

Bottle cleaning procedure for dissolved cobalt analyses

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Abstract

This is a widely used cleaning procedure for trace metal clean analyses. This procedure is specifically for the bottles used for measuring dissolved and labile cobalt using cathodic stripping voltammetry.

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Guidelines

Make sure to use a fume hood when completing the steps involving HCl.

Materials

- ✓ MilliQ water by Contributed by users
- ✓ Hydrochloric Acid by Contributed by users
- ✓ Citranox soap by Contributed by users

Protocol

Dissolved cobalt analyses

Step 1.

Obtain 60 mL narrow-mouth low density polyethylene bottles (LDPE) for this procedure.

Dissolved cobalt analyses

Step 2.

Bottles are soaked for 10 days in the acidic detergent, Citranox, and rotated after approximately 5 days to make sure all sides of the bottles have been coated with soap.

Dissolved cobalt analyses

Step 3.

The bottles are then rinsed thoroughly with Milli-Q water (usually 5 times, or until all soap is gone), and then filled with 10% HCl (new HCl) to soak for 10 days (also being rotated after 5 days).

Dissolved cobalt analyses

Step 4.

Each bottle is then rinsed thoroughly with pH 2 Milli-Q, and double-bagged and stored empty.