Glyphosate in Cereal
Sample Preparation

1. Intended Use

For the detection of Glyphosate in cereal products.

2. Sensitivity

7.5 ppb in matrix

3. Materials and Reagents Required

Analytical Balance
Microcentrifuge tubes, 1.5 mL or 2.0 mLMicrocentrifuge
Micropipettes with disposable plastic tips
Glass vials – 4 mL and 20 mL with Teflon-lined capsDeionized water
Serological pipettes, 5 mL or 10 mLRotator and/or shaker
Vortex mixer
Glyphosate Sample Diluent (provided in the kit; additional available for purchase; PN 500082)Eurofins Abraxis
Glyphosate Plate ELISA Kit (PN 500205)

4. Notes and Precautions

This procedure is intended for use with ground cereal products. Other matrices should be thoroughly validated before usewith this procedure.

Dried cereal should be placed in a Ziploc bag and broken down or smashed into smaller pieces using a hammer or relatedinstrument. Please wear gloves to prevent any cross-contamination.

Analysis should be performed with the Eurofins Abraxis Glyphosate Plate ELISA Kit as soon as possible after extraction.Samples should not sit more than one day in plastic microcentrifuge tubes before being diluted and analyzed.

This procedure is for research use only. It is not intended for diagnostic procedures.

5. Procedure

5.1. Weigh 0.5 g of ground sample to 20 mL glass vial.

5.2. Add 10 mL of deionized water to sample (1:20 dilution).

5.3. Vortex vigorously for 10 – 15 seconds and put sample on rotator or shaker for 10 minutes.

5.4. Remove from rotator or shaker and allow the sample to settle for at least 2 minutes.

5.5. Transfer 1.5 to 2 mL of the supernatant to an appropriately labeled microcentrifuge vial.

5.6. Centrifuge for 5 minutes at ~8000 x g. Make sure the centrifuge is properly balanced.

5.7. Add 800 µL of Glyphosate Sample Diluent to an appropriately labeled 4 mL glass vial. Add 200 µL of the supernatant (from 5.6) to the Glyphosate Diluent in the vial (1:5 dilution). Vortex. This will then be analyzed as sample, see *Derivatization of Standards, Control and Samples* in the Test Preparation sectionof the Glyphosate Plate ELISA Kit user's guide.

6. Evaluation of Results

The ELISA results must be multiplied by a factor of 100 to account for the necessary dilution. Samples showing a concentration lower than Standard 1 (0.075 ppb) should be reported as < 7.5 ppb of Glyphosate. Samples showing a higher concentration than Standard 5 (4.0 ppb) can be reported as > 400 ppb or diluted further and re-analyzed to obtain an accurate quantitative result.

7. Assistance

For ordering or technical assistance contact:

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