

Melamine in Infant Formula (Powder) Sample Preparation

1. Intended Use

For the detection of Melamine in powdered infant formula.

2. Range of Detection

100-2,500 ng/mL (ppb). Samples with higher concentrations must be diluted further and re-analyzed.

3. Materials Required (Not Provided)

Pipettes capable of delivering 100 and 900 μ L

Glass vials with Teflon lined caps

Methanol

ABRAXIS[®] Melamine ELISA Kit (PN 50005B)

4. Preparation of Solutions

10% MeOH/20 mM Phosphate Buffered Saline (PBS), pH 7.4: To 800 mL of distilled or deionized water, add: Sodium phosphate dibasic anhydrous 2.277 g; Sodium phosphate monobasic monohydrate 0.548 g; Sodium chloride 18.0 g, add 100 mL of methanol and then bring to 1 L with distilled or deionized water, pH 7.2-7.4.

5. Notes and Precautions

To eliminate matrix interference from infant formula powder to be tested for the presence of Melamine, samples must be prepared and diluted in 10% MeOH/20 mM PBS.

6. Procedure

6.1 Prepare the infant formula as indicated on sample package substituting 10% MeOH/20 mM PBS for the water normally used to reconstitute the formula. For example, infant formula, which should be prepared at a ratio of 8.6 grams of formula per 2 ounces (60mL) of water, should be prepared as 8.6 grams of formula into 2 ounces (60mL) of 10% MeOH/20 mM PBS. Reconstituted formula should then be diluted 1:5 in 10% MeOH/20 mM PBS.

6.2 The sample is now ready to analyze according to the procedure described in the ABRAXIS[®] Melamine Kit package insert.

7. Evaluation of Results

Results obtained for powder form infant formula prepared as described above must be multiplied by a factor of 5 to account for the sample dilution. Only use results within the analytical range of the assay (20-500 ppb). Results lower than lowest standard (20 ppb) should not be multiplied by dilution factor but should be reported as < 100 ppb. Results above the highest standard must be diluted and re-analyzed.

8. Performance Data

The sample preparation procedure detailed above was used with powdered infant formula (non-recalled) spiked with various amounts of Melamine. Average recovery was 104.9%.

9. For ordering or technical assistance contact

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