

Testing Alternate Matrices with QuickTox Strips for Melamine

(Cat #AS 073 BG)

Materials Required:

- EnviroLogix QuickTox Kit for Melamine, including Strips, disposables, and Extraction Buffer (prepare as directed). Extraction Buffer is only used in Protocol (A).
- Filtering supplies and/or centrifuge for (A) and/or (B)

Follow instructions in the product insert for using QuickTox Strips (bring to room temperature, reseal canister, etc.)

(A) Dry Matrices Procedure:

1. Weigh 50 g of the desired ground dry matrix into a suitable container capable of holding 200 mL liquid in addition to the sample. The dry material should have a 20 mesh consistency (similar to coffee grounds).
2. Add 100 mL Extraction Buffer to the dry material, cap container, and shake for one minute to extract the sample. Ensure that all ground matrix is well suspended in the Extraction Buffer.
3. Allow the mixture to settle for 1-2 minutes, or until a visible supernatant is present above the settled layer. Some matrices may absorb more Extraction Buffer than others; therefore a means of clarification may be necessary to yield a clear extract. Examples of clarification include straining material through cheesecloth followed by coarse filtration, or alternatively centrifugation at 5000 x g for 5 minutes. Note: If the matrix becomes too thick to easily clarify, an additional 25% Extraction Buffer can be added to thin the sample prior to clarification, without compromising assay performance.
4. Using a disposable pipette, carefully remove 0.5 mL of the clarified extract and place into the reaction vial provided. Add the QuickTox Strip (arrows first) and allow the test to run for 5 minutes. Interpret results at the five minute mark.
5. Interpretation: If the Test Line is lighter than the Control Line, sample contains more than 2.5 ppm melamine; if the Test Line is equal to or darker than the Control Line, sample contains less than 2.5 ppm melamine.

(B) Liquid Milk Procedure:

1. Obtain a 25 mL milk sample and prepare by centrifugation at 5000 x g, 5 minutes, 4°C. Upon centrifugation, the milk fat will rise to the surface of the centrifuge tube. Skim the fat layer off with a cotton swab and retain the skimmed milk. If testing skim milk, the skimming step can be eliminated.
2. Using a disposable pipette, carefully remove 0.5 mL of the skimmed milk and place into the reaction vial. Add the QuickTox Strip (arrows first) and allow test to run for 5 minutes. Interpret results at the five minute mark.
3. Interpretation: If the Test Line is lighter than the Control Line, sample contains more than 0.5 ppm melamine; if the Test Line is equal to or darker than the Control Line, sample contains less than 0.5 ppm melamine.

(C) Dry Milk Procedure:

1. Weigh a 25 g sample of the dry milk or milk solid matrix into a container large enough to hold at least 500 mL. Add 200 mL tap water to the dry milk material and resuspend into a homogeneous mixture.
2. Using a disposable pipette, carefully remove 0.5 mL of the homogeneous mixture into the reaction vial. Add the QuickTox Strip (arrows first) and allow test to run for 5 minutes. Interpret results at the five minute mark.
3. Interpretation: If the Test Line is lighter than the Control Line, sample contains more than 2.5 ppm melamine; if the Test Line is equal to or darker than the Control Line, sample contains less than 2.5 ppm melamine.

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