses

Entered and Reviewed by Jim Sumner

Mysid Survival and Growth Test-Growth-Weight

Start Date:	6/2/2026	Test ID:	AbKCICR	Sample ID:	REF-Ref Toxicant
End Date:	6/9/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	SWCHR-EPA-821-R-02-014	Test Species:	AB-Americamysis bahia
Comments:					

Conc-mg/L	1	2	3	4	5	6	7	8
D-Control	0.2040	0.2040	0.2080	0.2120	0.2080	0.2080	0.2180	0.2060
250	0.2100	0.2380	0.2120	0.2100	0.2340	0.2260	0.2140	0.2220
375	0.2120	0.2160	0.2280	0.2080	0.2200	0.2240	0.2380	0.2080
500	0.1420	0.1120	0.1060	0.1200	0.1120	0.0760	0.1020	0.0760
750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

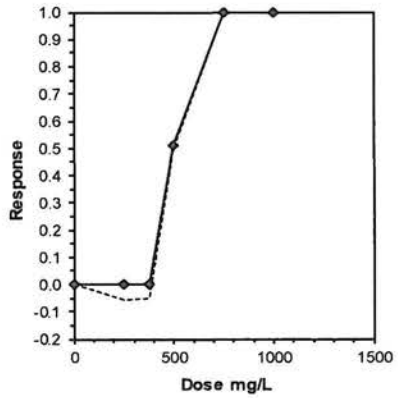
			Transform: Untransformed					1-Tailed			Isotonic	
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	0.2085	1.0000	0.2085	0.2040	0.2180	2.220	8				0.2162	1.0000
250	0.2208	1.0588	0.2208	0.2100	0.2380	5.008	8	-2.666	2.799	0.0129	0.2162	1.0000
375	0.2193	1.0516	0.2193	0.2080	0.2380	4.776	8	-2.340	2.799	0.0129	0.2162	1.0000
500	0.1058	0.5072	0.1058	0.0760	0.1420	20.778	8				0.1058	0.4892
750	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	8				0.0000	0.0000
1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	8				0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.93807	0.884	0.62735	-0.3107
Bartlett's Test indicates equal variances (p = 0.09)	4.87067	9.21035		

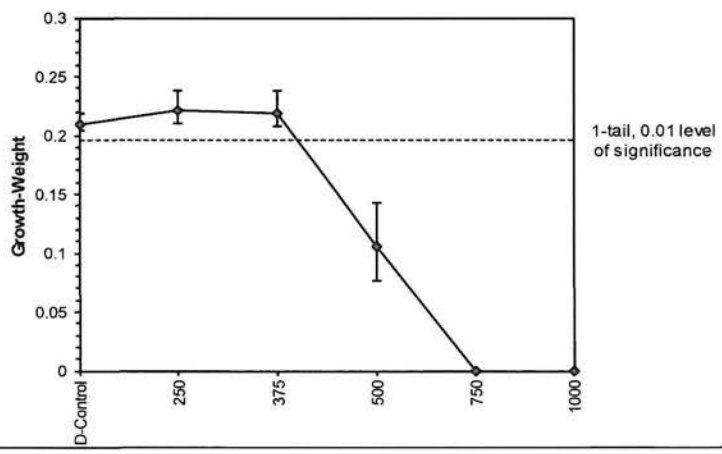
Hypothesis Test (1-tail, 0.01)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test Treatments vs D-Control	375	>375			0.01286	0.06167	0.00036	8.4E-05	0.02859	2, 21

Linear Interpolation (200 Resamples)

Point	mg/L	SD	95% CL		Skew
IC05	387.24	1.11	384.57	389.04	-0.7126
IC10	399.47	1.82	396.11	403.09	0.4374
IC15	411.71	2.64	407.10	417.13	0.5556
IC20	423.94	3.49	418.18	431.18	0.5622
IC25	436.18	4.35	428.97	445.22	0.5556
IC40	472.89	6.97	461.35	487.36	0.5392
IC50	497.36	11.42	482.94	524.77	0.8638



Dose-Response Plot



Environmental Testing Solutions, Inc.

AbKClCR Test Number: **276**

Daily Chemistry:

Temperatures performed at the time of test initiation, renewal or termination by the analyst identified in the Daily Renewal Information table located on Page 1. Alkalinity performed by the analyst identified on the bench sheet specific for this analysis and transcribed to this bench sheet.

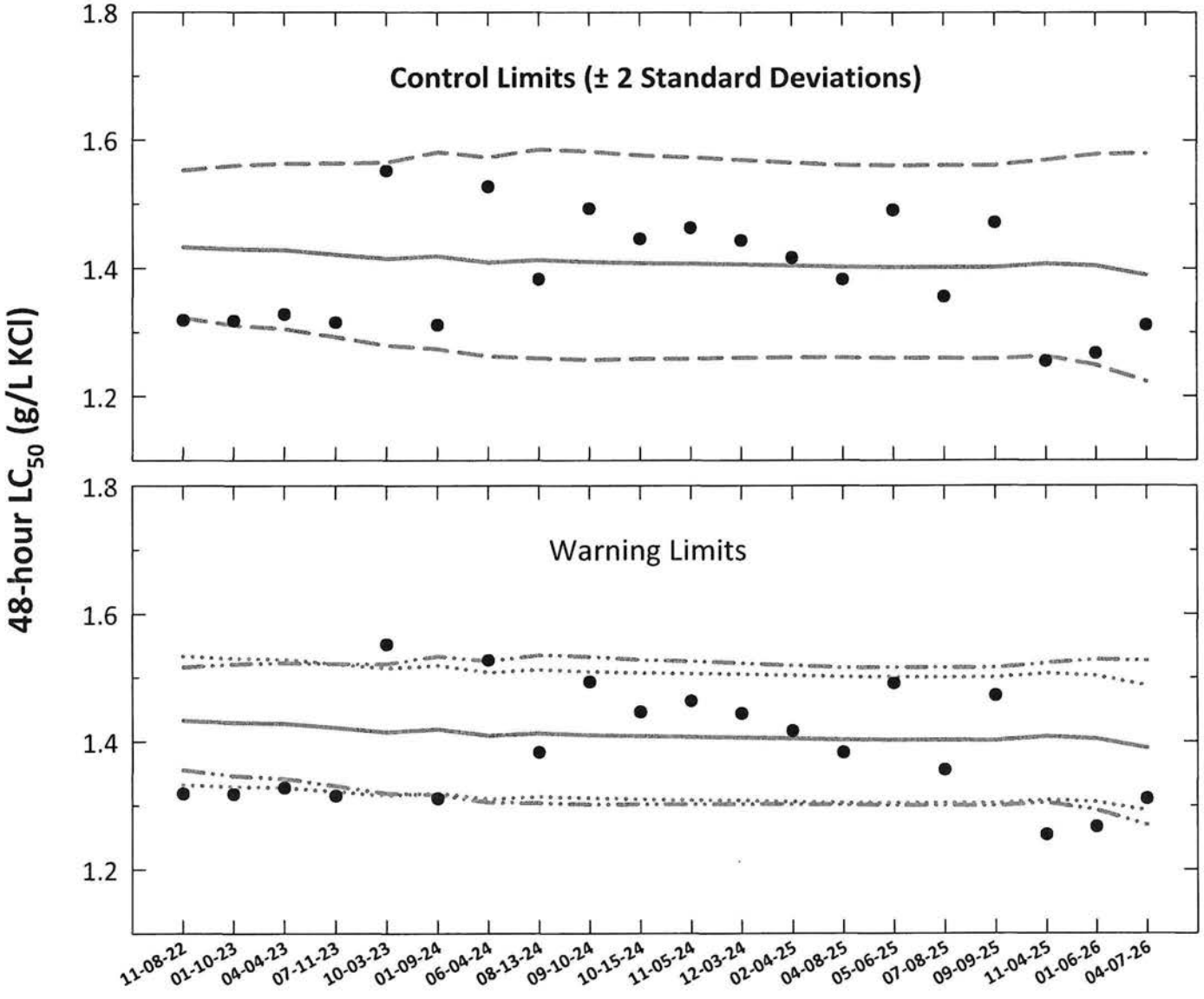
Conc.	Parameter	Day (Analyst identified for each day, performed pH, D.O. and salinity measurements only.) 0		1		2	
	Analyst	XL	XL	XL	XL	XL	XL
CONTROL, Salt SW	pH (S.U.)	8.00	7.97	8.02	7.90	8.00	7.89
	DO (mg/L)	8.4	8.0	8.2	7.9	8.2	8.0
	Salinity (ppt)	25.0	25.1	25.0	25.3	25.0	25.0
	Alkalinity (mg $CaCO_3$/L)	110		——— no 06-07-24 K		120	
	Temperature (°C)	25.2	25.5	25.2	25.6	25.2	25.6
250 mg KCl/L	pH (S.U.)	7.99	7.97	8.01	7.87	7.99	7.90
	DO (mg/L)	8.5	8.0	8.2	7.9	8.3	8.0
	Salinity (ppt)	25.1	25.3	25.3	25.5	25.4	25.4
	Temperature (°C)	25.3	25.7	25.1	25.3	25.2	25.5
375 mg KCl/L	pH (S.U.)	7.99	7.97	8.01	7.88	7.98	7.91
	DO (mg/L)	8.5	8.0	8.2	7.8	8.3	8.0
	Salinity (ppt)	25.3	25.4	25.4	25.6	25.5	25.5
	Temperature (°C)	25.3	25.7	25.1	25.7	25.3	25.4
500 mg KCl/L	pH (S.U.)	7.99	7.98	8.01	7.90	7.99	7.91
	DO (mg/L)	8.5	8.0	8.2	7.9	8.3	7.9
	Salinity (ppt)	25.3	25.5	25.5	25.7	25.6	25.8
	Temperature (°C)	25.3	25.5	25.1	25.5	25.3	25.4
750 mg KCl/L	pH (S.U.)	7.99	7.97				
	DO (mg/L)	8.5	8.0				
	Salinity (ppt)	25.5	26.1				
	Temperature (°C)	25.4	25.6				
1000 mg KCl/L	pH (S.U.)	7.99	7.96				
	DO (mg/L)	8.5	7.9				
	Salinity (ppt)	25.6	25.8				
	Temperature (°C)	25.4	25.6				
		Initial	Final	Initial	Final	Initial	Final

ETS
Environmental Testing Solutions, Inc.

AbKClCR Test Number: **276**

Conc.	Parameter	Day (Analyst identified for each day, performed pH, D.O. and salinity measurements only.) 3		4		5		6	
	Analyst	XL	BSL	BSL	BSL	BSL	XL	XL	XL
CONTROL, Salt SW	pH (S.U.)	7.98	7.93	8.05	7.92	8.13	7.92	8.02	7.74
	DO (mg/L)	8.2	8.2	8.4	7.8	8.3	7.9	8.1	6.4
	Salinity (ppt)	24.9	25.0	25.0	25.1	25.2	25.2	25.3	25.6
	Alkalinity (mg $CaCO_3$/L)			110					
	Temperature (°C)	25.2	25.5	25.2	25.7	25.2	25.7	25.2	25.7
250 mg KCl/L	pH (S.U.)	7.97	7.87	8.05	7.92	8.11	7.90	8.01	7.74
	DO (mg/L)	8.2	7.9	8.6	7.9	8.4	7.8	8.1	6.2
	Salinity (ppt)	25.2	25.3	25.3	25.1	25.4	25.3	25.4	25.5
	Temperature (°C)	25.2	25.6	25.2	25.4	25.3	25.5	25.2	25.7
375 mg KCl/L	pH (S.U.)	7.96	7.90	8.04	7.93	8.11	7.89	8.01	7.71
	DO (mg/L)	8.2	7.9	8.6	7.8	8.4	7.8	8.1	5.7
	Salinity (ppt)	25.3	25.3	25.3	25.3	25.5	25.4	25.5	25.6
	Temperature (°C)	25.3	25.6	25.2	25.5	25.1	25.5	25.3	25.6
500 mg KCl/L	pH (S.U.)	7.97	7.90	8.05	7.96	8.11	7.89	8.01	7.79
	DO (mg/L)	8.2	7.9	8.5	7.8	8.4	7.6	8.0	6.6
	Salinity (ppt)	25.4	25.6	25.4	25.5	25.0	25.7	25.6	25.6
	Temperature (°C)	25.3	25.5	25.2	25.5	25.3	25.4	25.2	25.6
750 mg KCl/L	pH (S.U.)								
	DO (mg/L)								
	Salinity (ppt)								
	Temperature (°C)								
1000 mg KCl/L	pH (S.U.)								
	DO (mg/L)								
	Salinity (ppt)								
	Temperature (°C)								
		Initial	Final	Initial	Final	Initial	Final	Initial	Final

Menidia beryllina
Acute Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.



- ● **48-hour LC_{50}** = median lethal concentration. An estimation of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).
- ——— **Central Tendency** (mean logarithmic LC_{50} converted to anti-logarithmic values)
- – – – **Control Limits** (mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values)
- —·—·— **Laboratory Warning Limits** (mean logarithmic LC_{50} ± 2 coefficent of variations converted to anti-logarithmic values)
- ····· **USEPA Warning Limits** (mean logarithmic LC_{50} ± $S_{A.10}$ converted to anti-logarithmic values, $S_{A.10}$ = 10th percentile of CVs reported nationally by USEPA)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Menidia beryllina
Acute Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.

Test number	Test date	48-hour LC_{50} ToxCal Determination (g/L KCl)	Log_{10} Conversion			Anti-logarithmic Values (g/L KCl)						
			48-hour LC_{50}	CT	S	CT	Control Limits		Laboratory Calculated CV Warning Limits		10th Percentile CV Warning Limits	
							CT - 2S	CT + 2S	CT - 2CV	CT + 2CV	CT - $S_{A.10}$	CT + $S_{A.10}$
1	11-08-22	1.3190	0.1588	0.1563	0.0174	1.4331	1.3231	1.5524	1.3563	1.5163	1.3328	1.5335
2	01-10-23	1.3180	0.1202	0.1552	0.0189	1.4297	1.3106	1.5596	1.3464	1.5205	1.3296	1.5298
3	04-04-23	1.3283	0.1199	0.1548	0.0196	1.4284	1.3053	1.5630	1.3422	1.5227	1.3284	1.5283
4	07-11-23	1.3153	0.1233	0.1528	0.0206	1.4216	1.2927	1.5634	1.3309	1.5213	1.3221	1.5211
5	10-03-23	1.5515	0.1190	0.1507	0.0219	1.4149	1.2793	1.5649	1.3190	1.5209	1.3158	1.5139
6	01-09-24	1.3113	0.1908	0.1520	0.0235	1.4190	1.2738	1.5809	1.3167	1.5331	1.3197	1.5184
7	06-04-24	1.5271	0.1177	0.1490	0.0239	1.4094	1.2627	1.5732	1.3053	1.5256	1.3107	1.5081
8	08-13-24	1.3832	0.1839	0.1502	0.0250	1.4131	1.2594	1.5854	1.3043	1.5351	1.3142	1.5120
9	09-10-24	1.4930	0.1409	0.1493	0.0250	1.4102	1.2569	1.5823	1.3015	1.5322	1.3115	1.5089
10	10-15-24	1.4461	0.1740	0.1488	0.0244	1.4087	1.2589	1.5763	1.3024	1.5277	1.3101	1.5073
11	11-05-24	1.4632	0.1602	0.1484	0.0242	1.4075	1.2593	1.5731	1.3022	1.5251	1.3090	1.5060
12	12-03-24	1.4436	0.1653	0.1480	0.0238	1.4062	1.2603	1.5689	1.3024	1.5219	1.3077	1.5046
13	02-04-25	1.4168	0.1594	0.1476	0.0235	1.4047	1.2609	1.5649	1.3023	1.5188	1.3064	1.5030
14	04-08-25	1.3832	0.1513	0.1470	0.0232	1.4029	1.2607	1.5611	1.3015	1.5156	1.3047	1.5011
15	05-06-25	1.4906	0.1409	0.1468	0.0232	1.4021	1.2597	1.5605	1.3006	1.5150	1.3039	1.5002
16	07-08-25	1.3559	0.1734	0.1468	0.0233	1.4022	1.2596	1.5610	1.3005	1.5154	1.3040	1.5004
17	09-09-25	1.4716	0.1322	0.1467	0.0234	1.4017	1.2587	1.5611	1.2997	1.5154	1.3036	1.4999
18	11-04-25	1.2543	0.1678	0.1484	0.0236	1.4073	1.2623	1.5690	1.3042	1.5222	1.3088	1.5058
19	01-06-26	1.2670	0.0984	0.1473	0.0254	1.4038	1.2488	1.5780	1.2934	1.5279	1.3055	1.5021
20	04-07-26	1.3112	0.1177	0.1430	0.0277	1.3898	1.2232	1.5791	1.2699	1.5260	1.2925	1.4871

Note: **48-hour LC_{50}** = 48-hour median lethal concentration. An estimate of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).

CT = Central tendency of the LC_{50} values.

S = Standard deviation of the LC_{50} values.

Control Limits = Mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values.

Warning Limits = Mean logarithmic LC_{50} ± 2CV or $S_{A.10}$ converted to anti-logarithmic values.

$S_{A.10}$ = Standard deviation corresponding to the 10th percentile of CVs reported nationally by USEPA. ($S_{A.10}$ = 0.07).

CV = Coefficient of variation.

Entered and Reviewed by Jim Sumner

ETS

Acute LC_{50} Whole Effluent Toxicity Test, Species: *Menidia beryllina*
EPA-821-R-02-012, Method 2006.0

Menidia beryllina Potassium Chloride Acute Reference Toxicant Test

MbKClAC # 106

Dilution Preparation:

Test concentrations (mg/L KCl)	1000	1250	1500	1750	2000
mL Stock solution	20	25	30	35	40
mL Dilution water	980	975	970	965	960
Total volume (mL)	1000	1000	1000	1000	1000

A stock solution was prepared by diluting 100 g KCl into 2000 mL deionized water. This 50,000 mg/L KCl stock solution was used to prepare the concentrations evaluated for toxicity.

Stock solution INSS #: 2465

Chemical Analyses:

		Hours		
		0	24	48
Concentration	Analyst	XL	XL	XL
Control, SaltSW	pH (S.U.)	8.04	7.94	7.93
	Dissolved oxygen (mg/L)	8.3	8.2	8.2
	*Salinity (ppt)	25.0	24.8	24.9
	*Alkalinity (mg/L $CaCO_3$)	110		
	*Temperature (°C)	25.4	25.0	24.5
1000 mg/L	pH (S.U.)	8.02	7.95	7.93
	Dissolved oxygen (mg/L)	8.4	8.2	8.2
	*Salinity (ppt)	25.6	25.8	25.7
	*Temperature (°C)	25.6	24.9	24.8
1250 mg/L	pH (S.U.)	8.03	7.96	7.92
	Dissolved oxygen (mg/L)	8.4	8.2	8.1
	*Salinity (ppt)	25.8	25.9	25.9
	*Temperature (°C)	25.6	24.7	24.8
1500 mg/L	pH (S.U.)	8.03	7.96	7.92
	Dissolved oxygen (mg/L)	8.3	8.2	8.1
	*Salinity (ppt)	~~26.2~~ 26.1	26.2	26.1
	*Temperature (°C)	25.6	25.1	24.6
1750 mg/L	pH (S.U.)	8.03	7.96	7.90
	Dissolved oxygen (mg/L)	8.3	8.2	8.1
	*Salinity (ppt)	26.1	26.1	26.2
	*Temperature (°C)	25.6	25.1	24.6
2000 mg/L	pH (S.U.)	8.03	7.96	
	Dissolved oxygen (mg/L)	8.3	8.2	
	*Salinity (ppt)	26.3	26.3	
	*Temperature (°C)	25.5	25.1	

gp 04-08-26

*Analyst identified for each day, performed pH and dissolved oxygen measurements only. Temperature and salinity performed at the time of test initiation or termination by the analyst performing the toxicity test. Alkalinity performed by the analyst identified on the test specific bench sheet and transcribed to this bench sheet.

Chemical analyses:

Parameter	Reporting limit	Method number	Meter	Serial number
pH	0.1 S.U.	SM 4500-H+ B-2021	Accumet AR20	93312452
Dissolved oxygen	1.0 mg/L	SM 4500-O H-2021	HACH HQ430d Flexi	SN250100050300
Salinity	1.0 ppt	SM 2520 B-2021	YSI PRO30	18D104324
Alkalinity	5.0 mg $CaCO_3$/L	SM 2320 B-2021	Accumet AR20	93312452
Temperature	0.1 °C	SM 2550B-2010	Digital Thermometer	130664705

ETS

Acute LC_{50} Whole Effluent Toxicity Test, Species: Menidia beryllina
EPA-821-R-02-012, Method 2006.0

Menidia beryllina Potassium Chloride Acute Reference Toxicant Test

MbKClAC # 106

Hours	Date	Feeding		Test Initiation or Termination		Location	Randomizing	SaltSW Batch
		Time	Analyst	Time	Analyst	Incubator/Shelf	Template	
0 Initiation	04-07-26	* 1125	JP	1416	JP	1C	Yellow	03-30-26B
24	04-08-26			1457	JP			
48 Termination	04-09-26			1405	JP			

*Test organisms were fed in holding 2 to 5 hours prior to test initiation. Test organisms were not fed during the test.

Test Organism Information:

Organism Source:	Aquatic Indicators, Inc.
Batch (AI Batch Mb):	03-28-26
Age (9 to 14 days old):	10 days old
Date organisms were born:	03-27-26 1200 to 03-28-26 1130
Average transfer volume:	< 0.25 mL
Transfer bowl information:	pH (S.U.): 7.82
	Temperature (°C) 24.5°C

Survival Data **(number of living organisms):**

Hours	Control		1000 mg/L		1250 mg/L		1500 mg/L		1750 mg/L		2000 mg/L	
	Replicate		Replicate		Replicate		Replicate		Replicate		Replicate	
	A	B	C	D	E	F	G	H	I	J	K	L
0 Initiation	10	10	10	10	10	10	10	10	10	10	10	10
24	9 d	10	10	9 d	9 2d	9 d	7 3d	4 6d	0 1,2d	1 9d	0 1,2d	0 1,2d
48 Termination	9	9 d	10	9	5 3d	5 4d	3 4d	1 3d	0	1	0	0
Mean Survival	90%		95%		50%		20%		5%		0%	

Comment codes: d = dead, u = unhealthy, s = stressed

Statistics:

Method	PROBIT
Lower 95% confidence limit (mg KCl/L)	1173.1
Upper 95% confidence limit (mg KCl/L)	1404.4
48-hour LC_{50} (mg KCl/L)	1311.2

Comments:

Test Reviewed by:

ETS
Environmental Testing Solutions, Inc.

Statistical Analyses

Acute Silverside Test-24 Hr Survival

Start Date:	4/7/2026	Test ID:	MbKClAC	Sample ID:	REF-Ref Toxicant
End Date:	4/9/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	MB-Menidia beryllina
Comments:					

Conc-mg/L	1	2
D-Control	0.9000	1.0000
1000	1.0000	0.9000
1250	0.8000	0.9000
1500	0.7000	0.4000
1750	0.0000	0.1000
2000	0.0000	0.0000

			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2				1	20
1000	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2	0.000	2.850	0.3967	1	20
1250	0.8500	0.8947	1.1781	1.1071	1.2490	8.517	2	1.095	2.850	0.3967	3	20
*1500	0.5500	0.5789	0.8379	0.6847	0.9912	25.859	2	3.539	2.850	0.3967	9	20
*1750	0.0500	0.0526	0.2403	0.1588	0.3218	47.963	2	7.833	2.850	0.3967	19	20
2000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2				20	20

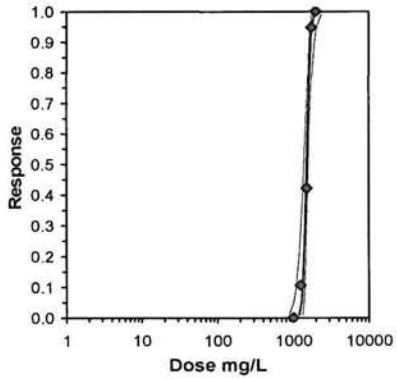
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Bartlett's Test indicates equal variances (p = 0.96)	0.64424	13.2767		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	1250	1500	1369.31		0.29708	0.31492	0.42616	0.01937	0.00226	4, 5
Treatments vs D-Control										

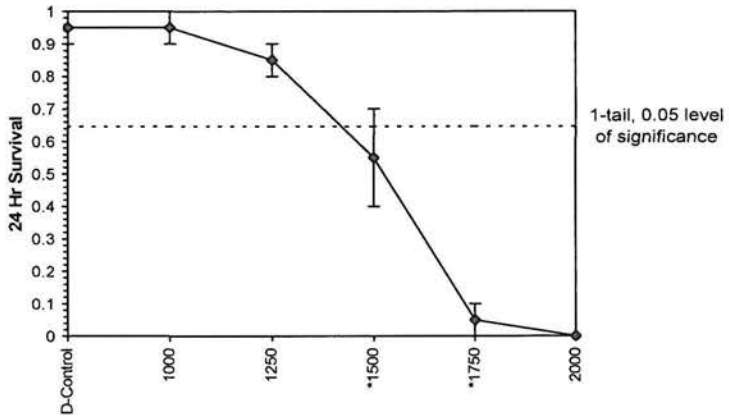
Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	23.0185	6.10299	11.0567	34.9804	0.05	1.21562	7.81472	0.74926	3.17939	0.04344	13
Intercept	-68.185	19.5018	-106.41	-29.961							
TSCR	0.06702	0.03662	-0.0048	0.13879							

Point	Probits	mg/L	95% Fiducial Limits	
EC01	2.674	1197.65	880.394	1327.24
EC05	3.355	1282.14	1012.15	1391.55
EC10	3.718	1329.59	1089.51	1428.11
EC15	3.964	1362.6	1144.47	1454
EC20	4.158	1389.41	1189.64	1475.5
EC25	4.326	1412.83	1229.33	1494.79
EC40	4.747	1473.63	1331.84	1548.54
EC50	5.000	1511.45	1393.37	1586.6
EC60	5.253	1550.24	1452.15	1631.84
EC75	5.674	1616.95	1537.28	1730.08
EC80	5.842	1644.21	1566.06	1777.89
EC85	6.036	1676.56	1596.73	1839.37
EC90	6.282	1718.18	1632.2	1924.44
EC95	6.645	1781.77	1681.03	2064.18
EC99	7.326	1907.47	1768.02	2365.67



Dose-Response Plot



ETS
Environmental Testing Solutions, Inc.

Statistical Analyses

Reviewed and Reviewed by Jim Sumner

Acute Silverside Test-48 Hr Survival

Start Date:	4/7/2026	Test ID:	MbKCIAC	Sample ID:	REF-Ref Toxicant
End Date:	4/9/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	MB-Menidia beryllina
Comments:					

Conc-mg/L	1	2
D-Control	0.9000	0.9000
1000	1.0000	0.9000
1250	0.5000	0.5000
1500	0.3000	0.1000
1750	0.0000	0.1000
2000	0.0000	0.0000

			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	0.9000	1.0000	1.2490	1.2490	1.2490	0.000	2				2	20
1000	0.9500	1.0556	1.3305	1.2490	1.4120	8.661	2	-0.745	2.850	0.3117	1	20
*1250	0.5000	0.5556	0.7854	0.7854	0.7854	0.000	2	4.239	2.850	0.3117	10	20
*1500	0.2000	0.2222	0.4507	0.3218	0.5796	40.461	2	7.299	2.850	0.3117	16	20
*1750	0.0500	0.0556	0.2403	0.1588	0.3218	47.963	2	9.223	2.850	0.3117	19	20
2000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2				20	20

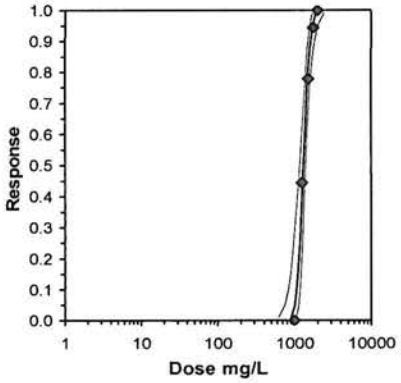
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	1000	1250	1118.03		0.25039	0.27822	0.459	0.01196	6.0E-04	4, 5
Treatments vs D-Control										

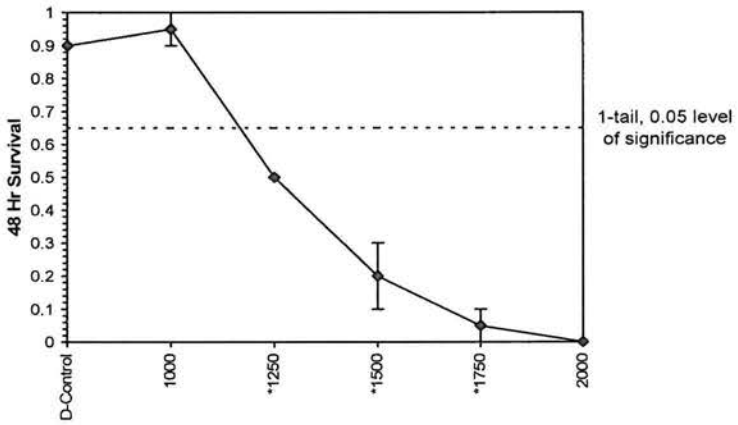
Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	14.4131	3.25295	8.03731	20.7889	0.1	1.51553	7.81472	0.67869	3.11767	0.06938	12
Intercept	-39.935	10.2313	-59.989	-19.882							
TSCR	0.07073	0.05165	-0.0305	0.17195							

Point	Probits	mg/L	95% Fiducial Limits	
EC01	2.674	904.2	621.111	1052.68
EC05	3.355	1008.2	752.57	1138.91
EC10	3.718	1068.45	832.944	1188.78
EC15	3.964	1111.12	891.46	1224.34
EC20	4.158	1146.24	940.441	1253.96
EC25	4.326	1177.26	984.159	1280.51
EC40	4.747	1259.19	1100.4	1353.8
EC50	5.000	1311.2	1173.09	1404.36
EC60	5.253	1365.36	1245.66	1462.59
EC75	5.674	1460.38	1359.11	1584.61
EC80	5.842	1499.9	1400.16	1643.74
EC85	6.036	1547.32	1445.23	1720.62
EC90	6.282	1609.11	1498.69	1828.93
EC95	6.645	1705.26	1574.08	2011.69
EC99	7.326	1901.41	1712.59	2423.84

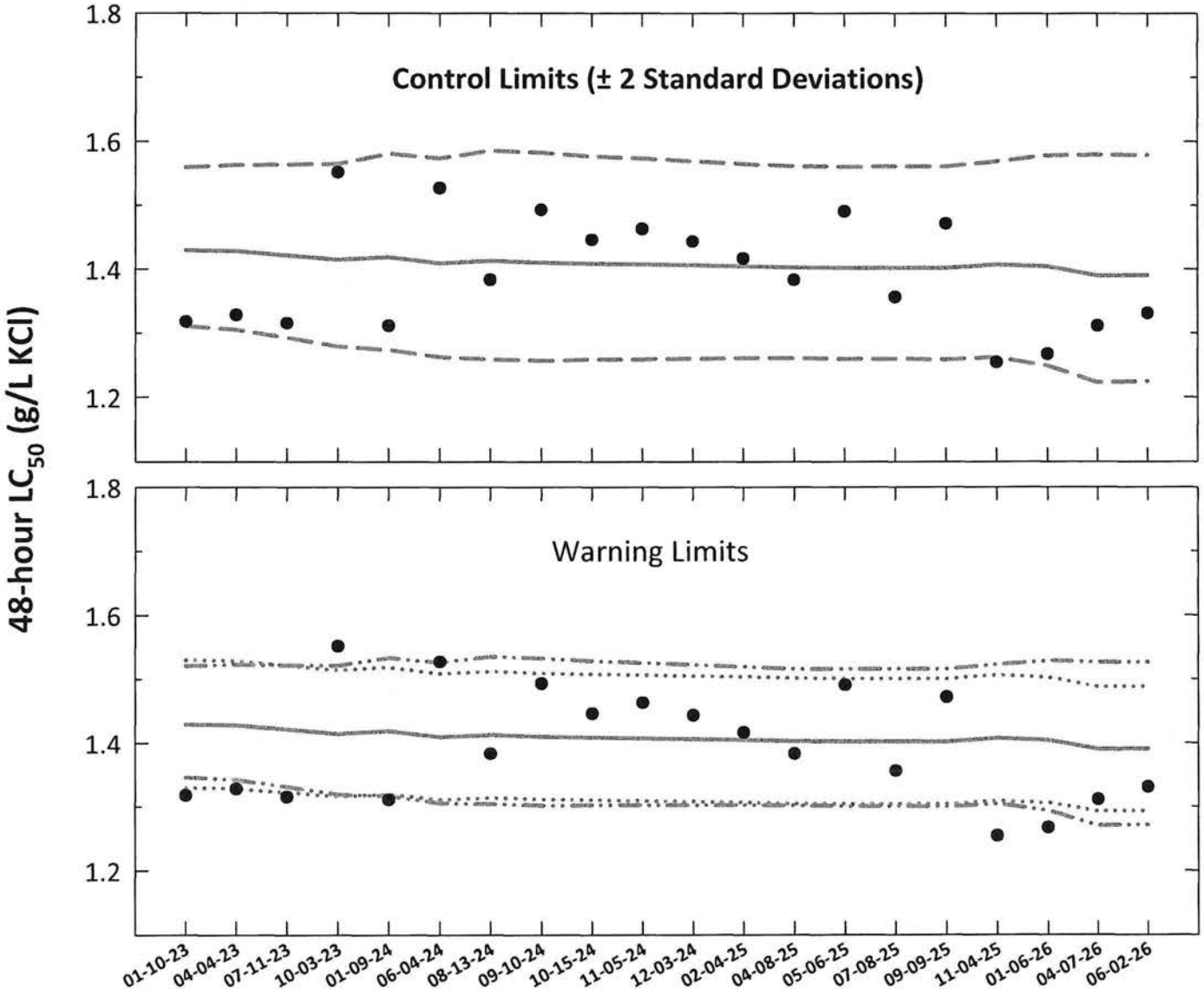


Dose-Response Plot



ETS
Environmental Testing Solutions, Inc.

Menidia beryllina
Acute Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.



- ● **48-hour LC_{50}** = median lethal concentration. An estimation of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).
- ——— **Central Tendency** (mean logarithmic LC_{50} converted to anti-logarithmic values)
- – – – **Control Limits** (mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values)
- —·—·— **Laboratory Warning Limits** (mean logarithmic LC_{50} ± 2 coefficent of variations converted to anti-logarithmic values)
- ····· **USEPA Warning Limits** (mean logarithmic LC_{50} ± $S_{A.10}$ converted to anti-logarithmic values, $S_{A.10}$ = 10th percentile of CVs reported nationally by USEPA)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Menidia beryllina
Acute Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.

Test number	Test date	48-hour LC_{50} ToxCal Determination (g/L KCl)	Log_{10} Conversion			Anti-logarithmic Values (g/L KCl)						
			48-hour LC_{50}	CT	S	CT	Control Limits		Laboratory Calculated CV Warning Limits		10th Percentile CV Warning Limits	
							CT - 2S	CT + 2S	CT - 2CV	CT + 2CV	CT - $S_{A.10}$	CT + $S_{A.10}$
1	**01-10-23**	**1.3180**	0.1202	0.1552	0.0189	1.4297	1.3106	1.5596	1.3464	1.5205	1.3296	1.5298
2	**04-04-23**	**1.3283**	0.1199	0.1548	0.0196	1.4284	1.3053	1.5630	1.3422	1.5227	1.3284	1.5283
3	**07-11-23**	**1.3153**	0.1233	0.1528	0.0206	1.4216	1.2927	1.5634	1.3309	1.5213	1.3221	1.5211
4	**10-03-23**	**1.5515**	0.1190	0.1507	0.0219	1.4149	1.2793	1.5649	1.3190	1.5209	1.3158	1.5139
5	**01-09-24**	**1.3113**	0.1908	0.1520	0.0235	1.4190	1.2738	1.5809	1.3167	1.5331	1.3197	1.5184
6	**06-04-24**	**1.5271**	0.1177	0.1490	0.0239	1.4094	1.2627	1.5732	1.3053	1.5256	1.3107	1.5081
7	**08-13-24**	**1.3832**	0.1839	0.1502	0.0250	1.4131	1.2594	1.5854	1.3043	1.5351	1.3142	1.5120
8	**09-10-24**	**1.4930**	0.1409	0.1493	0.0250	1.4102	1.2569	1.5823	1.3015	1.5322	1.3115	1.5089
9	**10-15-24**	**1.4461**	0.1740	0.1488	0.0244	1.4087	1.2589	1.5763	1.3024	1.5277	1.3101	1.5073
10	**11-05-24**	**1.4632**	0.1602	0.1484	0.0242	1.4075	1.2593	1.5731	1.3022	1.5251	1.3090	1.5060
11	**12-03-24**	**1.4436**	0.1653	0.1480	0.0238	1.4062	1.2603	1.5689	1.3024	1.5219	1.3077	1.5046
12	**02-04-25**	**1.4168**	0.1594	0.1476	0.0235	1.4047	1.2609	1.5649	1.3023	1.5188	1.3064	1.5030
13	**04-08-25**	**1.3832**	0.1513	0.1470	0.0232	1.4029	1.2607	1.5611	1.3015	1.5156	1.3047	1.5011
14	**05-06-25**	**1.4906**	0.1409	0.1468	0.0232	1.4021	1.2597	1.5605	1.3006	1.5150	1.3039	1.5002
15	**07-08-25**	**1.3559**	0.1734	0.1468	0.0233	1.4022	1.2596	1.5610	1.3005	1.5154	1.3040	1.5004
16	**09-09-25**	**1.4716**	0.1322	0.1467	0.0234	1.4017	1.2587	1.5611	1.2997	1.5154	1.3036	1.4999
17	**11-04-25**	**1.2543**	0.1678	0.1484	0.0236	1.4073	1.2623	1.5690	1.3042	1.5222	1.3088	1.5058
18	**01-06-26**	**1.2670**	0.0984	0.1473	0.0254	1.4038	1.2488	1.5780	1.2934	1.5279	1.3055	1.5021
19	**04-07-26**	**1.3112**	0.1177	0.1430	0.0277	1.3898	1.2232	1.5791	1.2699	1.5260	1.2925	1.4871
20	**06-02-26**	**1.3309**	0.1241	0.1432	0.0276	1.3904	1.2246	1.5787	1.2712	1.5258	1.2931	1.4878

Note: **48-hour LC_{50}** = 48-hour median lethal concentration. An estimate of the potassium chloride concentration which is lethal to 50% of the test organisms in 48-hours (calculated using ToxCalc).

CT = Central tendency of the LC_{50} values.

S = Standard deviation of the LC_{50} values.

Control Limits = Mean logarithmic LC_{50} ± 2 standard deviations converted to anti-logarithmic values.

Warning Limits = Mean logarithmic LC_{50} ± 2CV or $S_{A.10}$ converted to anti-logarithmic values.

$S_{A.10}$ = Standard deviation corresponding to the 10th percentile of CVs reported nationally by USEPA. ($S_{A.10}$ = 0.07).

CV = Coefficient of variation.

Entered and Reviewed by Jim Summer

ETS

Acute LC_{50} Whole Effluent Toxicity Test, Species: *Menidia beryllina*
EPA-821-R-02-012, Method 2006.0

Menidia beryllina Potassium Chloride Acute Reference Toxicant Test

MbKClAC # 107

Dilution Preparation:

Test concentrations (mg/L KCl)	1000	1250	1500	1750	2000
mL Stock solution	20	25	30	35	40
mL Dilution water	980	975	970	965	960
Total volume (mL)	1000	1000	1000	1000	1000

A stock solution was prepared by diluting 100 g KCl into 2000 mL deionized water. This 50,000 mg/L KCl stock solution was used to prepare the concentrations evaluated for toxicity.

Stock solution INSS #: 2478

Chemical Analyses:

		Hours		
		0	24	48
Concentration	Analyst	XL	XL	XL
Control, SaltSW	pH (S.U.)	8.00	7.99	7.89
	Dissolved oxygen (mg/L)	8.4	8.0	7.8
	*Salinity (ppt)	25.0	25.3	26.0
	*Alkalinity (mg/L $CaCO_3$)	110		
	*Temperature (°C)	25.5	25.2	25.3
1000 mg/L	pH (S.U.)	7.99	7.98	7.89
	Dissolved oxygen (mg/L)	8.5	8.0	7.9
	*Salinity (ppt)	25.6	26.0	26.6
	*Temperature (°C)	25.5	25.4	25.2
1250 mg/L	pH (S.U.)	7.99	7.98	7.90
	Dissolved oxygen (mg/L)	8.5	8.0	7.9
	*Salinity (ppt)	25.9	26.4	26.8
	*Temperature (°C)	25.6	25.4	25.6
1500 mg/L	pH (S.U.)	8.00	7.97	7.90
	Dissolved oxygen (mg/L)	8.6	8.0	7.9
	*Salinity (ppt)	26.1	26.9	27.5
	*Temperature (°C)	24.4	25.4	25.6
1750 mg/L	pH (S.U.)	8.00	7.96	
	Dissolved oxygen (mg/L)	8.5	8.0	
	*Salinity (ppt)	26.1	26.4	
	*Temperature (°C)	25.5	25.4	
2000 mg/L	pH (S.U.)	8.00	7.93	
	Dissolved oxygen (mg/L)	8.5	7.8	
	*Salinity (ppt)	26.2	26.8	
	*Temperature (°C)	25.4	25.2	

*Analyst identified for each day, performed pH and dissolved oxygen measurements only. Temperatu and salinity performed at the time of test initiation or termination by the analyst performing the toxici test. Alkalinity performed by the analyst identified on the test specific bench sheet and transcribed to this bench sheet.

Chemical analyses:

Parameter	Reporting limit	Method number	Meter	Serial number
pH	0.1 S.U.	SM 4500-H+ B-2021	Accumet AR20	93312452
Dissolved oxygen	1.0 mg/L	SM 4500-O H-2021	HACH HQ430d Flexi	SN250100050300
Salinity	1.0 ppt	SM 2520 B-2021	YSI PRO30	18D104324
Alkalinity	5.0 mg $CaCO_3$/L	SM 2320 B-2021	Accumet AR20	93312452
Temperature	0.1 °C	SM 2550B-2010	Digital Thermometer	13066470S

ETS

Acute LC_{50} Whole Effluent Toxicity Test, Species: Menidia beryllina
EPA-821-R-02-012, Method 2006.0

Menidia beryllina Potassium Chloride Acute Reference Toxicant Test

MbKClAC # 107

Hours	Date	Feeding		Test Initiation or Termination		Location	Randomizing	SaltSW Batch
		Time	Analyst	Time	Analyst	Incubator/Shelf	Template	
0 Initiation	06-02-26	* 1215	H	1448	ZP	1B	1,9h+ Blue	05-27-26 A
24	06-03-26			1453	ZP			
48 Termination	06-04-26			1450	ZP			

*Test organisms were fed in holding 2 to 5 hours prior to test initiation. Test organisms were not fed during the test.

Test Organism Information:

Organism Source:	Aquatic Indicators, Inc.
Batch (AI Batch Mb):	9-10 DAYS
Age (9 to 14 days old):	05-23-26
Date organisms were born:	05-22-26 1200 TO 05-23-26 1130
Average transfer volume:	< 0.25 mL
Transfer bowl information:	pH (S.U.): 7.41
	Temperature (°C): 24.4°C

Survival Data **(number of living organisms):**

Hours	Control		1000 mg/L		1250 mg/L		1500 mg/L		1750 mg/L		2000 mg/L	
	Replicate		Replicate		Replicate		Replicate		Replicate		Replicate	
	A	B	C	D	E	F	G	H	I	J	K	L
0 Initiation	10	10	10	10	10	10	10	10	10	10	10	10
24	10	10	10	9 d	9 d	10	6 d	4 d	0 d	0 d	0 d	0 d
48 Termination	10	10	10	9	7 d	9	1 d	2 d	0	0	0	0
Mean Survival	100%		95%		80%		15%		0%		0%	

Comment codes: d = dead, u = unhealthy, s = stressed

Statistics:

Method	PROBIT
Lower 95% confidence limit (mg KCl/L)	1256.6
Upper 95% confidence limit (mg KCl/L)	1401.1
48-hour LC_{50} (mg KCl/L)	1330.9

Comments:

Test Reviewed by: H

ETS
Environmental Testing Solutions, Inc.

Statistical Analyses

Acute Silverside Test-24 Hr Survival

Start Date:	6/2/2026	Test ID:	MbKClAC	Sample ID:	REF-Ref Toxicant
End Date:	6/4/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	MB-Menidia beryllina
Comments:					

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1000	1.0000	0.9000
1250	0.9000	1.0000
1500	0.6000	0.4000
1750	0.0000	0.0000
2000	0.0000	0.0000

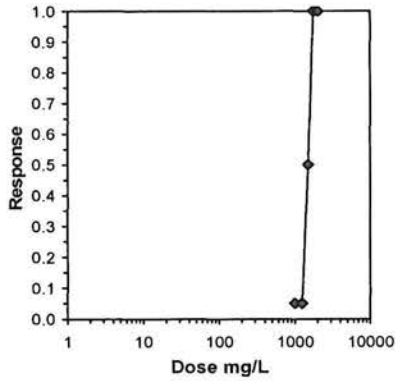
			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20
1000	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	0.842	2.850	0.2758	1	20
1250	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	0.842	2.850	0.2758	1	20
*1500	0.5000	0.5000	0.7854	0.6847	0.8861	18.129	2	6.475	2.850	0.2758	10	20
*1750	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	12.949	2.850	0.2758	20	20
2000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2				20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

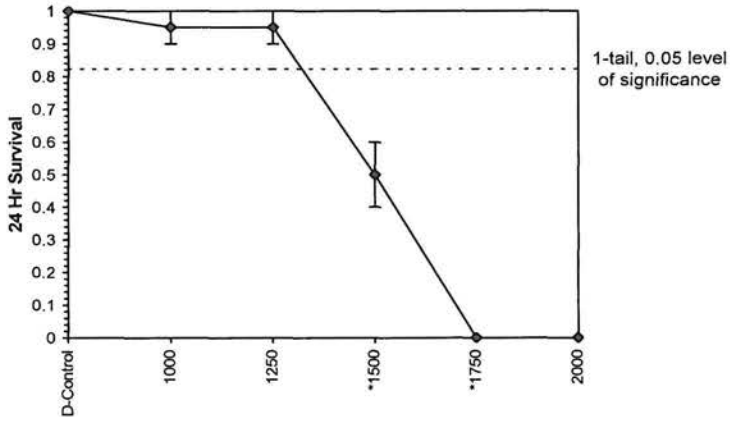
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	1250	1500	1369.31		0.15228	0.15619	0.57095	0.00937	2.0E-04	4, 5
Treatments vs D-Control										

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%			
5.0%	1483.74	1421.63	1548.57
10.0%	1485.54	1416.91	1557.49
20.0%	1489.14	1399.3	1584.75
Auto-5.0%	1483.74	1421.63	1548.57



Dose-Response Plot



ETS
Environmental Testing Solutions, Inc.

Statistical Analyses

Acute Silverside Test-48 Hr Survival

Start Date:	6/2/2026	Test ID:	MbKClAC	Sample ID:	REF-Ref Toxicant
End Date:	6/4/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	MB-Menidia beryllina
Comments:					

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1000	1.0000	0.9000
1250	0.7000	0.9000
1500	0.1000	0.2000
1750	0.0000	0.0000
2000	0.0000	0.0000

			Transform: Arcsin Square Root						1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20
1000	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	0.766	2.850	0.3032	1	20
1250	0.8000	0.8000	1.1201	0.9912	1.2490	16.280	2	2.744	2.850	0.3032	4	20
*1500	0.1500	0.1500	0.3927	0.3218	0.4636	25.550	2	9.580	2.850	0.3032	17	20
*1750	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	11.779	2.850	0.3032	20	20
2000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2				20	20

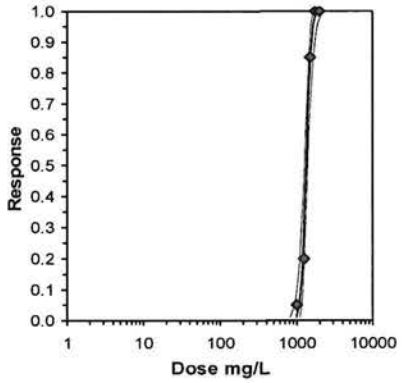
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	1250	1500	1369.31		0.17369	0.17814	0.65062	0.01132	2.3E-04	4, 5
Treatments vs D-Control										

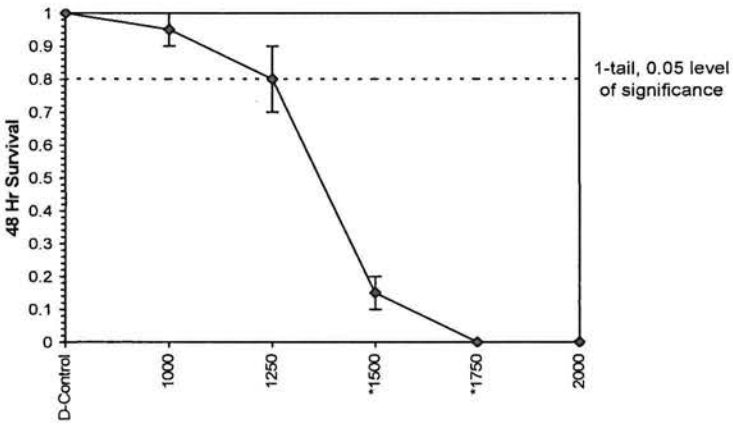
Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	18.113	3.32071	11.6044	24.6216	0	3.90199	7.81472	0.27224	3.12413	0.05521	4
Intercept	-51.587	10.4057	-71.983	-31.192							
TSCR											

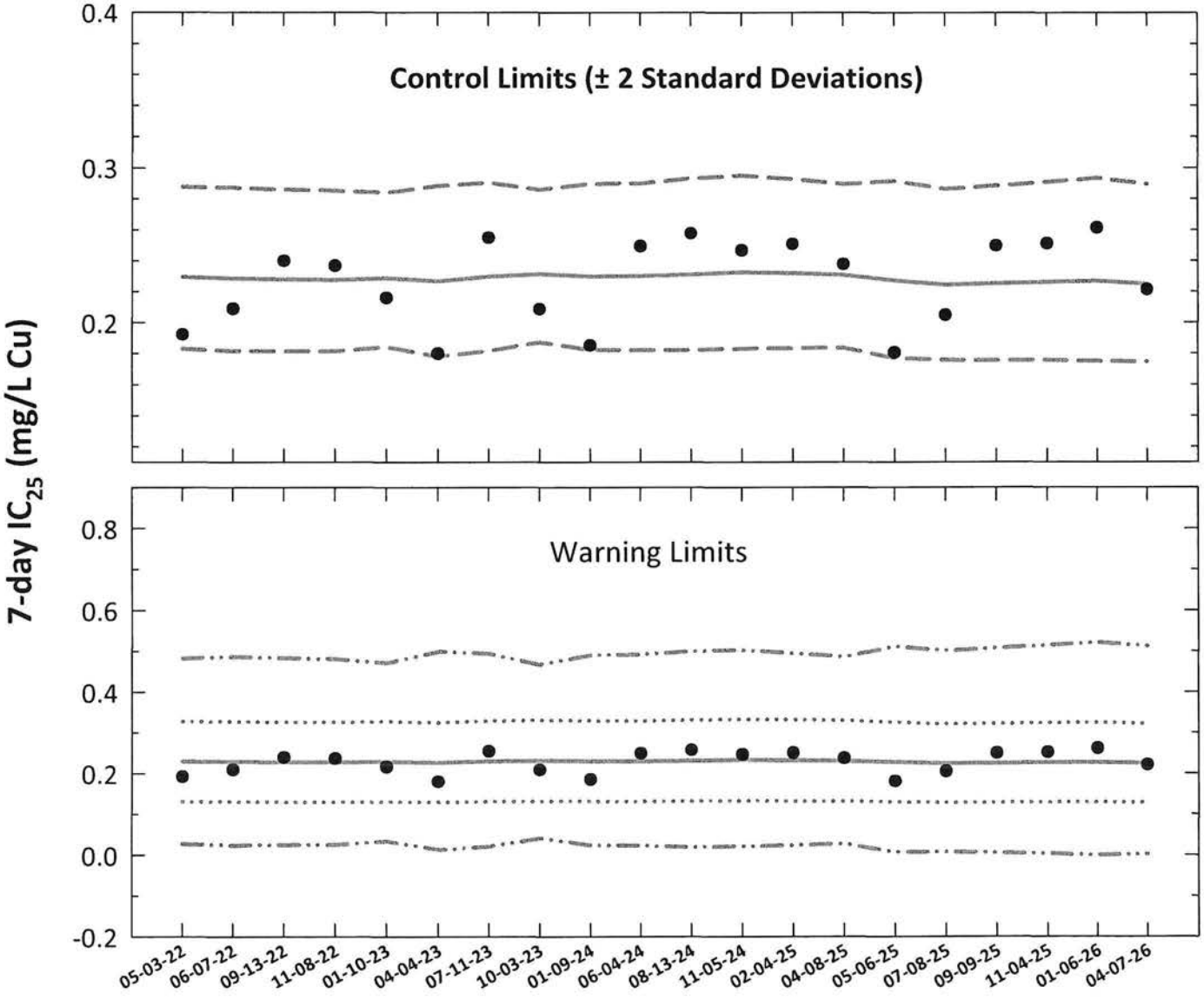
Point	Probits	mg/L	95% Fiducial Limits	
EC01	2.674	990.139	820.485	1087.96
EC05	3.355	1079.74	935.954	1163.68
EC10	3.718	1130.78	1002.94	1207.47
EC15	3.964	1166.57	1050.07	1238.83
EC20	4.158	1195.82	1088.45	1265.08
EC25	4.326	1221.5	1121.87	1288.77
EC40	4.747	1288.68	1206.63	1355
EC50	5.000	1330.86	1256.56	1401.06
EC60	5.253	1374.42	1304.46	1453.21
EC75	5.674	1450	1378.64	1554.9
EC80	5.842	1481.14	1406.48	1600.34
EC85	6.036	1518.28	1438.15	1656.69
EC90	6.282	1566.33	1477.25	1732.48
EC95	6.645	1640.37	1534.61	1854.34
EC99	7.326	1788.82	1643.27	2112.93



Dose-Response Plot



Menidia beryllina
Chronic Reference Toxicant Control Chart
Source: Aquatic Indicators, Inc.



Test date

- ● **7-day IC_{25}** = 25% inhibition concentration. An estimation of the copper concentration which would cause a 25% reduction in *Menidia* growth (calculated using ToxCalc).
- ——— **Central Tendency** (mean logarithmic IC_{25} converted to anti-logarithmic values)
- – – – **Control Limits** (mean logarithmic IC_{25} ± 2 standard deviations converted to anti-logarithmic values)
- —·—· **Laboratory Warning Limits** (mean logarithmic IC_{25} ± 2 coefficent of variations converted to anti-logarithmic values)
- ····· **USEPA Warning Limits** (mean logarithmic IC_{25} ± $S_{A.75}$ converted to anti-logarithmic values, $S_{A.75}$ = 75th percentile of CVs reported nationally by USEPA)

Entered and Reviewed by Jim Sumner

ETS
Environmental Testing Solutions, Inc.

Menidia beryllina

Chronic Reference Toxicant Control Chart

Source: Aquatic Indicators, Inc.

Test number	Test date	7-day IC_{25} ToxCal Determination (mg/L Cu)	Log_{10} Conversion			Anti-logarithmic Values (mg/L Cu)						
			7-day IC_{25}	CT	S	CT	Control Limits		Laboratory Calculated CV Warning Limits		75th Percentile CV Warning Limits	
							CT - 2S	CT + 2S	CT - 2CV	CT + 2CV	CT - $S_{A.75}$	CT + $S_{A.75}$
1	**05-03-22**	**0.1925**	-0.7156	-0.6390	0.0490	0.2296	0.1832	0.2877	0.0276	0.4827	0.1309	0.3283
2	**06-07-22**	**0.2088**	-0.6803	-0.6415	0.0498	0.2283	0.1815	0.2872	0.0233	0.4861	0.1301	0.3265
3	**09-13-22**	**0.2399**	-0.6200	-0.6422	0.0494	0.2279	0.1816	0.2861	0.0246	0.4831	0.1299	0.3259
4	**11-08-22**	**0.2368**	-0.6256	-0.6428	0.0491	0.2276	0.1816	0.2853	0.0254	0.4811	0.1297	0.3255
5	**01-10-23**	**0.2159**	-0.6657	-0.6408	0.0471	0.2287	0.1841	0.2841	0.0337	0.4708	0.1304	0.3270
6	**04-04-23**	**0.1799**	-0.7450	-0.6447	0.0523	0.2266	0.1781	0.2884	0.0125	0.4991	0.1292	0.3241
7	**07-11-23**	**0.2548**	-0.5938	-0.6387	0.0509	0.2298	0.1818	0.2905	0.0208	0.4939	0.1310	0.3286
8	**10-03-23**	**0.2086**	-0.6807	-0.6356	0.0459	0.2314	0.1873	0.2859	0.0408	0.4669	0.1319	0.3309
9	**01-09-24**	**0.1852**	-0.7324	-0.6387	0.0502	0.2298	0.1824	0.2896	0.0233	0.4900	0.1310	0.3286
10	**06-04-24**	**0.2493**	-0.6033	-0.6383	0.0504	0.2300	0.1823	0.2901	0.0227	0.4914	0.1311	0.3288
11	**08-13-24**	**0.2577**	-0.5889	-0.6360	0.0516	0.2312	0.1823	0.2932	0.0196	0.4996	0.1318	0.3306
12	**11-05-24**	**0.2466**	-0.6080	-0.6338	0.0518	0.2324	0.1831	0.2950	0.0201	0.5019	0.1325	0.3323
13	**02-04-25**	**0.2507**	-0.6008	-0.6349	0.0507	0.2318	0.1835	0.2928	0.0234	0.4950	0.1321	0.3314
14	**04-08-25**	**0.2377**	-0.6240	-0.6369	0.0494	0.2307	0.1838	0.2896	0.0273	0.4861	0.1315	0.3299
15	**05-06-25**	**0.1805**	-0.7435	-0.6438	0.0542	0.2271	0.1769	0.2915	0.0062	0.5105	0.1294	0.3247
16	**07-08-25**	**0.2047**	-0.6889	-0.6492	0.0530	0.2243	0.1757	0.2863	0.0077	0.5007	0.1278	0.3207
17	**09-09-25**	**0.2496**	-0.6028	-0.6477	0.0539	0.2251	0.1756	0.2885	0.0052	0.5069	0.1283	0.3219
18	**11-04-25**	**0.2509**	-0.6005	-0.6462	0.0548	0.2259	0.1755	0.2907	0.0027	0.5131	0.1287	0.3230
19	**01-06-26**	**0.2611**	-0.5832	-0.6448	0.0561	0.2266	0.1750	0.2934	-0.0011	0.5215	0.1292	0.3240
20	**04-07-26**	**0.2212**	-0.6552	-0.6479	0.0548	0.2250	0.1748	0.2895	0.0021	0.5118	0.1282	0.3217

Note:

7-day IC_{25} = 25% inhibition concentration. An estimation of the copper concentration that would cause a 25% reduction in *Menidia* growth (calculated using ToxCalc).

CT = Central tendency of the IC_{25} values.

S = Standard deviation of the IC_{25} values.

Control Limits = Mean logarithmic IC_{25} ± 2 standard deviations converted to anti-logarithmic values.

Warning Limits = Mean logarithmic IC_{25} ± 2CV or $S_{A.75}$ converted to anti-logarithmic values.

$S_{A.75}$ = Standard deviation corresponding to the 75th percentile of CVs reported nationally by USEPA ($S_{A.75}$ = 0.43).

CV = Coefficient of variation.

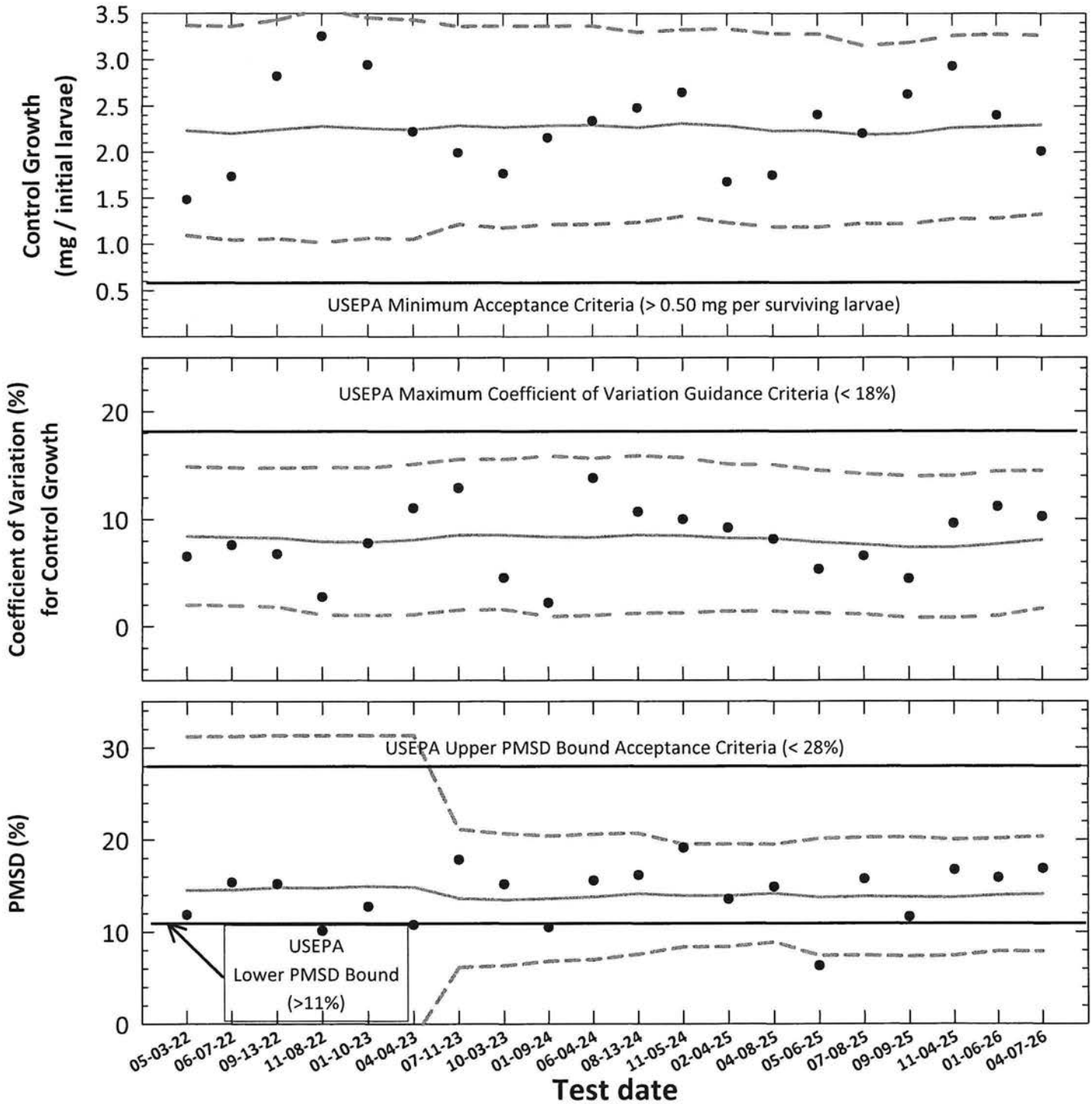
Entered and Reviewed by Jim Summer

ETS
Environmental Testing Solutions, Inc.

Menidia beryllina

Chronic Reference Toxicant Testing, Test Acceptability Criteria

Organism Source: Aquatic Indicators, Inc.



- **Control Growth, Coefficient of Variation (CV) or Percent Minimum Significant Difference (PMSD)**
  PMSD is the percent minimum significant difference between the control and treatment that can be declared statistically significant. The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.

——— **Central Tendency** (mean Control Growth, CV or PMSD)

– – – **95% Confidence Interval** (mean Control Growth, CV or PMSD ± 2 Standard Deviations)

Entered and Reviewed by Jim Sumner

ETS Environmental Testing Solutions, Inc.

Menidia beryllina
Chronic Reference Toxicant Testing, Test Acceptability Criteria
Source: Aquatic Indicators, Inc.

Test number	Test date	ToxCal Determination					Control Growth (mg/initial larvae)			Control Growth CV (%)			Test PMSD (%)		
		Control Survival	Control Growth		Test			95% Confidence Interval			95% Confidence Interval			95% Confidence Interval	
		(%)	Mean (mg/initial larvae)	CV (%)	MSD	PMSD (%)	CT	CT - 2S	CT + 2S	CT	CT - 2S	CT + 2S	CT	CT - 2S	CT + 2S
1	05-03-22	100	1.483	6.5	0.1756	11.8	2.2320	1.092	3.372	8.4	2.0	14.9	14.5	-2.1	31.2
2	06-07-22	100	1.733	7.6	0.2665	15.4	2.201	1.041	3.361	8.3	1.9	14.8	14.6	-2.1	31.2
3	09-13-22	100	2.822	6.8	0.4290	15.2	2.243	1.057	3.430	8.3	1.8	14.7	14.8	-1.7	31.3
4	11-08-22	100	3.255	2.7	0.3294	10.1	2.280	1.014	3.545	7.9	1.0	14.8	14.8	-1.8	31.3
5	01-10-23	100	2.945	7.8	0.3755	12.8	2.257	1.062	3.453	7.9	1.0	14.8	15.0	-1.4	31.3
6	04-04-23	100	2.220	11.0	0.2389	10.8	2.243	1.053	3.433	8.1	1.1	15.1	14.9	-1.6	31.3
7	07-11-23	100	1.992	12.9	0.3549	17.8	2.287	1.213	3.360	8.5	1.5	15.6	13.6	6.2	21.1
8	10-03-23	100	1.763	4.5	0.2673	15.2	2.270	1.174	3.366	8.5	1.5	15.5	13.5	6.3	20.6
9	01-09-24	100	2.156	2.2	0.2257	10.5	2.287	1.211	3.364	8.4	0.9	15.8	13.6	6.8	20.4
10	06-04-24	100	2.339	13.8	0.3637	15.5	2.291	1.215	3.368	8.3	1.0	15.6	13.8	7.0	20.6
11	08-13-24	100	2.479	10.7	0.4001	16.1	2.266	1.235	3.297	8.5	1.2	15.9	14.1	7.6	20.7
12	11-05-24	100	2.648	10.0	0.5061	19.1	2.312	1.299	3.324	8.5	1.2	15.7	13.9	8.3	19.5
13	02-04-25	100	1.675	9.2	0.2268	13.5	2.283	1.232	3.335	8.2	1.4	15.1	13.9	8.4	19.5
14	04-08-25	100	1.747	8.1	0.2598	14.9	2.230	1.183	3.278	8.2	1.4	15.0	14.2	8.9	19.5
15	05-06-25	100	2.406	5.3	0.1521	6.3	2.233	1.184	3.281	7.9	1.2	14.5	13.7	7.4	20.1
16	07-08-25	100	2.201	6.6	0.3464	15.7	2.188	1.221	3.155	7.6	1.1	14.2	13.8	7.4	20.3
17	09-09-25	100	2.628	4.4	0.3054	11.6	2.201	1.217	3.185	7.4	0.8	14.0	13.8	7.3	20.3
18	11-04-25	100	2.930	9.6	0.4894	16.7	2.266	1.268	3.263	7.4	0.8	14.0	13.7	7.4	20.0
19	01-06-26	100	2.401	11.1	0.3809	15.9	2.276	1.278	3.274	7.7	1.0	14.4	14.0	7.9	20.1
20	04-07-26	100	2.009	10.2	0.3387	16.9	2.292	1.322	3.261	8.1	1.6	14.5	14.1	7.9	20.3

Note:

Control Survival = USEPA minimum test acceptability criteria ≥ 80% survival.

Control Mean Growth = USEPA minimum test acceptability criteria ≥ 0.50 mg/surviving larvae.

CV = Coefficient of variation for control growth.
USEPA maximum CV guidance criteria (90th percentile) < 18%

MSD = Minimum significant difference.

PMSD = Percent minimum significant difference.
PMSD is a measure of test precision. The PMSD is the minimum percent difference between the control and treatment that can be declared statistically significant in a whole effluent toxicity test.
Lower PMSD bound determined by USEPA (10th percentile) > 11%.
The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.
Upper PMSD bound acceptance criteria determined by USEPA (90th percentile) < 28%.

CT = Central tendency of the growth, CV or PMSD values.

S = Standard deviation of the growth, CV or PMSD values.

Entered and Reviewed by JH Summer

ETS
Environmental Testing Solutions, Inc.

Copper Sulfate Chronic Reference Toxicant Test (EPA-821-R-02-014, Method 1006.0)

Species: *Menidia beryllina*

MbCuCR Test Number: **156**

Dilution preparation information:						***Comments:***
Cu Stock INSS number:		INSS 2481				
Stock preparation:		100 mg Cu/L: Dissolve 0.1965 g $CuSO_4$ in 500-mL deionized water				
Dilution prep (mg/L)	0.025	0.050	0.100	0.200	0.500	
Stock volume (mL)	0.5	1.0	2.0	4.0	10.0	
Diluent volume (mL)	1999.5	1999.0	1998.0	1996.0	1990.0	
Total volume (mL)	2000	2000	2000	2000	2000	

Test organism information:

Organism source:	Aquatic Indicators, Inc.
Age:	10-days old
Batch:	AI Mb 03-28-26
Hatch dates and times:	03-27-26 1200 to 03-28-26 1130
Transfer vessel information:	pH (S.U.) = 7.82 Temperature (°C) = 24.5
Average transfer volume (mL):	< 0.25 mL

Test information:

Randomizing template:	Green
Incubator number and shelf location:	7E
Artemia CHM number:	CHM1432
Drying information for weight determination:	
Date / Time in oven:	04-14-26 1155
*Initial oven temperature:	60°C
Date / Time out of oven:	04-15-26 1155
*Final oven temperature:	60°C
Total drying time:	24-hours

*60°C Oven, Thermometer SN: 14-985B5

Daily feeding and renewal information:

Day	Date	Morning feeding		Afternoon feeding		Test initiation, renewal, or termination		Sample number used	SaltSW batch used
		Time	Analyst	Time	Analyst	Time	Analyst		
0	04-07-26	1125	JH	1420	JH	1230	JH	NA	03-30-26 B
1	04-08-26	0500	JH	1400	JH	0740	JH	↓	↓
2	04-09-26	0500	JH	1230	JH	0900	JH		04-06-26 A
3	04-10-26	0500	JH	1100	JH	0746	JH		04-08-26 B
4	04-11-26	0600	JH	1235	JH	0930	JH		04-09-26
5	04-12-26	0600	JH	1100	JH	0830	JH		04-10-26
6	04-13-26	0600	JH	1100	JH	0846	JH	↓	↓
7	04-14-26					1030	JH		

Chemical analyses:

Parameter	Reporting Limit	Method number	Meter	Serial number
pH	0.1 S.U.	SM 4500-H+ B-2021	Accumet AR20	93312452
Dissolved Oxygen (D.O.)	1.0 mg/L	SM 4500-O H-2021	HACH HQ430d Flexi	SN250100050300
Salinity	1.0 ppt	SM 2520 B-2021	YSI PRO30	18D104324
Alkalinity	5.0 mg $CaCO_3$/L	SM 2320 B-2021	Accumet AR20	93312452
Temperature	0.1 °C	SM 2550B-2010	Digital Thermometer	13066485

Control information:		Acceptance criteria
% Mortality:	0%	≤ 20%
Average weight per initial larvae:	2.029	
Average weight per surviving larvae:	2.009	≥ 0.25mg/larvae

Summary of test endpoints:	
7-day LC_{50} (mg/L Cu)	0.302
NOEC (mg/L Cu)	0.1
LOEC (mg/L Cu)	0.2
ChV (mg/L Cu)	0.141
IC_{25} (mg/L Cu)	0.221

Environmental Testing Solutions, Inc.

Species: ***Menidia beryllina*** MbCuCR Test Number: **156**

Survival and Growth Data

Day	CONTROL				0.025 mg/L				0.05 mg/L			
	A	B	C	D	E	F	G	H	I	J	K	L
0	10	10	10	10	10	10	10	10	10	10	10	10
1	10	10	10	10	10	10	10	10	10	10	10	10
2	10	10	10	10	10	10	10	10	10	10	10	10
3	10	10	10	10	10	10	10	10	10	10	10	10
4	10	10	10	10	10	10	10	10	10	10	10	10
5	10	10	10	10	10	10	10	10	10	10	10	10
6	10	10	10	10	10	10	10	10	10	10	10	10
7	10	10	10	10	10	10	10	10	10	10	10	10
*A = Pan weight (mg) Tray color code: Peach Analyst: XL Date: 05/17/26	12.86	13.46	14.94	14.48	13.78	11.59	12.88	12.92	14.50	14.78	13.68	13.39
*B = Pan + Larvae weight (mg) Analyst: XL Date: 05/17/26	35.01	32.34	32.79	35.95	33.94	30.99	31.69	30.92	34.06	38.86	34.29	30.77
C = Larvae weight (mg) = B – A Analyst: JP	22.15	18.88	17.85	21.47	20.16	19.40	18.81	18.00	19.56	24.08	20.61	17.38
Weight per initial number of larvae (mg) = C / Initial number of larvae Analyst: JP	2.215	1.888	1.785	2.147	2.016	1.940	1.881	1.800	1.956	2.408	2.061	1.738
Average weight per initial number of larvae (mg) / Percent reduction from control (%)	2.009				1.909		5.0%		2.041		-1.6%	

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

Environmental Testing Solutions, Inc.

Species: ***Menidia beryllina*** MbCuCR Test Number: **156**

Survival and Growth Data

Day	0.1 mg/L				0.2 mg/L				0.5 mg/L			
	M	N	O	P	Q	R	S	T	U	V	W	X
0	10	10	10	10	10	10	10	10	10	10	10	10
1	10	10	10	10	10	10	10	10	8 2d	8 2d	9 1d	9 1d
2	10	10	10	10	10	10	10	10	6 2d	7 1d	6 3d	5 4d
3	10	10	10	10	10	10	10	10	4 2d	6 1d	4 2d	3 2d
4	10	10	10	10	10	10	10	10	4	4 4d	3 1d	3
5	10	10	10	10	10	9 1d	9 1d	10	3 1d	3 1d	3	2 1d
6	10	10	10	10	10	9	9	10	3	3	3	2
7	10	10	10	10	8 2d	8 1d	9	9 1d	1 2d	0 3d	1 2d	2
*A = Pan weight (mg) Tray color code: peach Analyst: XL Date: 03-17-26	12.04	14.07	12.67	14.26	12.82	14.94	14.21	11.62	12.48	12.22	12.78	12.54
*B = Pan + Larvae weight (mg) Analyst: XL Date: 03-17-26	30.79	31.69	34.67	35.91	27.78	28.59	30.81	30.63	15.33	12.22	15.48	15.11
C = Larvae weight (mg) = B – A Analyst: JP	18.75	17.62	22.00	21.65	14.96	13.65	16.60	19.01	2.85	0	2.70	2.57
Weight per initial number of larvae (mg) = C / Initial number of larvae Analyst: JP	1.875	1.762	2.200	2.165	1.496	1.365	1.660	1.901	0.285	0	0.270	0.257
Average weight per initial number of larvae (mg)	2.001				1.606				0.203			
Percent reduction from control (%)	0.4%				20.1%				89.9%			

*Weight measurements performed using Cahn 28 Automatic Electrobalance, SN 41520.

Comment codes: c = clear, d = dead, fg = fungus, k = killed, m = missing, sk = sick, sm = unusually small, lg = unusually large, d&r = decanted and returned, w = wounded.

Comments:

Environmental Testing Solutions, Inc.

Menidia beryllina Chronic Whole Effluent Toxicity Test
EPA-821-R-02-014, Method 1006.0

Quality Control
Verification of Data Entry, Calculations, and Statistical Analyses

Test number: 156

Concentration (mg/L Cu)	Replicate	Initial number of larvae	Final number of larvae	A = Pan weight (mg)	B = Pan + Larvae weight (mg)	Larvae weight (mg) = B - A	Not for Compliance Assessment, Internal Laboratory QC: Weight / Surviving number of larvae (mg)	Mean weight/ Surviving number of larvae (mg)	Coefficient of variation (Mean weight per surviving number of larvae) (%)	Weight / Initial number of larvae (mg)	Mean survival (%)	Mean weight/ Initial number of larvae (mg)	Coefficient of variation (%)	Percent reduction from control (%)
Control	A	10	10	12.86	35.01	22.15	2.215	2.009	10.2	2.215	100.0	2.009	10.2	Not applicable
	B	10	10	13.46	32.34	18.88	1.888			1.888				
	C	10	10	14.94	32.79	17.85	1.785			1.785				
	D	10	10	14.48	35.95	21.47	2.147			2.147				
0.025	E	10	10	13.78	33.94	20.16	2.016	1.909	4.8	2.016	100.0	1.909	4.8	5.0
	F	10	10	11.59	30.99	19.40	1.940			1.940				
	G	10	10	12.88	31.69	18.81	1.881			1.881				
	H	10	10	12.92	30.92	18.00	1.800			1.800				
0.050	I	10	10	14.50	34.06	19.56	1.956	2.041	13.7	1.956	100.0	2.041	13.7	-1.6
	J	10	10	14.78	38.86	24.08	2.408			2.408				
	K	10	10	13.68	34.29	20.61	2.061			2.061				
	L	10	10	13.39	30.77	17.38	1.738			1.738				
0.100	M	10	10	12.04	30.79	18.75	1.875	2.001	10.8	1.875	100.0	2.001	10.8	0.4
	N	10	10	14.07	31.69	17.62	1.762			1.762				
	O	10	10	12.67	34.67	22.00	2.200			2.200				
	P	10	10	14.26	35.91	21.65	2.165			2.165				
0.200	Q	10	8	12.82	27.78	14.96	1.870	1.883	9.0	1.496	85.0	1.606	14.4	20.1
	R	10	8	14.94	28.59	13.65	1.706			1.365				
	S	10	9	14.21	30.81	16.60	1.844			1.660				
	T	10	9	11.62	30.63	19.01	2.112			1.901				
0.500	U	10	1	12.48	15.33	2.85	2.850	1.350	141.4	0.285	10.0	0.203	66.9	89.9
	V	10	0	0.00	0.00	0.00	0.000			0.000				
	W	10	1	12.78	15.48	2.70	2.700			0.270				
	X	10	2	12.54	15.11	2.57	1.285			0.257				

Dunnett's MSD value: 0.3387
PMSD: 16.9

MSD = Minimum Significant Difference
PMSD = Percent Minimum Significant Difference

PMSD is a measure of test precision. The PMSD is the minimum percent difference between the control and treatment that can be declared statistically significant in a whole effluent toxicity test.

Lower PMSD bound determined by USEPA (10th percentile) = 11%.
Upper PMSD bound determined by USEPA (90th percentile) = 28%.
Lower and upper PMSD bounds were determined from the 10th and 90th percentile, respectively, of PMSD data from EPA's WET Interlaboratory Variability Study (USEPA, 2001a; USEPA, 2001b).
The lower PMSD bound represents a practical limit to the sensitivity of the test method and is not a minimum acceptance criteria.

USEPA. 2001a, 2001b. Final Report: Interlaboratory Variability Study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods, Volumes 1 and 2-Appendix. EPA-821-B-01-004 and EPA-821-B-01-005. US Environmental Protection Agency, Cincinnati, OH.

Entered and Reviewed by Jim Sumner

ETS Environmental Testing Solutions, Inc.

Statistical Analyses

Entered and Reviewed by Jim Sumner

Larval Fish Growth and Survival Test-7 Day Survival

Start Date:	4/7/2026	Test ID:	MbCuCR	Sample ID:	REF-Ref Toxicant
End Date:	4/14/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	CUSO4
Sample Date:		Protocol:	SWCHR-EPA-821-R-02-014	Test Species:	MB-Menidia beryllina
Comments:					

Conc-mg/L	1	2	3	4
D-Control	1.0000	1.0000	1.0000	1.0000
0.025	1.0000	1.0000	1.0000	1.0000
0.05	1.0000	1.0000	1.0000	1.0000
0.1	1.0000	1.0000	1.0000	1.0000
0.2	0.8000	0.8000	0.9000	0.9000
0.5	0.1000	0.0000	0.1000	0.2000

			Transform: Arcsin Square Root					Rank	1-Tailed	Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	4			0	40
0.025	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	4	18.00	10.00	0	40
0.05	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	4	18.00	10.00	0	40
0.1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	4	18.00	10.00	0	40
*0.2	0.8500	0.8500	1.1781	1.1071	1.2490	6.954	4	10.00	10.00	6	40
*0.5	0.1000	0.1000	0.3165	0.1588	0.4636	39.374	4	10.00	10.00	36	40

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.72057	0.884	-0.223	4.54315
Equality of variance cannot be confirmed				

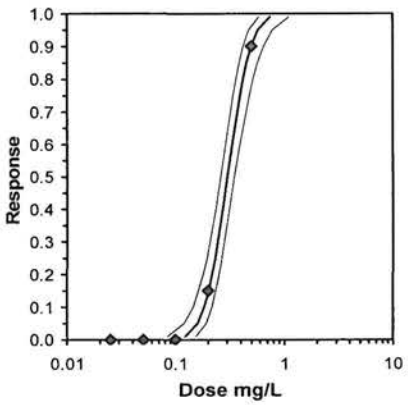
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	0.1	0.2	0.14142	
Treatments vs D-Control				

Maximum Likelihood-Probit

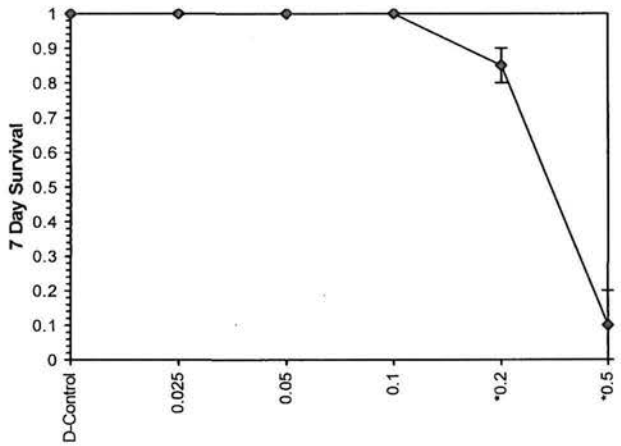
Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	5.93503	0.85326	4.26264	7.60742	0	0.10445	7.81472	0.9913	-0.5195	0.16849	3
Intercept	8.08345	0.49008	7.1229	9.044							

TSCR

Point	Probits	mg/L	95% Fiducial Limits	
EC01	2.674	0.1226	0.08415	0.15378
EC05	3.355	0.15971	0.12006	0.19143
EC10	3.718	0.18388	0.14454	0.21598
EC15	3.964	0.20223	0.1634	0.23489
EC20	4.158	0.2181	0.17977	0.2516
EC25	4.326	0.23271	0.19476	0.26737
EC40	4.747	0.27402	0.23604	0.31461
EC50	5.000	0.30232	0.26289	0.34972
EC60	5.253	0.33354	0.29097	0.39119
EC75	5.674	0.39275	0.34035	0.47694
EC80	5.842	0.41906	0.36104	0.51763
EC85	6.036	0.45196	0.38608	0.57043
EC90	6.282	0.49704	0.41921	0.64591
EC95	6.645	0.57228	0.4722	0.77887
EC99	7.326	0.74548	0.58681	1.11314



Dose-Response Plot



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Statistical Analyses

Entered and Reviewed by Jim Sumner

Larval Fish Growth and Survival Test-7 Day Growth

Start Date:	4/7/2026	Test ID:	MbCuCR	Sample ID:	REF-Ref Toxicant
End Date:	4/14/2026	Lab ID:	ETS-Envir. Testing Sol.	Sample Type:	CUSO4
Sample Date:		Protocol:	SWCHR-EPA-821-R-02-014	Test Species:	MB-Menidia beryllina
Comments:					

Conc-mg/L	1	2	3	4
D-Control	2.2150	1.8880	1.7850	2.1470
0.025	2.0160	1.9400	1.8810	1.8000
0.05	1.9560	2.4080	2.0610	1.7380
0.1	1.8750	1.7620	2.2000	2.1650
0.2	1.4960	1.3650	1.6600	1.9010
0.5	0.2850	0.0000	0.2700	0.2570

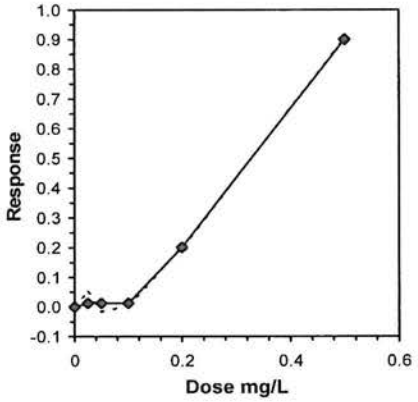
			Transform: Untransformed					1-Tailed			Isotonic	
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	2.0088	1.0000	2.0088	1.7850	2.2150	10.214	4				2.0088	1.0000
0.025	1.9093	0.9505	1.9093	1.8000	2.0160	4.788	4	0.673	2.290	0.3387	1.9835	0.9874
0.05	2.0408	1.0159	2.0408	1.7380	2.4080	13.689	4	-0.216	2.290	0.3387	1.9835	0.9874
0.1	2.0005	0.9959	2.0005	1.7620	2.2000	10.779	4	0.056	2.290	0.3387	1.9835	0.9874
0.2	1.6055	0.7993	1.6055	1.3650	1.9010	14.390	4				1.6055	0.7993
0.5	0.2030	0.1011	0.2030	0.0000	0.2850	66.904	4				0.2030	0.1011

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.97376	0.844	0.19087	-0.6496
Bartlett's Test indicates equal variances (p = 0.43)	2.77629	11.3449		

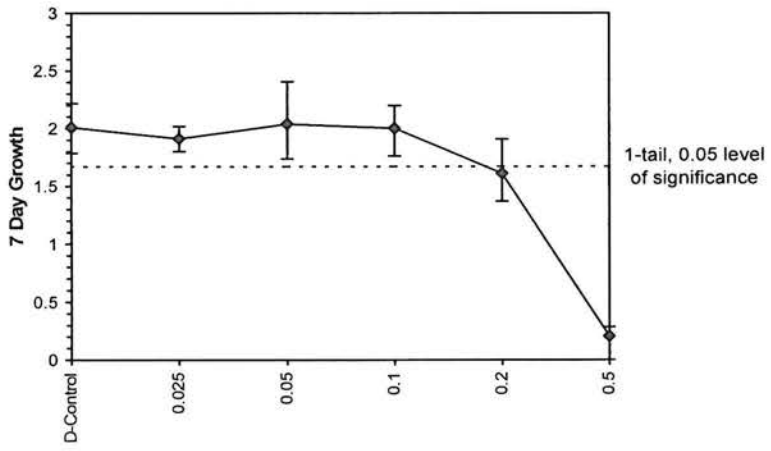
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test Treatments vs D-Control	0.1	>0.1			0.33869	0.16861	0.01274	0.04375	0.8309	3, 12

Linear Interpolation (200 Resamples)

Point	mg/L	SD	95% CL(Exp)		Skew
IC05	0.1199	0.0459	0.0000	0.1533	-0.6658
IC10	0.1465	0.0354	0.0000	0.2317	-1.0547
IC15	0.1730	0.0273	0.0833	0.2476	0.1043
IC20	0.1996	0.0244	0.1159	0.2630	-0.0269
IC25	0.2212	0.0219	0.1458	0.2788	-0.0837
IC40	0.2856	0.0180	0.2215	0.3306	-0.3058
IC50	0.3286	0.0152	0.2770	0.3665	-0.2698



Dose-Response Plot



Environmental Testing Solutions, Inc.

Species: ***Menidia beryllina*** MbCuCR Test Number: **156**

Daily Chemistry:

Temperature and salinity performed at the time of test initiation, renewal or termination by the analyst identified in the Daily Renewal Information table located on Page 1. Alkalinity and chlorine (total residual) performed by the analyst identified on the bench sheet specific for each analysis and transcribed to this bench sheet.

		Day (Analyst identified for each day, performed pH and D.O. measurements only.)					
		0		1		2	
	Analyst	XL	XL	XL	XL	XL	XL
Concentration	Parameter						
CONTROL, SaltSW	pH (S.U.)	8.04	8.06	8.10	7.97	8.10	8.03
	Dissolved oxygen (mg/L)	8.3	8.2	8.3	8.1	8.3	8.1
	Salinity (ppt)	25.0	24.9	25.0	25.2	25.0	25.1
	Alkalinity (mg $CaCO_3$/L)	110		→		110	
	Temperature (°C)	24.7	24.9	24.6	24.6	24.7	24.6
0.025 mg/L	pH (S.U.)	8.09	8.05	8.06	7.90	8.10	8.02
	Dissolved oxygen (mg/L)	8.3	8.2	8.2	8.1	8.2	8.1
	Salinity (ppt)	25.0	25.2	25.1	25.3	25.1	25.2
	Temperature (°C)	24.6	24.7	24.6	24.3	24.7	24.6
0.05 mg/L	pH (S.U.)	8.08	8.05	8.06	7.89	8.10	8.02
	Dissolved oxygen (mg/L)	8.3	8.1	8.3	8.0	8.3	8.1
	Salinity (ppt)	25.1	25.4	25.1	25.3	25.1	25.3
	Temperature (°C)	24.6	25.0	24.5	24.8	24.6	24.7
0.1 mg/L	pH (S.U.)	8.08	8.06	8.06	7.90	8.10	7.98
	Dissolved oxygen (mg/L)	8.3	8.2	8.3	8.0	8.3	8.0
	Salinity (ppt)	25.0	25.4	25.1	25.3	25.1	25.2
	Temperature (°C)	24.6	25.0	24.5	24.5	24.6	24.7
0.2 mg/L	pH (S.U.)	8.08	8.04	8.05	7.87	8.09	8.02
	Dissolved oxygen (mg/L)	8.3	8.2	8.2	8.0	8.3	8.0
	Salinity (ppt)	25.0	25.4	25.0	25.2	25.1	25.2
	Temperature (°C)	24.8	24.6	24.5	24.5	24.6	24.7
0.5 mg/L	pH (S.U.)	8.08	8.05	8.05	7.88	8.09	8.01
	Dissolved oxygen (mg/L)	8.4	8.1	8.2	8.1	8.4	7.8
	Salinity (ppt)	24.9	25.1	25.0	25.1	25.1	25.2
	Temperature (°C)	24.8	24.6	24.5	24.5	24.6	24.9
		Initial	Final	Initial	Final	Initial	Final

Environmental Testing Solutions, Inc.

Species: ***Menidia beryllina***

MbCuCR Test Number: **156**

		Day (Analyst identified for each day, performed pH and D.O. measurements only.)							
		3		4		5		6	
	Analyst	XL	BSL	BSL	BSL	BSL	XL	XL	XL
Concentration	Parameter								
CONTROL, SaltSW	pH (S.U.)	8.06	7.93	8.06	7.94	8.08	7.94	8.07	7.80
	Dissolved oxygen (mg/L)	8.2	8.2	8.3	~~8.1~~ (7.8)	8.2	8.0	8.3	6.5
	Salinity (ppt)	25.0	25.4	25.0	25.4	25.1	25.2	25.0	25.3
	Alkalinity (mg $CaCO_3$/L)	120		120		120			
	Temperature (°C)	24.8	25.0	24.7	24.9	24.7	25.0	24.7	25.0
0.025 mg/L	pH (S.U.)	8.11	7.94	8.08	7.91 ~~7.8~~	8.13	7.97	8.07	7.80
	Dissolved oxygen (mg/L)	8.2	8.3	8.5	~~8.2~~ (7.8)	8.3	8.0	8.2	6.5
	Salinity (ppt)	25.0	25.4	25.1	25.4	24.7	25.1	25.4	25.4
	Temperature (°C)	24.7	24.7	24.8	24.7	24.7	24.8	24.8	24.8
0.05 mg/L	pH (S.U.)	8.11	7.96	8.05	7.93 ~~7.8~~	8.13	7.97	8.08	7.80
	Dissolved oxygen (mg/L)	8.3	8.2	8.5	~~8.2~~ (7.8)	8.3	8.1	8.3	6.5
	Salinity (ppt)	25.1	25.3	25.1	25.3	24.6	25.1	25.3	25.4
	Temperature (°C)	24.7	24.7	24.8	24.7	24.7	24.8	24.8	24.8
0.1 mg/L	pH (S.U.)	8.12	7.96	8.05	7.89 ~~7.8~~	8.14	7.97	8.08	7.79
	Dissolved oxygen (mg/L)	8.3	8.2	8.5	~~8.3~~ (7.8)	8.3	8.1	8.3	6.3
	Salinity (ppt)	25.0	25.3	25.1	25.3	24.7	25.2	25.4	25.3
	Temperature (°C)	24.7	24.8	24.7	24.9	24.7	24.8	24.8	25.1
0.2 mg/L	pH (S.U.)	8.12	~~8.04~~ ~~7.94~~ (7.96)	8.05	7.93	8.14	7.98	8.07	7.84
	Dissolved oxygen (mg/L)	8.2	8.3	8.5	~~8.3~~ (7.8)	8.3	8.1	8.3	7.1
	Salinity (ppt)	25.0	25.3	25.0	25.5	24.6	25.1	25.3	25.4
	Temperature (°C)	24.8	24.6	24.7	24.9	24.8	25.0	24.9	24.8
0.5 mg/L	pH (S.U.)	8.11	7.96	8.05	7.96	8.14	8.00	8.07	7.90
	Dissolved oxygen (mg/L)	8.2	8.0	8.5	~~8.3~~ (7.8)	8.3	8.0	8.3	7.0
	Salinity (ppt)	25.0	25.1	25.0	25.3	24.5	24.9	25.2	25.5
	Temperature (°C)	24.7	24.6	24.7	24.7	24.8	25.0	24.9	24.9
		Initial	Final	Initial	Final	Initial	Final	Initial	Final

* BSL verified correct 04.22.26