

INSTRUCTIONS (March 2017) C11, C12, C13 TOXICOLOGY

1.0 Sample Reception

- 1.1 Check that all the sample bottles for which you are registered are accounted for. All breakages and shortages must be reported within 24 hours of sample receipt.
- 1.2 Samples should be stored in the dark at 4±2°C upon receipt. Samples are stable for the duration of the study.
- 1.3 Check that all the parameters for which you are registered are correctly identified on the web data entry report form.
- 1.4 Inquiries regarding samples and their shipment may be directed to:

PT Non-conformances
Information and Quality Management
Environment Canada
Testing
fax: 905-336-8914
email: PTNC@ec.gc.ca

cc: Erinn Knight, CALA Program
Administrator (fax: 613-233-5501
email: eknight@cala.ca)

Inquiries must be made by facsimile or email only. Use the enclosed Nonconformance Form (see reverse) when sending a fax. Please include your CALA membership number on all correspondence.

2.0 Sample Analysis

- 2.1 The reference toxicants have been prepared using the following toxicants:
 - Trout LC50 (96 h) and microtox IC50 (15 min) – phenol.
 - Daphnia LC50 (48 h) - sodium chloride.
- 2.2 The highest concentration (ml of sample added per litre of test solution) and applied dilution factor for each sample should be as shown to the right:
- 2.3 For each sample prepare at least five (5) test solutions in a geometric series using the dilution factor shown above.

- 2.4 Example calculation for trout C11-1, assuming a 20 L test volume:

Test solution 1: 9 ml/L x 20 L = 180 ml of sample into 20L.

Test solution 2: 180 ml x 0.5 = 90 ml of sample into 20L.

Test solution 3: 90 ml x 0.5 = 45 ml of sample into 20L.

Test solution 4: 45 ml x 0.5 = 22.5 ml of sample into 20L.

Test solution 5: 22.5 ml x 0.5 = 11.25 ml of sample into 20L.

Parameter	I.D.	HIGHEST CONC. (mL/L)	DILUTION FACTOR
Trout LC50 (96 h)	C11-1	9	0.5
	C11-2	6	0.5
	C11-3	7	0.5
	C11-4	5	0.5
Daphnia LC50 (48 h)	C12-1	150	0.5
	C12-2	170	0.5
	C12-3	110	0.5
	C12-4	70	0.5
Microtox IC50 (15 min)	C13-1	80	0.5
	C13-2	50	0.5
	C13-3	70	0.5
	C13-4	50	0.5

- 2.5 For Microtox, the top concentration is prepared in a volumetric flask with dilution water (i.e. deionized water). This solution is then pipetted into the cuvettes as the sample and diluted with the appropriate diluent using a 0.5 dilution factor, as per standard test procedure.
- 2.6 Use volumetric labware and laboratory dilution water to prepare the dilution series for Daphnia and rainbow trout.
- 2.7 Proceed with testing using the routine analytical method identified in your recent application to the CALA program.
- 2.8 For trout and daphnia, calculate the results using the preferred statistical method for the data as determined by following the flowsheet in Figure 4 of the Environment Canada test method EPS 1/RM/46. For microtox calculate the IC50 using the Microbics computer program.

3.0 Reporting Results

- 3.1 Report data using the web-data-entry system (www.CALA.ca) in the units indicated.
- 3.2 Report results with 95% confidence limits. Also provide information on method, date analyzed, dilution water data, and name and telephone number of laboratory contact.

4.0 Safety

- 4.1 The PT samples are designed for use by laboratory professionals familiar with environmental samples and potentially hazardous materials.

PT SAMPLE NON-CONFORMANCE FORM

Attn: PT non-conformances

Study Number:

ENSURE THAT SAMPLES RECEIVED MATCH REPORT FORMS

1 - Laboratory Information

Contact Name:

Laboratory Name

Laboratory Address

Contact Telephone #

Contact Facsimile #

Contact e-mail:

2 - Sample Details

Date & Time of Arrival(YYYY,MM,DD,HH:MM):

FedEx Tracking Number:

Test Groups Received (e.g. C1 , C2 etc.):

Number of Boxes:

3 - Description of Nonconformance

4 - Requested Action

5 - PT Provider Notes