



Instructions for Catalog # AQC015 USEPA Test Code 38

Revision 090119

Organism: *Daphnia pulex*

Test Conditions: 48-Hour Acute, Non-renewal, 25°C, Moderately-Hard Synthetic Freshwater (MHSF)

Description:

- This reference toxicant is designed for the *Daphnia pulex*, 48-Hour Acute, Non-renewal, 25°C, Moderately-Hard Synthetic Freshwater (MHSF), Toxicity Test (i.e., USEPA Test Code 38, USEPA Method Code 2021.0).
- This reference toxicant is packaged in a 125 mL bottle containing approximately 125 mL of standard concentrate.
- This concentrate can be stored at room temperature.
- This product is intended to be used as a quality control check of the entire analytical process for the analytes/matrix included in the standard.
- The dilution instructions below represent the minimum suggested sample size for this product. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown on the certificate of analysis.
- The certified values apply to the diluted sample after following the stated dilution instructions.

Helpful Hints:

- This reference toxicant has been prepared as a concentrate and must be diluted prior to analysis to prepare a “simulated” effluent (hereafter referred to as the effluent).
- This reference toxicant must be diluted with Moderately-Hard Synthetic Freshwater (MHSF). MHSF is prepared from Millipore Milli-Q® (or equivalent) deionized water and reagent grade chemicals, as specified in the current version of the USEPA Methods Manual.
- The diluted effluent should be utilized as soon as possible after preparation.

Instructions:

1. Add approximately 800 mL of moderately-hard synthetic freshwater (MHSF) to a clean, dry, 1.0 Liter, class A volumetric flask.
2. Shake the reference toxicant concentrate bottle prior to opening.
3. Using a clean, dry, 50 mL, class A volumetric flask, carefully transfer 50 mL of the reference toxicant concentrate into the 1.0 L flask.
4. Rinse the 50 mL flask into the 1.0 L flask using MHSF.
5. Dilute the 1.0 L flask to final volume using MHSF.
6. Cap the flask and mix well.

The effluent prepared according to these instructions represents the 100% effluent. See below for secondary dilution instructions:

1. Split the 100% effluent sample into two 0.5 L aliquots. The first aliquot is your 100% effluent for testing.
2. Dilute the second aliquot with 0.5 L of MHSF and mix. This is your 50% effluent sample.
3. Continue diluting half of each sample with the same volume of MHSF to make your 25%, 12.5% and 6.25% effluent dilutions, which represent all five test dilutions.
4. You are now ready to proceed with the test following your normal procedures.
5. If necessary, additional effluent may be prepared using the same reference toxicant concentrate and following instructions 1-6 above.

Safety:

ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website www.eraqc.com.