

Cylindrospermopsin in Brackish Water or Seawater Sample Preparation

1. Intended Use

For the preparation of brackish water or seawater samples for analysis in the ABRAXIS® Cylindrospermopsin ELISA.

2. Sensitivity

0.15 ppb in brackish water or seawater

3. Materials and Reagents Required

4 mL glass vials with Teflon-lined caps

Micropipettes with disposable plastic tips

Vortex mixer

Timer

Microcentrifuge tubes

Microcentrifuge

Cylindrospermopsin Seawater Sample Treatment Reagent

ABRAXIS® Cylindrospermopsin ELISA Kit (PN 522011)

4. Notes and Precautions

This procedure is intended for use with brackish water or seawater samples. Other matrices should be thoroughly validated before use with this procedure.

5. Procedure

- 5.1 Weigh 0.1 g of Cylindrospermopsin Seawater Sample Treatment Reagent into a clean, appropriately labeled 4 mL glass vial.
- 5.2 Add 1 mL of brackish water or seawater sample to the vial.
- 5.3 Vortex for 1 minute. Allow the sample to settle for 10 minutes.
- 5.4 Pipette the supernatant into an appropriately labeled microcentrifuge tube. Centrifuge for 5 minutes at 13,000 rpm. The sample will separate into 3 layers: a solid, white precipitate (bottom layer), a clear liquid (center layer), and a very thin white film (on top of the liquid layer).
- 5.5 Pipette the clear liquid (center layer) into a clean, appropriately labeled 4 mL glass vial. Avoid pipetting the very thin white film.
- 5.6 Dilute the supernatant 1:3 with DI H₂O (i.e. 333 µL supernatant and 667 µL DI H₂O). The sample can then be analyzed using the ABRAXIS® Cylindrospermopsin ELISA Kit.

6. Evaluation of Results

The Cylindrospermopsin concentration in samples is determined by multiplying the ELISA results by a factor of 3. Samples showing a concentration lower than standard 1 (0.05 ppb) should be reported as containing < 0.15 ppb of Cylindrospermopsin. Samples showing a higher concentration than standard 6 (2.0 ppb) can be reported as containing >6 ppb of Cylindrospermopsin or diluted further and re-analyzed to obtain an accurate quantitative result.

7. Performance Data

Recovery

Samples containing various concentrations of seawater were spiked with Cylindrospermopsin, prepared as described above, and then analyzed using the Cylindrospermopsin Assay. Average recovery was 89.6%.

8. For ordering or technical assistance contact:

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