FDEP Biology Lab-Toxicity Section
Test Instrument Serial Number Page
Method: EPA-821-R-02-012

METER / DEVICE	ID	SOP	Parameter	Method	Benchsheet Code
YSI Model 58 Dissolved Oxygen Meter	90H018262	TA-06.04	Dissolved Oxygen	SM 4500 O G	DO1
Thermo Scientific Orion Star A213 Benchtop RDO/DOMeter	SN X49117 Probe: 019059	TA-06.39	Dissolved Oxygen	SM 4500 O G	DO2
Accumet AR-10 pH Meter	93312105	TA-06.23	pH	SM 4500 H+	PH1
Fisherbrand FE150 pH Meter	SN 2753630 Probe: S35932 Temp: S35934	TA-06.37	pH	SM 4500 H+	PH2
Mettler-Toledo SevenMulti Conductivity Meter	SN 1225117049 Probe H04257	TA-06.25	Conductivity Salinity	SM 2510 B SM 2520 B	COND1
Traceable Bench Conductivity Meter	SN 170814827	TA-06.36	Conductivity Salinity	SM 2510 B SM 2520 B	COND2
Hach Ammonia Mid-Range Kit for freshwater	Kit Lot # A6070	TA-06.33	Ammonia	SM 4500 NH3	NH32
Hach Ammonia Kit NI-SA for saltwater	Kit Lot # A6055	TA-06.33	Ammonia	SM 4500 NH3	NH31
Hach Ammonia Nitrogen Pocket Colorimeter II	Kit Lot # A8051	TA-06.35	Ammonia	SM 4500 NH4	NH34
Traceable Thermometer	#7-SN 160858747 Probe #181156302	TA-06.05	Temperature	SM-2530B modified & DEP SOP-001/01 FT1400	#7
Traceable Thermometer	#6-SN150057760 Probe #181156300	TA-06.05	Temperature	SM-2530B modified & DEP SOP-001/01 FT1400	#6B
Hach Chlorine Pocket Colorimeter II	#2-05050C026378	TA-06.22	Total Residual Chlorine	EPA 330.5 SM 4500 CL G	#2
Alkalinity (Hach Kit)	No SN	TA-06.08	Alkalinity	SM 2320 B	ALK1
Hardness (Hach Kit)	No SN	TA-06.08	Hardness	SM 2340 C	HARD1
Mettler Toledo XA105	B314195659	PCR-2.2	Weight	-	BAL1
Mettler Toledo 403TS/00	B815673069	TA-06.34	Weight	-	BAL2
S-Weights	BIO-S-WEIGHTS-01	NA	Balance check	-	S01

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Test Information Sheet

Sample Collection: Date:_____Time:_____
Hold Time Start: Date:_____Time:_____

Test Start Date:_____ Time:_____
Test End Date:_____Time:_____

Organism Age: _____
Batch #: _____

Facility:_____

_____

Address:_____

_____

County:_____

NPDES Permit #: FL _____

Contact/District: _____

LIMS Job #:_____**LIMS Sample #:**_____

LIMS Entry:_____**Verified:**_____

Reviewer:_____

Circle one:

P. promelas (SOP:TA-07.09, Method: EPA-821-R-02-013 1000.0)

M. beryllina (SOP: TA-07.14, Method: EPA-821-R-02-014 1006.0)

Test Type
☐ Screen
☐ Definitive
☐ Static
☐ Flow-through

Light Intensity: 50-100 ft candles (recommended) Photoperiod:16 hr light, 8 hr dark (recommended)

Initial Sample Handling:							
pH adjustment:		**Aeration:**		**Dechlorination:**		**Salinity adjustment:**	
Yes	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Initial pH: _____		**Initial DO:** _____mg/L		**Initial TRC:** _____mg/L		**Initial Salinity:** _____ ppt	
NaOH: _____N		**Final DO:** _____mg/L		_____ mL of 0.025 N Sodium Thiosulfate per liter of sample.		**Final Salinity:** _____ ppt	
HCl: _____N		**Duration:** _____minutes		**Final TRC:** _____mg/L		**Circle one:** Salts Hypersaline brine	
_____ml		**Rate:** ~ _____ bubbles per min				**Amount:** _____	
Final pH: _____							

Sample Validation:		
Temperature Shipped ≤ 6°C:	**Yes**	**No**
If Hand Delivered, Cooling:	**Yes**	**No**
Received: _____ °C **Collected:** _____ °C		
Holding Time ≤ 36 Hours:	**Yes**	**No**
(Composite: End of collection; Grab: When collected; 4 in 24: Time last sample collected)		

Chamber Size: 1000 mL
Test Volume:_____ mL

Feeding Times	
First	**Second**
Day 0 * _____	**Day 0** _____
Day 1 _____	**Day 1** _____
Day 2 _____	**Day 2** _____
Day 3 _____	**Day 3** _____
Day 4 _____	**Day 4** _____
Day 5 _____	**Day 5** _____
Day 6 _____	**Day 6** _____

*** Day 0 first feeding is 2 hours prior to test intiation.**

Artemia Batch #'s
Day 0 _____
Day 1 _____
Day 2 _____
Day 3 _____
Day 4 _____
Day 5 _____
Day 6 _____
Artemia **Lot #** _____

Comments:

FDEP Biology Laboratory-Toxicity Section

Chronic Bioassay Information Sheet

Method from EPA-821-R-02-013 (*P. promelas*) and EPA-821-R-02-014 (*M. beryllina*)

LIMS Sample #: _____ (for lab sample # 1)

Start Date: _____ Time: _____ Randomizer #: _____

End Date: _____ Time: _____

Diluent	Batch #/LIMS ID #	Days Used

Stats run by/Date: _____

Stats verified by/Date: _____

Results	
Control % CV:	
Dunnetts PMSD (%)**:**	
ICP25 (%)**:**	
Growth NOEC (%)**:**	
Growth LOEC (%)**:**	
Survival NOEC (%)**:**	
Survival LOEC (%)**:**	

Temperature Range (°C)	
Incubator #_____	
Min._____	**Max._____**
Test	
Min._____	**Max._____**
Room B246	
Min._____	**Max._____**

Circle one:

P. promelas PMSD Bounds for Growth: Lower 12 Upper 30

M. beryllina PMSD Bounds for Growth: Lower 11 Upper 28

Test Acceptability Criteria		
Control Survival ≥ 80%:	**Yes**	**No**
Temperature Range ≤ 3° C:	**Yes**	**No**

Comments:

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Water Quality Sheet

LIMS Sample #: _____ (for lab sample #1)

Circle one:
Method from EPA-821-R-02-013 (*P. promelas* SOP TA-07.09) and EPA-821-R-02-014 (*M. beryllina* SOP TA-07.14)

Sample Received	LAB Sample #	LIMS JOB #	LIMS SAMPLE #	Collection Date/Time	Received Date/Time
Test Day 0	**1**	TLH-			
Test Day 2	**2**	TLH-			
Test Day 4	**3**	TLH-			

Water Quality Parameters	MHW LIMS ID # & Batch # _____	ASW LIMS ID # & Batch # _____	MHW/ASW* LIMS ID # & Batch # _____	Sample 1 LIMS Sample # _____	Sample 2 LIMS Sample # _____	Sample 3 LIMS Sample # _____	SOP	Measured By:	Transcription Checked by:
Field Total Residual Cl_2 (mg/L)	N/A	N/A	N/A				TA-06.22		
Lab Total Residual Cl_2 (mg/L)							TA-06.22		
Alkalinity (mg/L as $CaCO_3$)							TA-06.08		
Hardness (mg/L as $CaCO_3$)							TA-06.08		
Total Ammonia (mg/L as N)							TA-06.35 or TA-06.33		
Conductivity: □ µmhos □ mmhos							TA-06.36		
Salinity (ppt)							TA-06.36		
Days Used:									

* MHW used for *P. promelas* ASW used for *M. beryllina*

Comments:

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Survival Benchsheet

LIMS Sample Number:
_____ (From Lab sample 1)

Start Date:_____ Start Time:_____
End Date:_____ End Time:_____

Test Species: (circle one) *P. promelas (*SOP TA-07.09, Method: EPA-821-R-02-013*)*
*M.beryllina (*SOP TA-07.14, Method: EPA-821-R-02-014*)*

Conc. = Concentration **Rep = Replicate** **D = dead M=missing**

Randomizer # _____

			TEST DAY							
Conc. (%)	Rep	Chamber	0	1	2	3	4	5	6	7
Control	A		10							
	B		10							
	C		10							
	D		10							
	A		10							
	B		10							
	C		10							
	D		10							
	A		10							
	B		10							
	C		10							
	D		10							
	A		10							
	B		10							
	C		10							
	D		10							
	A		10							
	B		10							
	C		10							
	D		10							
	A		10							
	B		10							
	C		10							
	D		10							
	A		10							
	B		10							
	C		10							
	D		10							
Loaded by (0 hr):			Checked by:							
Verified by (0 hr):										
Concentrations prepared by:										

Comments:

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Parameters Benchsheet

Facility:_____ **Start Date:**_____ **Start Time:**_____

LIMS Sample #:_____ (for Lab sample #1) **End Date:**_____ **End Time:**_____

Method from EPA-821-R-02-013 (*P. promelas*) and EPA-821-R-02-014 (*M. beryllina*)

Conc = concentration (%) **Rep = Replicate** **Temp = Temperature** **DO = Dissolved oxygen** **Circle umhos or mmhos**

Test Day ↓		Conc. (%)	Before Renewal: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity (ppth)	After Renewal: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity (ppth)
Day 0	sample:	Control												
	1													
	1													
	1													
	1													
	1													
	1													
	Measured by:													
	Recorded by:													
			Rep	**pH**	**Temp**	**DO**	**Conductivity**	**Salinity**	**Rep**	**pH**	**Temp**	**DO**	**Conductivity**	**Salinity**
Day 1	sample:	Control												
	1													
	1													
	1													
	1													
	1													
	1													
	Measured by:													
	Recorded by:													
			Rep.	**pH**	**Temp**	**DO**	**Conductivity**	**Salinity**	**Rep.**	**pH**	**Temp**	**DO**	**Conductivity**	**Salinity**
Day 2	sample:	Control												
	2													
	2													
	2													
	2													
	2													
	2													
	Measured by:													
	Recorded by:													
			Rep	**pH**	**Temp**	**DO**	**Conductivity**	**Salinity**	**Rep**	**pH**	**Temp**	**DO**	**Conductivity**	**Salinity**
Day 3	sample:	Control												
	2													
	2													
	2													
	2													
	2													
	2													
	Measured by:													
	Recorded by:													

Comments:

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Parameters Benchsheet

Facility:_____ **Start Date:**_____ **Start Time:**_____

LIMS Sample #:_____ (for Lab sample #1) **End Date:**_____ **End Time:**_____

Method from EPA-821-R-02-013 (*P. promelas*) and EPA-821-R-02-014 (*M. beryllina*)

Conc = concentration **Rep = replicate** **Temp = Temperature** **DO = Dissolved oxygen** **Circle umhos or mmhos**

Test Day ↓			Before Renewal						After Renewal					
		Conc.	Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity (ppth)	Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity (ppth)
Day 4	sample	Control												
	3													
	3													
	3													
	3													
	3													
	3													
	Measured by:													
	Recorded by:													
		Conc.	Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 5	sample	Control												
	3													
	3													
	3													
	3													
	3													
	3													
	Measured by:													
	Recorded by:													
		Conc.	Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 6	sample	Control												
	3													
	3													
	3													
	3													
	3													
	3													
	Measured by:													
	Recorded by:													
		Conc.	Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 7	sample	Control												
	3													
	3													
	3													
	3													
	3													
	3													
	Measured by:													
	Recorded by:													

Comments:

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Weight Benchsheet

Facility:_____

LIMS Sample ID: _____ (from Lab sample

wt.= Weight Conc. = Concentration

Concentration: %

Concentration	Replicate	Pan #	Pan wt. (g)	Pan + Fish (g)	Fish wt. (g)	Original # of fish	Mean wt. (mg.)	Mean wt./Conc. (mg)
			Mean wt. = Fish wt. divided by 10					
Control	A					10		
	B					10		
	C					10		
	D					10		
	A					10		
	B					10		
	C					10		
	D					10		
	A					10		
	B					10		
	C					10		
	D					10		
	A					10		
	B					10		
	C					10		
	D					10		
	A					10		
	B					10		
	C					10		
	D					10		
	A					10		
	B					10		
	C					10		
	D					10		
	A					10		
	B					10		
	C					10		
	D					10		
Weighed by initials:								

Comments:

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Weight
Quality Control Benchsheet

Weighing chronic *P. promelas* and *M. beryllina* tests: SOP TA-06.21

Facility:_____

LIMS Sample #:_____(for Lab Sample # 1)

Test Species: *P.promelas* (SOP TA-07.09) *M. beryllina* (07.14) (circle one)

Empty Pan Weights Date: _____ By:_____

Weights in grams	Pan 1 wt.	Pan 1 initial wt.
after Pan 5	@	
after Pan 10	@	
after Pan 15	@	
after Pan 20	@	
after Pan 25	@	
after Pan 30	@	
after Pan 35	@	
after Pan 40	@	
after Pan 45	@	
after Pan 48	@	

	Measured Value (g)	S-weight Value (g)
S-weights	@	
	@	

S-Weights: BIO-S-WEIGHTS-01
Balance: Mettler Toledo XA105
Ser# B314195659

Fish + Pan Weights Date: _____ By:_____

Weights in grams	Pan 1 wt.	Pan 1 initial wt.
after Pan 5	@	
after Pan 10	@	
after Pan 15	@	
after Pan 20	@	
after Pan 25	@	
after Pan 30	@	
after Pan 35	@	
after Pan 40	@	
after Pan 45	@	
after Pan 48	@	

	Measured Value (g)	S-weight Value (g)
S-weights	@	
	@	

Drying Oven ID: _____
Temperature ^{o}C: _____
Drying Hours: _____
Date/Time Organisms in oven: _____
Date/Time Organisms out of oven: _____

Note: Pan number (5, 10, etc.) refers to sequence of weighing as actual Pan #s may differ.

Comments:

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Instrument Code Sheet

Test ID: Dates:

METER / DEVICE	Instrument Code
DO Meter	
pH Meter	
Conductivity Meter	
Ammonia Kit	
Traceable Thermometer	
Chlorine Kit	
Alkalinity Kit	
Hardness Kit	
Balances used:	
Weights used:	
Entered by and date:	

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Instrument Code Sheet

FDEP Biology Laboratory-Toxicity Section
Chronic Bioassay Instrument Code Sheet