aquatic bioassay & consulting laboratories, inc

September 29, 2014

Mr. Jay Rao
DCOR
290 Maple Ct., Suite 290
Ventura, CA 93003

Dear Mr. Rao:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, EPA/600/R-95/136.* Results were as follows:

| | |
|---|---|
| CLIENT: | DCOR |
| SAMPLE I.D.: | Platform Edith |
| DATE RECEIVED: | 11 Sept - 2014 |
| ABC LAB. NO.: | DCO0914.087 |

**CHRONIC ABALONE LARVAL DEVELOPMENT BIOASSAY**

IWC = 2983:1.

**TST RESULT**

PASS

Yours very truly,

Scott Johnson
Laboratory Director

# CETIS Summary Report

| | |
|---|---|
| Report Date: | 29 Sep-14 11:47 (p 1 of 1) |
| Test Code: | DCO0914.087abs \| 21-4297-1618 |

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Batch ID:** | 13-1835-2314 | **Test Type:** | Development | **Analyst:** | |
| **Start Date:** | 11 Sep-14 12:32 | **Protocol:** | EPA/600/R-95/136 (1995) | **Diluent:** | Laboratory Seawater |
| **Ending Date:** | 13 Sep-14 12:30 | **Species:** | Haliotis rufescens | **Brine:** | Not Applicable |
| **Duration:** | 48h | **Source:** | Cultured Abalone | **Age:** | |

| | | | | | |
|---|---|---|---|---|---|
| **Sample ID:** | 20-8011-7962 | **Code:** | DCO0914.087abs | **Client:** | DCOR, LLC. |
| **Sample Date:** | 10 Sep-14 07:00 | **Material:** | Sample Water | **Project:** | |
| **Receive Date:** | 11 Sep-14 13:45 | **Source:** | Bioassay Report | | |
| **Sample Age:** | 30h (10.5 °C) | **Station:** | Platform Edith | | |

## Comparison Summary

| Analysis ID | Endpoint | NOEL | LOEL | TOEL | PMSD | TU | Method |
|---|---|---|---|---|---|---|---|
| 12-1588-7851 | Proportion Normal | 0.067 | >0.067 | NA | NA | 1493 | Steel Many-One Rank Sum Test |

## Point Estimate Summary

| Analysis ID | Endpoint | Level | % | 95% LCL | 95% UCL | TU | Method |
|---|---|---|---|---|---|---|---|
| 00-8648-8289 | Proportion Normal | EC5 | >0.067 | N/A | N/A | <1493 | Linear Interpolation (ICPIN) |
| | | EC10 | >0.067 | N/A | N/A | <1493 | |
| | | EC15 | >0.067 | N/A | N/A | <1493 | |
| | | EC20 | >0.067 | N/A | N/A | <1493 | |
| | | EC25 | >0.067 | N/A | N/A | <1493 | |
| | | EC40 | >0.067 | N/A | N/A | <1493 | |
| | | EC50 | >0.067 | N/A | N/A | <1493 | |

## Test Acceptability

| Analysis ID | Endpoint | Attribute | Test Stat | TAC Limits | Overlap | Decision |
|---|---|---|---|---|---|---|
| 00-8648-8289 | Proportion Normal | Control Resp | 1 | 0.8 - NL | Yes | Passes Acceptability Criteria |
| 12-1588-7851 | Proportion Normal | Control Resp | 1 | 0.8 - NL | Yes | Passes Acceptability Criteria |

## Proportion Normal Summary

| C-% | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | %Effect |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Control | 5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% |
| 0.0168 | | 5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% |
| 0.0335 | | 5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% |
| 0.067 | | 5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% |

## Proportion Normal Detail

| C-% | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 1 | 1 | 1 | 1 | 1 |
| 0.0168 | | 1 | 1 | 1 | 1 | 1 |
| 0.0335 | | 1 | 1 | 1 | 1 | 1 |
| 0.067 | | 1 | 1 | 1 | 1 | 1 |

## Proportion Normal Binomials

| C-% | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 0.0168 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 0.0335 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 0.067 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |

# CETIS Analytical Report


Test Code: DCO0914.087abs | 21-4297-1618

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Analysis ID:** | 12-1588-7851 | **Endpoint:** | Proportion Normal | **CETIS Version:** | CETISv1.8.7 |
| **Analyzed:** | 29 Sep-14 11:46 | **Analysis:** | Nonparametric-Control vs Treatments | **Official Results:** | Yes |

| | | | | | |
|---|---|---|---|---|---|
| **Sample ID:** | 20-8011-7962 | **Code:** | DCO0914.087abs | **Client:** | DCOR, LLC. |
| **Sample Date:** | 10 Sep-14 07:00 | **Material:** | Sample Water | **Project:** | |
| **Receive Date:** | 11 Sep-14 13:45 | **Source:** | Bioassay Report | | |
| **Sample Age:** | 30h (10.5 °C) | **Station:** | Platform Edith | | |

| Data Transform | Zeta | Alt Hyp | Trials | Seed | NOEL | LOEL | TOEL | TU |
|---|---|---|---|---|---|---|---|---|
| Angular (Corrected) | NA | C > T | NA | NA | 0.067 | >0.067 | NA | 1493 |

**Steel Many-One Rank Sum Test**

| Control | vs | C-% | Test Stat | Critical | Ties | DF | P-Value | P-Type | Decision(α:5%) |
|---|---|---|---|---|---|---|---|---|---|
| Negative Control | | 0.0168 | 27.5 | 17 | 1 | 8 | 0.7500 | Asymp | Non-Significant Effect |
| | | 0.0335 | 27.5 | 17 | 1 | 8 | 0.7500 | Asymp | Non-Significant Effect |
| | | 0.067 | 27.5 | 17 | 1 | 8 | 0.7500 | Asymp | Non-Significant Effect |

**ANOVA Table**

| Source | Sum Squares | Mean Square | DF | F Stat | P-Value | Decision(α:5%) |
|---|---|---|---|---|---|---|
| Between | 0 | 0 | 3 | 65540 | <0.0001 | Significant Effect |
| Error | 0 | 0 | 16 | | | |
| Total | 0 | | 19 | | | |

**Proportion Normal Summary**

| C-% | Control Type | Count | Mean | 95% LCL | 95% UCL | Median | Min | Max | Std Err | CV% | %Effect |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Control | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.0% | 0.0% |
| 0.0168 | | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.0% | 0.0% |
| 0.0335 | | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.0% | 0.0% |
| 0.067 | | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.0% | 0.0% |

**Angular (Corrected) Transformed Summary**

| C-% | Control Type | Count | Mean | 95% LCL | 95% UCL | Median | Min | Max | Std Err | CV% | %Effect |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 5 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 0 | 0.0% | 0.0% |
| 0.0168 | | 5 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 0 | 0.0% | 0.0% |
| 0.0335 | | 5 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 0 | 0.0% | 0.0% |
| 0.067 | | 5 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 0 | 0.0% | 0.0% |

**Proportion Normal Detail**

| C-% | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 1 | 1 | 1 | 1 | 1 |
| 0.0168 | | 1 | 1 | 1 | 1 | 1 |
| 0.0335 | | 1 | 1 | 1 | 1 | 1 |
| 0.067 | | 1 | 1 | 1 | 1 | 1 |

**Angular (Corrected) Transformed Detail**

| C-% | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 |
| 0.0168 | | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 |
| 0.0335 | | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 |
| 0.067 | | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 |

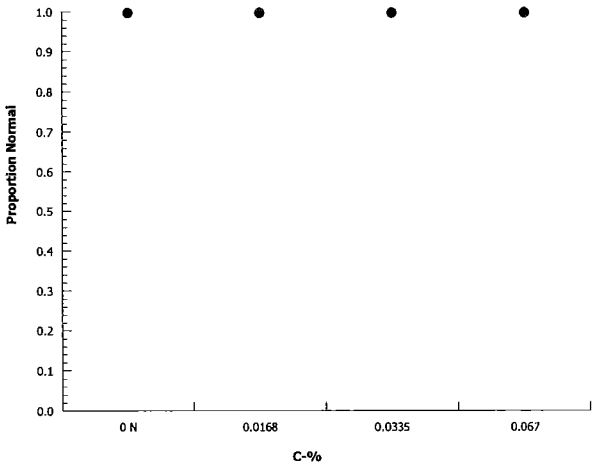
**Proportion Normal Binomials**

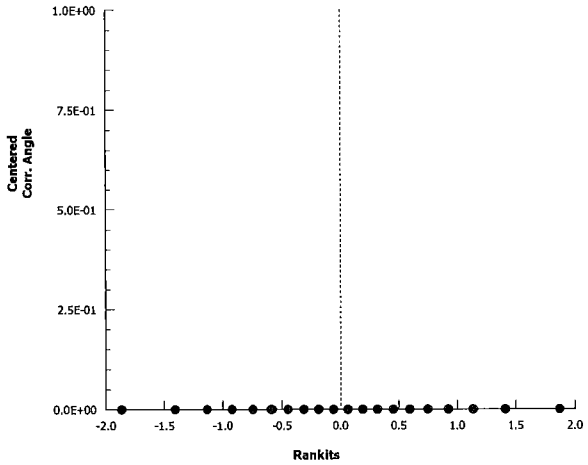
| C-% | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 0.0168 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 0.0335 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 0.067 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Analysis ID:** | 12-1588-7851 | **Endpoint:** | Proportion Normal | **CETIS Version:** | CETISv1.8.7 |
| **Analyzed:** | 29 Sep-14 11:46 | **Analysis:** | Nonparametric-Control vs Treatments | **Official Results:** | Yes |

## Graphics



# CETIS Analytical Report


Test Code: DCO0914.087abs | 21-4297-1618

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Analysis ID:** | 00-8648-8289 | **Endpoint:** | Proportion Normal | **CETIS Version:** | CETISv1.8.7 |
| **Analyzed:** | 29 Sep-14 11:46 | **Analysis:** | Linear Interpolation (ICPIN) | **Official Results:** | Yes |

| | | | | | |
|---|---|---|---|---|---|
| **Sample ID:** | 20-8011-7962 | **Code:** | DCO0914.087abs | **Client:** | DCOR, LLC. |
| **Sample Date:** | 10 Sep-14 07:00 | **Material:** | Sample Water | **Project:** | |
| **Receive Date:** | 11 Sep-14 13:45 | **Source:** | Bioassay Report | | |
| **Sample Age:** | 30h (10.5 °C) | **Station:** | Platform Edith | | |

**Linear Interpolation Options**

| X Transform | Y Transform | Seed | Resamples | Exp 95% CL | Method |
|---|---|---|---|---|---|
| Linear | Linear | 0 | 280 | Yes | Two-Point Interpolation |

**Point Estimates**

| Level | % | 95% LCL | 95% UCL | TU | 95% LCL | 95% UCL |
|---|---|---|---|---|---|---|
| EC5 | >0.067 | N/A | N/A | <1493 | NA | NA |
| EC10 | >0.067 | N/A | N/A | <1493 | NA | NA |
| EC15 | >0.067 | N/A | N/A | <1493 | NA | NA |
| EC20 | >0.067 | N/A | N/A | <1493 | NA | NA |
| EC25 | >0.067 | N/A | N/A | <1493 | NA | NA |
| EC40 | >0.067 | N/A | N/A | <1493 | NA | NA |
| EC50 | >0.067 | N/A | N/A | <1493 | NA | NA |

**Proportion Normal Summary**

| | | | Calculated Variate(A/B) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C-% | Control Type | Count | Mean | Min | Max | Std Err | Std Dev | CV% | %Effect | A | B |
| 0 | Negative Control | 5 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% | 500 | 500 |
| 0.0168 | | 5 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% | 500 | 500 |
| 0.0335 | | 5 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% | 500 | 500 |
| 0.067 | | 5 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% | 500 | 500 |

**Proportion Normal Detail**

| C-% | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 1 | 1 | 1 | 1 | 1 |
| 0.0168 | | 1 | 1 | 1 | 1 | 1 |
| 0.0335 | | 1 | 1 | 1 | 1 | 1 |
| 0.067 | | 1 | 1 | 1 | 1 | 1 |

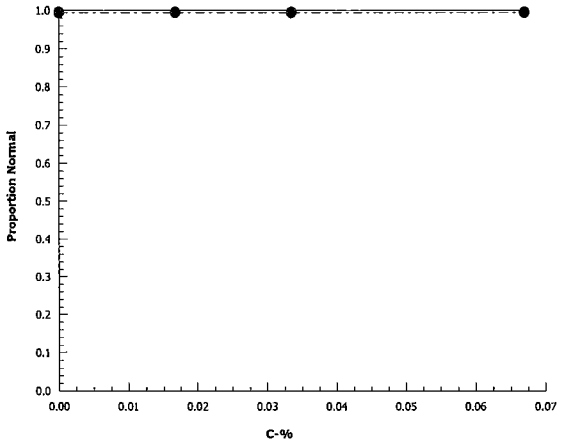
**Proportion Normal Binomials**

| C-% | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 0.0168 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 0.0335 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 0.067 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Analysis ID:** | 00-8648-8289 | **Endpoint:** | Proportion Normal | **CETIS Version:** | CETISv1.8.7 |
| **Analyzed:** | 29 Sep-14 11:46 | **Analysis:** | Linear Interpolation (ICPIN) | **Official Results:** | Yes |

## Graphics



# CETIS Measurement Report



**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Batch ID:** | 13-1835-2314 | **Test Type:** | Development | **Analyst:** | |
| **Start Date:** | 11 Sep-14 12:32 | **Protocol:** | EPA/600/R-95/136 (1995) | **Diluent:** | Laboratory Seawater |
| **Ending Date:** | 13 Sep-14 12:30 | **Species:** | Haliotis rufescens | **Brine:** | Not Applicable |
| **Duration:** | 48h | **Source:** | Cultured Abalone | **Age:** | |

| | | | | | |
|---|---|---|---|---|---|
| **Sample ID:** | 20-8011-7962 | **Code:** | DCO0914.087abs | **Client:** | DCOR, LLC. |
| **Sample Date:** | 10 Sep-14 07:00 | **Material:** | Sample Water | **Project:** | |
| **Receive Date:** | 11 Sep-14 13:45 | **Source:** | Bioassay Report | | |
| **Sample Age:** | 30h (10.5 °C) | **Station:** | Platform Edith | | |

**Parameter Acceptability Criteria**

| Parameter | Min | Max | Acceptability Limits | Overlap | Decision |
|---|---|---|---|---|---|
| Salinity-ppt | 34 | 34 | 32 - 36 | Yes | Results Within Limits |
| Temperature-°C | 14.9 | 15.1 | 14 - 16 | Yes | Results Within Limits |

**Dissolved Oxygen-mg/L**

| C-% | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | QA Count |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 2 | 6.2 | -19.21 | 31.61 | 4.2 | 8.2 | 2 | 2.828 | 45.62% | 0 |
| 0.0168 | | 2 | 6.4 | -12.66 | 25.46 | 4.9 | 7.9 | 1.5 | 2.121 | 33.15% | 0 |
| 0.0335 | | 2 | 6.6 | -12.46 | 25.66 | 5.1 | 8.1 | 1.5 | 2.121 | 32.14% | 0 |
| 0.067 | | 2 | 6.75 | -10.4 | 23.9 | 5.4 | 8.1 | 1.35 | 1.909 | 28.28% | 0 |
| Overall | | 8 | 6.488 | | | 4.2 | 8.2 | | | | 0 (0%) |

**pH-Units**

| C-% | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | QA Count |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 2 | 7.35 | 5.444 | 9.256 | 7.2 | 7.5 | 0.15 | 0.2121 | 2.89% | 0 |
| 0.0168 | | 2 | 7.45 | 6.815 | 8.085 | 7.4 | 7.5 | 0.05 | 0.07072 | 0.95% | 0 |
| 0.0335 | | 2 | 7.45 | 6.815 | 8.085 | 7.4 | 7.5 | 0.05 | 0.07072 | 0.95% | 0 |
| 0.067 | | 2 | 7.45 | 6.815 | 8.085 | 7.4 | 7.5 | 0.05 | 0.07072 | 0.95% | 0 |
| Overall | | 8 | 7.425 | | | 7.2 | 7.5 | | | | 0 (0%) |

**Salinity-ppt**

| C-% | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | QA Count |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| 0.0168 | | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| 0.0335 | | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| 0.067 | | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| Overall | | 8 | 34 | | | 34 | 34 | | | | 0 (0%) |

**Temperature-°C**

| C-% | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | QA Count |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| 0.0168 | | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| 0.0335 | | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| 0.067 | | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| Overall | | 8 | 15 | | | 14.9 | 15.1 | | | | 0 (0%) |

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

**Dissolved Oxygen-mg/L**

| C-% | Control Type | 1 | 2 |
|---|---|---|---|
| 0 | Negative Contr | 8.2 | 4.2 |
| 0.0168 | | 7.9 | 4.9 |
| 0.0335 | | 8.1 | 5.1 |
| 0.067 | | 8.1 | 5.4 |

**pH-Units**

| C-% | Control Type | 1 | 2 |
|---|---|---|---|
| 0 | Negative Contr | 7.5 | 7.2 |
| 0.0168 | | 7.5 | 7.4 |
| 0.0335 | | 7.5 | 7.4 |
| 0.067 | | 7.5 | 7.4 |

**Salinity-ppt**

| C-% | Control Type | 1 | 2 |
|---|---|---|---|
| 0 | Negative Contr | 34 | 34 |
| 0.0168 | | 34 | 34 |
| 0.0335 | | 34 | 34 |
| 0.067 | | 34 | 34 |

**Temperature-°C**

| C-% | Control Type | 1 | 2 |
|---|---|---|---|
| 0 | Negative Contr | 15.1 | 14.9 |
| 0.0168 | | 15.1 | 14.9 |
| 0.0335 | | 15.1 | 14.9 |
| 0.067 | | 15.1 | 14.9 |

Aquatic Bioassay and Consulting Labs.
29 N. Olive Street
Ventura, CA 93001
Phone and Fax:(805) 643-5621
**CHAIN OF CUSTODY RECORD**

**REPORT: e-mail to jrao@dcorllc.com**
Fax (805) 535-2075
Company DCOR,LLC.
Address 290 Maple Court. Suite 290
Ventura CA. 93003
**Contact Jay Rao at 805 535-2078**

**BILL TO:**
**P.O. #**
**Company:** DCOR,LLC.
**Address**

PROJ. NO.

**PROJECT NAME**
**Platform Edith**
**Whole Effluent Toxicity Tests**

**SAMPLER'S SIGNATURE:** Dean Mesner
**Print Name:** Dean Mesner

**CONTAINER TYPES**
A=Amber B=Brass G=Glass
P=Plastic V=Voa Vial O=Other

| Grab Sample NO. | Date Sampled | Time Sampled | Comp | Grab | Sample Description | Matrix: Water | Soil | Sludge | Other | Container # | Container Type | Analysis: Red Abalone | | | | | | Remarks: 8 Grab samples in 24 hours; Use EPA Method 600/R95/136 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9/9/14 | 10:00AM | | X | Produced Water | X | | | | 1 | P | | X | | | | | Produced Water Temp: 128° |
| 2 | 9/9/14 | 1:00PM | | X | Produced Water | X | | | | | | | | | | | | |
| 3 | 9/9/14 | 4:00PM | | X | Produced Water | X | | | | | | | | | | | | |
| 4 | 9/9/14 | 7:00PM | | X | Produced Water | X | | | | | | | | | | | | |
| 5 | 9/9/14 | 10:00PM | | X | Produced Water | X | | | | | | | | | | | | TOM = 10.5°C |
| 6 | 9/10/14 | 1:00AM | | X | Produced Water | X | | | | | | | | | | | | [illegible] = |
| 7 | 9/10/14 | 4:00AM | | X | Produced Water | X | | | | | | | | | | | | CHLORINE = <0.1 |
| 8 | 9/10/14 | 7:00AM | | X | Produced Water | X | | | | | | | | | | | | AMMONIA = >10 |

**CHECK ONE BOX**
Dispose Samples X
Return Samples

| Relinquished by :(Signature) | Date | Received by :(Signature) | Relinquished by :(Signature) | Date | Received by :(Signature) |
|---|---|---|---|---|---|
| Dean Mesner | 9-11-14 | R. J. R. | R. J. R. | 9/11/14 | [illegible] |
| Print Name: Dean Mesner | Time 7:45 | Print Name: JAY RAO | Print Name: JAY RAO | Time | Print Name: E. RAYMOND |
| Relinquished by :(Signature) | Date | Received by :(Signature) | Relinquished by :(Signature) | Date 1:45PM | Received by :(Signature) |
| Print Name: | Time | Print Name: | Print Name: | Time | Print Name: |

Verified by Lead Operator:(Signature) Dean Mesner
Print Name: Dean Mesner
Date: 9-10-14
Time: 0700

**Turn Around time**

| | | | | |
|---|---|---|---|---|
| 24Hr. | | | 5 day | |
| 48Hr | | | Standard | X |
| 72Hr | | | other | |

aquatic bioassay & consulting laboratories, inc

**CHRONIC ABALONE DEVELOPMENT BIOASSAY**

DATE: 11 September 2014

STANDARD TOXICANT: Zinc

NOEC = 56.00 ug/l

EC25 = 65.26 ug/l
EC50 = 76.84 ug/l

Yours very truly,

Scott Johnson
Laboratory Director

29 north olive st. ventura, ca 93001 (805) 643 5621 www.aquabio.org

# CETIS Summary Report

Report Date: 29 Sep-14 11:35 (p 1 of 1)
Test Code: ABS091114 | 03-8285-2263

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Batch ID:** | 04-4233-3821 | **Test Type:** | Development | **Analyst:** | |
| **Start Date:** | 11 Sep-14 12:30 | **Protocol:** | EPA/600/R-95/136 (1995) | **Diluent:** | Laboratory Seawater |
| **Ending Date:** | 13 Sep-14 12:30 | **Species:** | Haliotis rufescens | **Brine:** | Not Applicable |
| **Duration:** | 48h | **Source:** | Cultured Abalone | **Age:** | |

| | | | | | |
|---|---|---|---|---|---|
| **Sample ID:** | 06-4301-8044 | **Code:** | ABS091114 | **Client:** | Internal Lab |
| **Sample Date:** | 11 Sep-14 12:30 | **Material:** | Zinc | **Project:** | REF TOX |
| **Receive Date:** | | **Source:** | Reference Toxicant | | |
| **Sample Age:** | NA | **Station:** | REF TOX | | |

## Comparison Summary

| Analysis ID | Endpoint | NOEL | LOEL | TOEL | PMSD | TU | Method |
|---|---|---|---|---|---|---|---|
| 11-6461-9371 | Proportion Normal | 56 | 100 | 74.83 | 3.01% | | Steel Many-One Rank Sum Test |

## Point Estimate Summary

| Analysis ID | Endpoint | Level | µg/L | 95% LCL | 95% UCL | TU | Method |
|---|---|---|---|---|---|---|---|
| 00-1027-5282 | Proportion Normal | EC5 | 56 | 35.79 | 59.3 | | Linear Interpolation (ICPIN) |
| | | EC10 | 58.32 | 50.42 | 61.44 | | |
| | | EC15 | 60.63 | 56.37 | 63.58 | | |
| | | EC20 | 62.95 | 58.93 | 65.73 | | |
| | | EC25 | 65.26 | 61.5 | 67.87 | | |
| | | EC40 | 72.21 | 69.2 | 74.29 | | |
| | | EC50 | 76.84 | 74.33 | 78.58 | | |

## Test Acceptability

| Analysis ID | Endpoint | Attribute | Test Stat | TAC Limits | Overlap | Decision |
|---|---|---|---|---|---|---|
| 00-1027-5282 | Proportion Normal | Control Resp | 1 | 0.8 - NL | Yes | Passes Acceptability Criteria |
| 11-6461-9371 | Proportion Normal | Control Resp | 1 | 0.8 - NL | Yes | Passes Acceptability Criteria |
| 11-6461-9371 | Proportion Normal | NOEL | 56 | NL - 56 | No | Above Acceptability Criteria |
| 11-6461-9371 | Proportion Normal | PMSD | 0.03009 | NL - 0.2 | No | Passes Acceptability Criteria |

## Proportion Normal Summary

| C-µg/L | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | %Effect |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Control | 5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% |
| 18 | | 5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% |
| 32 | | 5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% |
| 56 | | 5 | 0.95 | 0.8522 | 1 | 0.82 | 1 | 0.03521 | 0.07874 | 8.29% | 5.0% |
| 100 | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 100.0% |
| 180 | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 100.0% |

## Proportion Normal Detail

| C-µg/L | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 1 | 1 | 1 | 1 | 1 |
| 18 | | 1 | 1 | 1 | 1 | 1 |
| 32 | | 1 | 1 | 1 | 1 | 1 |
| 56 | | 0.93 | 0.82 | 1 | 1 | 1 |
| 100 | | 0 | 0 | 0 | 0 | 0 |
| 180 | | 0 | 0 | 0 | 0 | 0 |

## Proportion Normal Binomials

| C-µg/L | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 18 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 32 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 56 | | 93/100 | 82/100 | 100/100 | 100/100 | 100/100 |
| 100 | | 0/100 | 0/100 | 0/100 | 0/100 | 0/100 |
| 180 | | 0/100 | 0/100 | 0/100 | 0/100 | 0/100 |

# CETIS Analytical Report

Report Date: 29 Sep-14 11:35 (p 1 of 2)
Test Code: ABS091114 | 03-8285-2263

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Analysis ID:** | 11-6461-9371 | **Endpoint:** | Proportion Normal | **CETIS Version:** | CETISv1.8.7 |
| **Analyzed:** | 29 Sep-14 11:34 | **Analysis:** | Nonparametric-Control vs Treatments | **Official Results:** | Yes |

| | | | | | |
|---|---|---|---|---|---|
| **Sample ID:** | 06-4301-8044 | **Code:** | ABS091114 | **Client:** | Internal Lab |
| **Sample Date:** | 11 Sep-14 12:30 | **Material:** | Zinc | **Project:** | REF TOX |
| **Receive Date:** | | **Source:** | Reference Toxicant | | |
| **Sample Age:** | NA | **Station:** | REF TOX | | |

| Data Transform | Zeta | Alt Hyp | Trials | Seed | PMSD | NOEL | LOEL | TOEL | TU |
|---|---|---|---|---|---|---|---|---|---|
| Angular (Corrected) | NA | C > T | NA | NA | 3.01% | 56 | 100 | 74.83 | |

**Steel Many-One Rank Sum Test**

| Control | vs | C-µg/L | Test Stat | Critical | Ties | DF | P-Value | P-Type | Decision(α:5%) |
|---|---|---|---|---|---|---|---|---|---|
| Negative Control | | 18 | 27.5 | 17 | 1 | 8 | 0.7500 | Asymp | Non-Significant Effect |
| | | 32 | 27.5 | 17 | 1 | 8 | 0.7500 | Asymp | Non-Significant Effect |
| | | 56 | 22.5 | 17 | 1 | 8 | 0.3045 | Asymp | Non-Significant Effect |

**ANOVA Table**

| Source | Sum Squares | Mean Square | DF | F Stat | P-Value | Decision(α:5%) |
|---|---|---|---|---|---|---|
| Between | 0.05506188 | 0.01835396 | 3 | 2.356 | 0.1103 | Non-Significant Effect |
| Error | 0.1246394 | 0.007789963 | 16 | | | |
| Total | 0.1797013 | | 19 | | | |

**Distributional Tests**

| Attribute | Test | Test Stat | Critical | P-Value | Decision(α:1%) |
|---|---|---|---|---|---|
| Variances | Mod Levene Equality of Variance | 2.59 | 5.953 | 0.1013 | Equal Variances |
| Variances | Levene Equality of Variance | 22.35 | 5.292 | <0.0001 | Unequal Variances |
| Distribution | Shapiro-Wilk W Normality | 0.6506 | 0.866 | <0.0001 | Non-normal Distribution |
| Distribution | Kolmogorov-Smirnov D | 0.4 | 0.2235 | <0.0001 | Non-normal Distribution |
| Distribution | D'Agostino Skewness | 2.848 | 2.576 | 0.0044 | Non-normal Distribution |
| Distribution | D'Agostino Kurtosis | 3.126 | 2.576 | 0.0018 | Non-normal Distribution |
| Distribution | D'Agostino-Pearson K2 Omnibus | 17.88 | 9.21 | 0.0001 | Non-normal Distribution |
| Distribution | Anderson-Darling A2 Normality | 3.787 | 3.878 | <0.0001 | Non-normal Distribution |

**Proportion Normal Summary**

| C-µg/L | Control Type | Count | Mean | 95% LCL | 95% UCL | Median | Min | Max | Std Err | CV% | %Effect |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Control | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.0% | 0.0% |
| 18 | | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.0% | 0.0% |
| 32 | | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.0% | 0.0% |
| 56 | | 5 | 0.95 | 0.8522 | 1 | 1 | 0.82 | 1 | 0.03521 | 8.29% | 5.0% |
| 100 | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 100.0% |
| 180 | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 100.0% |

**Angular (Corrected) Transformed Summary**

| C-µg/L | Control Type | Count | Mean | 95% LCL | 95% UCL | Median | Min | Max | Std Err | CV% | %Effect |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 5 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 0 | 0.0% | 0.0% |
| 18 | | 5 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 0 | 0.0% | 0.0% |
| 32 | | 5 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 | 0 | 0.0% | 0.0% |
| 56 | | 5 | 1.4 | 1.18 | 1.619 | 1.521 | 1.133 | 1.521 | 0.07894 | 12.61% | 7.97% |
| 100 | | 5 | 0.05002 | 0.05001 | 0.05003 | 0.05002 | 0.05002 | 0.05002 | 0 | 0.0% | 96.71% |
| 180 | | 5 | 0.05002 | 0.05001 | 0.05003 | 0.05002 | 0.05002 | 0.05002 | 0 | 0.0% | 96.71% |

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Analysis ID:** | 11-6461-9371 | **Endpoint:** | Proportion Normal | **CETIS Version:** | CETISv1.8.7 |
| **Analyzed:** | 29 Sep-14 11:34 | **Analysis:** | Nonparametric-Control vs Treatments | **Official Results:** | Yes |

## Proportion Normal Detail

| C-µg/L | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 1 | 1 | 1 | 1 | 1 |
| 18 | | 1 | 1 | 1 | 1 | 1 |
| 32 | | 1 | 1 | 1 | 1 | 1 |
| 56 | | 0.93 | 0.82 | 1 | 1 | 1 |
| 100 | | 0 | 0 | 0 | 0 | 0 |
| 180 | | 0 | 0 | 0 | 0 | 0 |

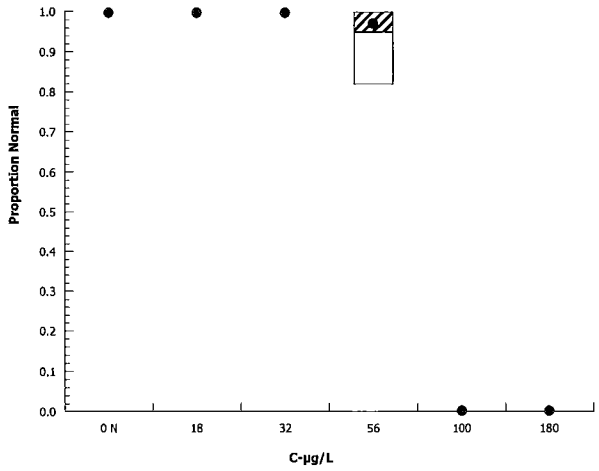
## Angular (Corrected) Transformed Detail

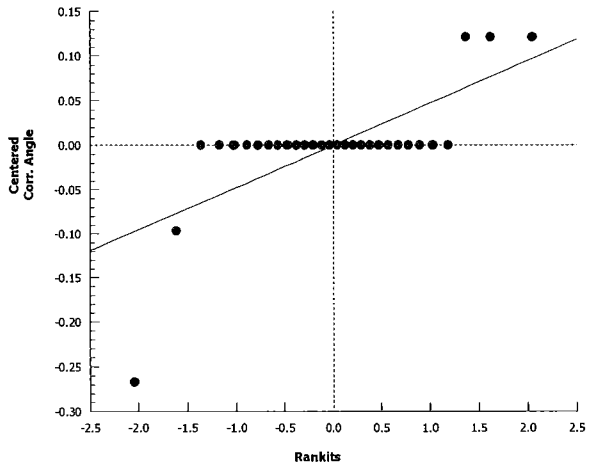
| C-µg/L | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 |
| 18 | | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 |
| 32 | | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 |
| 56 | | 1.303 | 1.133 | 1.521 | 1.521 | 1.521 |
| 100 | | 0.05002 | 0.05002 | 0.05002 | 0.05002 | 0.05002 |
| 180 | | 0.05002 | 0.05002 | 0.05002 | 0.05002 | 0.05002 |

## Proportion Normal Binomials

| C-µg/L | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 18 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 32 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 56 | | 93/100 | 82/100 | 100/100 | 100/100 | 100/100 |
| 100 | | 0/100 | 0/100 | 0/100 | 0/100 | 0/100 |
| 180 | | 0/100 | 0/100 | 0/100 | 0/100 | 0/100 |

## Graphics



# CETIS Analytical Report


Test Code: ABS091114 | 03-8285-2263

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Analysis ID:** | 00-1027-5282 | **Endpoint:** | Proportion Normal | **CETIS Version:** | CETISv1.8.7 |
| **Analyzed:** | 29 Sep-14 11:34 | **Analysis:** | Linear Interpolation (ICPIN) | **Official Results:** | Yes |

| | | | | | |
|---|---|---|---|---|---|
| **Sample ID:** | 06-4301-8044 | **Code:** | ABS091114 | **Client:** | Internal Lab |
| **Sample Date:** | 11 Sep-14 12:30 | **Material:** | Zinc | **Project:** | REF TOX |
| **Receive Date:** | | **Source:** | Reference Toxicant | | |
| **Sample Age:** | NA | **Station:** | REF TOX | | |

**Linear Interpolation Options**

| X Transform | Y Transform | Seed | Resamples | Exp 95% CL | Method |
|---|---|---|---|---|---|
| Linear | Linear | 0 | 280 | Yes | Two-Point Interpolation |

**Point Estimates**

| Level | µg/L | 95% LCL | 95% UCL |
|---|---|---|---|
| EC5 | 56 | 35.79 | 59.3 |
| EC10 | 58.32 | 50.42 | 61.44 |
| EC15 | 60.63 | 56.37 | 63.58 |
| EC20 | 62.95 | 58.93 | 65.73 |
| EC25 | 65.26 | 61.5 | 67.87 |
| EC40 | 72.21 | 69.2 | 74.29 |
| EC50 | 76.84 | 74.33 | 78.58 |

**Proportion Normal Summary**

| | | | Calculated Variate(A/B) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C-µg/L | Control Type | Count | Mean | Min | Max | Std Err | Std Dev | CV% | %Effect | A | B |
| 0 | Negative Control | 5 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% | 500 | 500 |
| 18 | | 5 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% | 500 | 500 |
| 32 | | 5 | 1 | 1 | 1 | 0 | 0 | 0.0% | 0.0% | 500 | 500 |
| 56 | | 5 | 0.95 | 0.82 | 1 | 0.03521 | 0.07874 | 8.29% | 5.0% | 475 | 500 |
| 100 | | 5 | 0 | 0 | 0 | 0 | 0 | | 100.0% | 0 | 500 |
| 180 | | 5 | 0 | 0 | 0 | 0 | 0 | | 100.0% | 0 | 500 |

**Proportion Normal Detail**

| C-µg/L | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 1 | 1 | 1 | 1 | 1 |
| 18 | | 1 | 1 | 1 | 1 | 1 |
| 32 | | 1 | 1 | 1 | 1 | 1 |
| 56 | | 0.93 | 0.82 | 1 | 1 | 1 |
| 100 | | 0 | 0 | 0 | 0 | 0 |
| 180 | | 0 | 0 | 0 | 0 | 0 |

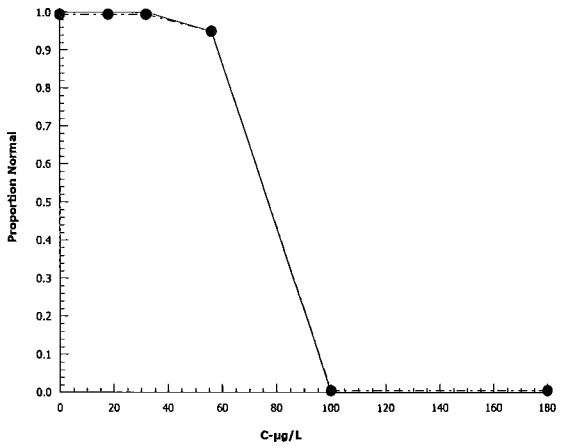
**Proportion Normal Binomials**

| C-µg/L | Control Type | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---|---|---|---|---|---|---|
| 0 | Negative Control | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 18 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 32 | | 100/100 | 100/100 | 100/100 | 100/100 | 100/100 |
| 56 | | 93/100 | 82/100 | 100/100 | 100/100 | 100/100 |
| 100 | | 0/100 | 0/100 | 0/100 | 0/100 | 0/100 |
| 180 | | 0/100 | 0/100 | 0/100 | 0/100 | 0/100 |

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Analysis ID:** | 00-1027-5282 | **Endpoint:** | Proportion Normal | **CETIS Version:** | CETISv1.8.7 |
| **Analyzed:** | 29 Sep-14 11:34 | **Analysis:** | Linear Interpolation (ICPIN) | **Official Results:** | Yes |

## Graphics



# CETIS Measurement Report



**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

| | | | | | |
|---|---|---|---|---|---|
| **Batch ID:** | 04-4233-3821 | **Test Type:** | Development | **Analyst:** | |
| **Start Date:** | 11 Sep-14 12:30 | **Protocol:** | EPA/600/R-95/136 (1995) | **Diluent:** | Laboratory Seawater |
| **Ending Date:** | 13 Sep-14 12:30 | **Species:** | Haliotis rufescens | **Brine:** | Not Applicable |
| **Duration:** | 48h | **Source:** | Cultured Abalone | **Age:** | |

| | | | | | |
|---|---|---|---|---|---|
| **Sample ID:** | 06-4301-8044 | **Code:** | ABS091114 | **Client:** | Internal Lab |
| **Sample Date:** | 11 Sep-14 12:30 | **Material:** | Zinc | **Project:** | REF TOX |
| **Receive Date:** | | **Source:** | Reference Toxicant | | |
| **Sample Age:** | NA | **Station:** | REF TOX | | |

**Parameter Acceptability Criteria**

| Parameter | Min | Max | Acceptability Limits | Overlap | Decision |
|---|---|---|---|---|---|
| Salinity-ppt | 34 | 34 | 32 - 36 | Yes | Results Within Limits |
| Temperature-°C | 14.9 | 15.1 | 14 - 16 | Yes | Results Within Limits |

**Dissolved Oxygen-mg/L**

| C-µg/L | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | QA Count |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 2 | 6.2 | -19.21 | 31.61 | 4.2 | 8.2 | 2 | 2.828 | 45.62% | 0 |
| 18 | | 2 | 6.75 | -14.22 | 27.72 | 5.1 | 8.4 | 1.65 | 2.333 | 34.57% | 0 |
| 32 | | 2 | 6.75 | -14.22 | 27.72 | 5.1 | 8.4 | 1.65 | 2.333 | 34.57% | 0 |
| 56 | | 2 | 6.75 | -14.22 | 27.72 | 5.1 | 8.4 | 1.65 | 2.333 | 34.57% | 0 |
| 100 | | 2 | 6.75 | -14.22 | 27.72 | 5.1 | 8.4 | 1.65 | 2.333 | 34.57% | 0 |
| 180 | | 2 | 6.75 | -14.22 | 27.72 | 5.1 | 8.4 | 1.65 | 2.333 | 34.57% | 0 |
| Overall | | 12 | 6.658 | | | 4.2 | 8.4 | | | | 0 (0%) |

**pH-Units**

| C-µg/L | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | QA Count |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 2 | 7.35 | 5.444 | 9.256 | 7.2 | 7.5 | 0.15 | 0.2121 | 2.89% | 0 |
| 18 | | 2 | 7.45 | 6.815 | 8.085 | 7.4 | 7.5 | 0.05 | 0.07072 | 0.95% | 0 |
| 32 | | 2 | 7.45 | 6.815 | 8.085 | 7.4 | 7.5 | 0.05 | 0.07072 | 0.95% | 0 |
| 56 | | 2 | 7.45 | 6.815 | 8.085 | 7.4 | 7.5 | 0.05 | 0.07072 | 0.95% | 0 |
| 100 | | 2 | 7.45 | 6.815 | 8.085 | 7.4 | 7.5 | 0.05 | 0.07072 | 0.95% | 0 |
| 180 | | 2 | 7.45 | 6.815 | 8.085 | 7.4 | 7.5 | 0.05 | 0.07072 | 0.95% | 0 |
| Overall | | 12 | 7.433 | | | 7.2 | 7.5 | | | | 0 (0%) |

**Salinity-ppt**

| C-µg/L | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | QA Count |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| 18 | | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| 32 | | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| 56 | | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| 100 | | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| 180 | | 2 | 34 | 34 | 34 | 34 | 34 | 0 | 0 | 0.0% | 0 |
| Overall | | 12 | 34 | | | 34 | 34 | | | | 0 (0%) |

**Temperature-°C**

| C-µg/L | Control Type | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | QA Count |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Negative Contr | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| 18 | | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| 32 | | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| 56 | | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| 100 | | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| 180 | | 2 | 15 | 13.73 | 16.27 | 14.9 | 15.1 | 0.1 | 0.1414 | 0.94% | 0 |
| Overall | | 12 | 15 | | | 14.9 | 15.1 | | | | 0 (0%) |

**Red Abalone Larval Development Test** — **Aquatic Bioassay & Consulting Labs, Inc.**

**Dissolved Oxygen-mg/L**

| C-µg/L | Control Type | 1 | 2 |
|---|---|---|---|
| 0 | Negative Contr | 8.2 | 4.2 |
| 18 | | 8.4 | 5.1 |
| 32 | | 8.4 | 5.1 |
| 56 | | 8.4 | 5.1 |
| 100 | | 8.4 | 5.1 |
| 180 | | 8.4 | 5.1 |

**pH-Units**

| C-µg/L | Control Type | 1 | 2 |
|---|---|---|---|
| 0 | Negative Contr | 7.5 | 7.2 |
| 18 | | 7.5 | 7.4 |
| 32 | | 7.5 | 7.4 |
| 56 | | 7.5 | 7.4 |
| 100 | | 7.5 | 7.4 |
| 180 | | 7.5 | 7.4 |

**Salinity-ppt**

| C-µg/L | Control Type | 1 | 2 |
|---|---|---|---|
| 0 | Negative Contr | 34 | 34 |
| 18 | | 34 | 34 |
| 32 | | 34 | 34 |
| 56 | | 34 | 34 |
| 100 | | 34 | 34 |
| 180 | | 34 | 34 |

**Temperature-°C**

| C-µg/L | Control Type | 1 | 2 |
|---|---|---|---|
| 0 | Negative Contr | 15.1 | 14.9 |
| 18 | | 15.1 | 14.9 |
| 32 | | 15.1 | 14.9 |
| 56 | | 15.1 | 14.9 |
| 100 | | 15.1 | 14.9 |
| 180 | | 15.1 | 14.9 |