

# PERFORMANCE EVALUATION

Quarterly Study

**WETT 30**

WETT / DMRQA 30

15-Mar-2010 through 2-Jul-2010

**RT2179**

RTC Labcode

**VA01116**

US EPA Labcode

Coastal Bioanalysts, Inc  
Pete DeLisle  
6400 Enterprise Court  
Gloucester VA 23061

Thank you for participating in study WETT 30. Additional information about this study may be found online at [www.rt-corp.com](http://www.rt-corp.com).  
If you have any questions or comments about this study please contact me.

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**This report may contain data that are not covered by the A2LA accreditation.**

Sincerely,



Christopher Rucinski  
Quality Director

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Dataset

# DMRQA30[1]

## Include in DMRQA Study

Evaluations from this dataset will be included in DMRQA 30.

### Accreditors

Evaluations of this dataset will be sent to the accreditor(s) listed below using your laboratory's labcode listed above each accrediting agency. If any of the information listed below is incorrect, please contact RTC immediately.

#### Accrediting Labcode **VA01116**

Delaware DNREC

Water Pollution Branch

**244** Glenn Davis  
89 Kings Hwy R and R Building  
Dover DE 19901  
UNITED STATES

#### Accrediting Labcode **VA01116**

Maryland Department of the Environment

**313** Ron Wicks  
WP/DMR Certification  
DIV Munciple Compliance  
1800 Washington Blvd.  
Suite 420  
Baltimore MD 21230  
UNITED STATES

#### Accrediting Labcode **VA01116**

Virginia DEQ

**467** Joanne Lam  
P.O. Box 1105  
Richmond VA 23218  
UNITED STATES

#### Accrediting Labcode **VA01116**

Virginia SDWP

Consolidated Lab Services Division

**470** Cathy Westerman  
600 North 5th St.  
Richmond VA 23219-3691  
UNITED STATES

## Test Code 13 / EPA Method 2000

Test Code 13 / EPA Method 2000 (DMRQA WET)

Analysis

EPA 2000.0

Method Number 9945647

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
Fathead Minnow Acute MHSF 25° - LC50 1, 2, 3, 4 754 / WET-013 - Lot 016414 /Analysis Date: 3/31/10	<b>33.0</b> %	27.90	8.17 to 47.6	0.52	<b>Acceptable</b>

## Test Code 15 / EPA Method 1000

Test Code 15 / EPA Method 1000 (DMRQA WET)

**Test Code 15 / EPA Method 1000 (continued)**

Test Code 15 / EPA Method 1000 (DMRQA WET)

Analysis

EPA 1000

Method Number 10114600

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
Fathead Minnow Chronic MHSF - Survival NOEC 1, 258 / WET-015 - Lot 016410 /Analysis Date: 3/25/10	12.5 %	25.00	12.5 to 50	-1.00	Acceptable
Fathead Minnow Chronic MHSF - Growth IC25 (ON) 1, 2, 3, 4 808 / WET-015 - Lot 016410 /Analysis Date: 3/25/10	12.4 %	26.40	<6.25 to 49.6	-1.21	Acceptable
Fathead Minnow Chronic MHSF - Growth NOEC (ON) 1, 2, 3, 4 810 / WET-015 - Lot 016410 /Analysis Date: 3/25/10	6.25 %	25.00	6.25 to 50.0	-1.50	Acceptable

**Test Code 19 / EPA Method 2002**

Test Code 19 / EPA Method 2002 (DMRQA WET)

Analysis

EPA 2002.0

Method Number 9954654

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
Ceriodaphnia Acute MHSF 25° - LC50 1, 2, 3, 4 764 / WET-019 - Lot 016409 /Analysis Date: 4/22/10	48.8 %	30.60	<6.25 to 58.0	1.33	Acceptable

**Test Code 21 / EPA Method 1002**

Test Code 21 / EPA Method 1002 (DMRQA WET)

Analysis

EPA 1002

Method Number 10115001

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
Ceriodaphnia Chronic MHSF - Survival NOEC 1, 2, 3, 766 / WET-021 - Lot 016430 /Analysis Date: 3/24/10	12.5 %	25.00	12.5 to 50.0	-1.00	Acceptable
Ceriodaphnia Chronic MHSF - Reproduction IC25 4 767 / WET-021 - Lot 016430 /Analysis Date: 3/24/10	16.2 %	20.30	<6.25 to 39.3	-0.43	Acceptable
Ceriodaphnia Chronic MHSF - Reproduction NOEC 1, 2, 3, 4 768 / WET-021 - Lot 016430 /Analysis Date: 3/24/10	12.5 %	12.50	<6.25 to 25.0	0.00	Acceptable

**Test Code 42 / EPA Method 2007**

Test Code 42 / EPA Method 2007 (DMRQA WET)

Analysis

EPA 2007.0

Method Number 9954621

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
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### Test Code 42 / EPA Method 2007 (continued)

Test Code 42 / EPA Method 2007 (DMRQA WET)

Analysis

EPA 2007.0

(continued)  
Method Number 9954621

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
Mysid Acute 40 F 25° - LC50 1, 2, 3, 4 798 / WET-042 - Lot 016412 /Analysis Date: 4/7/10	19.5 %	25.60	9.90 to 41.2	-0.78	Acceptable

### Test Code 43 / EPA Method 1007

Test Code 43 / EPA Method 1007 (DMRQA WET)

Analysis

EPA 1007

Method Number 10116004

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
Mysid Chronic 40 F Survival NOEC 1, 2, 3, 4 799 / WET-043 - Lot 016418 /Analysis Date: 3/30/10	100 %	50.00	5.00 to 100	2.00	Acceptable
Mysid Chronic 40 F Growth IC25 (ON) 1, 2, 3, 4 816 / WET-043 - Lot 016418 /Analysis Date: 3/30/10	>100 %	82.50	47.2 to >100		Acceptable
Mysid Chronic 40 F Growth NOEC (ON) 1, 2, 3, 4 818 / WET-043 - Lot 016418 /Analysis Date: 3/30/10	100 %	50.00	25.0 to 100	2.00	Acceptable

### Test Code 46 / EPA Method 2004

Test Code 46 / EPA Method 2004 (DMRQA WET)

Analysis

EPA 2004.0

Method Number 9954621

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
Sheepshead Minnow Acute 40 F 25° - LC50 1, 2, 3, 4 804 / WET-046 - Lot 016411 /Analysis Date: 4/24/10	20.3 %	18.50	14.5 to 22.5	0.90	Acceptable

### Test Code 47 / EPA Method 1004

Test Code 47 / EPA Method 1004 (DMRQA WET)

Analysis

EPA 1004

Method Number 10115409

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
Sheepshead Minnow Chronic 40 F - Survival NOEC 1, 2, 3, 4 805 / WET-047 - Lot 016406 /Analysis Date: 4/20/10	25.0 %	12.50	6.25 to 25.0	2.00	Acceptable
Sheepshead Minnow Chronic 40 F - Growth IC25 (ON) 4 820 / WET-047 - Lot 016406 /Analysis Date: 4/20/10	22.6 %	13.90	<6.25 to 25.7	1.47	Acceptable



### Test Code 47 / EPA Method 1004 (continued)

Test Code 47 / EPA Method 1004 (DMRQA WET)

Analysis

EPA 1004

**(continued)**

Method Number 10115409

	Result Units	Proficiency Value	Accept. Window	Z	Evaluation
Sheepshead Minnow Chronic 40 F - Growth NOEC (ON) 1, 2, 3, 4 822 / WET-047 - Lot 016406 /Analysis Date: 4/20/10	12.5 %	6.25	<6.25 to 12.5	0.50	<b>Acceptable</b>

End of DMRQA30[1]



## Sample Information

### Fathead Minnow Acute MHSF 25°C

WET-013 / Lot 016414

	Units	Assigned Value	Study Mean	Study Std. Dev.
Fathead Minnow Acute MHSF 25° - LC50 754 Test Code 13 / EPA Method 2000	%	27.9	27.90	9.85

### Fathead Minnow, 7Day, MHSF

WET-015 / Lot 016410

	Units	Assigned Value	Study Mean	Study Std. Dev.
Fathead Minnow Chronic MHSF - Survival NOEC 756 Test Code 15 / EPA Method 1000	%	25.0		
Fathead Minnow Chronic MHSF - Growth IC25 (ON) 808 Test Code 15 / EPA Method 1000	%	26.4	26.40	11.60
Fathead Minnow Chronic MHSF - Growth IC25 (SN) 809 Test Code 15 / EPA Method 1000	%	34.0	34.00	19.60
Fathead Minnow Chronic MHSF - Growth NOEC (ON) 810 Test Code 15 / EPA Method 1000	%	25.0	18.40	10.90
Fathead Minnow Chronic MHSF - Growth NOEC (SN) 811 Test Code 15 / EPA Method 1000	%	25.0	22.50	15.60

### Ceriodaphnia Acute MHSF 25°C

WET-019 / Lot 016409

	Units	Assigned Value	Study Mean	Study Std. Dev.
Ceriodaphnia Acute MHSF 25° - LC50 764 Test Code 19 / EPA Method 2002	%	30.6	30.60	13.70

### Ceriodaphnia Chronic MHSF

WET-021 / Lot 016430

	Units	Assigned Value	Study Mean	Study Std. Dev.
Ceriodaphnia Chronic MHSF - Survival NOEC 766 Test Code 21 / EPA Method 1002	%	25.0		
Ceriodaphnia Chronic MHSF - Reproduction IC25 767 Test Code 21 / EPA Method 1002	%	20.3	20.30	9.52
Ceriodaphnia Chronic MHSF - Reproduction NOEC 768 Test Code 21 / EPA Method 1002	%	12.5	14.90	8.30

### Daphnia Magna Acute MHSF 25°C

WET-032 / Lot 016415

	Units	Assigned Value	Study Mean	Study Std. Dev.
Daphnia Magna Acute MHSF 25° - LC50 788 Test Code 32 / EPA Method 2021	%	21.8	21.80	11.20

### Mysid Acute 40 Fathoms Seawater 25°C

WET-042 / Lot 016412

	Units	Assigned Value	Study Mean	Study Std. Dev.
Mysid Acute 40 F 25° - LC50 798 Test Code 42 / EPA Method 2007	%	25.6	25.60	7.83

### Mysid Chronic 40 Fathoms Seawater

WET-043 / Lot 016418

	Units	Assigned Value	Study Mean	Study Std. Dev.
Mysid Chronic 40 F Survival NOEC 799 Test Code 43 / EPA Method 1007	%	50.0		
Mysid Chronic 40 F Growth IC25 (ON) 816 Test Code 43 / EPA Method 1007	%	82.5	82.50	17.60
Mysid Chronic 40 F Growth IC25 (SN) 817 Test Code 43 / EPA Method 1007	%	65.6		
Mysid Chronic 40 F Growth NOEC (ON) 818 Test Code 43 / EPA Method 1007	%	50.0		

**Mysid Chronic 40 Fathoms Seawater**

WET-043 / Lot 016418

(continued)

	Units	Assigned Value	Study Mean	Study Std. Dev.
Mysid Chronic 40 F Growth NOEC (SN) 819 Test Code 43 / EPA Method 1007	%	50.0	64.80	44.10

**Sheepshead Minnow Acute 40 Fathoms Seawater 25°C**

WET-046 / Lot 016411

	Units	Assigned Value	Study Mean	Study Std. Dev.
Sheepshead Minnow Acute 40 F 25° - LC50 804 Test Code 46 / EPA Method 2004	%	18.5	17.80	0.46

**Sheepshead Minnow Chronic 40 Fathoms Seawater**

WET-047 / Lot 016406

	Units	Assigned Value	Study Mean	Study Std. Dev.
Sheepshead Minnow Chronic 40 F - Survival NOEC 805 Test Code 47 / EPA Method 1004	%	12.5	11.10	7.55
Sheepshead Minnow Chronic 40 F - Growth IC25 (ON) 820 Test Code 47 / EPA Method 1004	%	13.9	13.90	5.91
Sheepshead Minnow Chronic 40 F - Growth IC25 (SN) 821 Test Code 47 / EPA Method 1004	%	42.6		
Sheepshead Minnow Chronic 40 F - Growth NOEC (ON) 822 Test Code 47 / EPA Method 1004	%	6.25		
Sheepshead Minnow Chronic 40 F - Growth NOEC (SN) 823 Test Code 47 / EPA Method 1004	%	12.5		

**Definitions:**

**Assigned Value:** Value attributed to a particular quantity and accepted, sometimes by convention, as having an uncertainty appropriate for a give purpose. See ISO Guide 43 for additional information.

**Accept. Window:** The range of values that constitute acceptable performance for a laboratory participation in this PT study.

**Z:** A Z-Score tells how a single data point compares to normal data. A Z-Score says not only whether a point was above or below average, but how unusual the measurement is. Generally, a method result with a Z-Score less than |2| is considered to be in control, a Z-Score between |2| and |3| is considered 'Questionable', but still within control and a Z greater than |3| is considered not acceptable and the method is out of control.

**Study Mean:** Statistical study mean calculated using a robust statistical model (RTC employs the 'Biweight Program'). Robust statistical techniques to minimize the influence that extreme results can have on estimates of the mean and standard deviation NOTE - These techniques assign less weight to extreme results, rather than eliminate them from a data set.

**Study Std. Dev.:** Standard deviation calculated from study data using robust statisticals (Biweight).

**Gravimetric Value:** The prepared to value, determined by gravimetric means. The uncertainty associated to this value is standard uncertainty and based on RTC's gravimetric tolerances.

Program analyte accrediting footnotes

1 NELAC Compliant

3 ISO 17025 Compliant

5 NELAC Experimental

2 EPA

4 ISO Guide 43 Accredited