

## **Glyphosate in Tea Leaf Extraction Sample Preparation**

### **1. Intended Use**

For the detection of Glyphosate in tea leaves.

### **2. Sensitivity**

7.5 ppb in matrix

### **3. Materials and Reagents Required**

Glass vials – 4 mL and 20 mL with Teflon-lined caps

Deionized water

Serological pipettes, 5 mL or 10 mL

Clean-up Reagent (PN 500094)

Microcentrifuge tubes, 2.0 mL

Microcentrifuge capable of 14,000 x g

Millipore Amicon Ultra 0.5mL 10k centrifugal filter units

Rotator and/or shaker

Vortex mixer

ABRAXIS<sup>®</sup> Glyphosate Sample Diluent (PN 500082)

ABRAXIS<sup>®</sup> Glyphosate ELISA Kit (PN 500205)

### **4. Notes and Precautions**

This procedure is intended for use with tea samples. Other matrices should be thoroughly validated before use with this procedure.

- Assay should be performed with ABRAXIS<sup>®</sup> Glyphosate ELISA kit as soon after extraction as possible. Samples should not sit more than one day in plastic microcentrifuge tubes before being run with the ABRAXIS<sup>®</sup> Glyphosate ELISA kit.
- This procedure is for research use only. It is not intended for diagnostic procedures.

### **5. Extraction Procedure**

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

5.2 Add 10 mL of deionized water to sample (20-fold dilution).

5.3 Vortex vigorously for 10 – 15 seconds and put sample on rotator or shaker at 40 rpm for 10 minutes.

5.4 After mixing, let sample settle for at least 2 minutes.

5.5 Aspirate 4.0 mL of extracted sample to a clean, appropriately labeled 20 mL glass vial containing 100 mg of Clean-Up Reagent.

5.6 Vortex or mix well by shaking for 30 seconds. Let sample settle for at least 2 minutes.

5.7 Centrifuge tube at 14,000 x g for 5 minutes. Make sure the centrifuge is properly balanced.

5.8 Pipette 0.5 mL of the separated liquid into a Millipore Amicon Ultra filter and the appropriately labeled 2 mL microcentrifuge tube that are provided in the kit.

5.9 Centrifuge filter/tube unit at 14,000 x g for 5 minutes.

5.10 Dilute the filtrate 5-fold in ABRAXIS<sup>®</sup> Glyphosate Sample Diluent included in the ABRAXIS<sup>®</sup> ELISA kit by pipetting 0.2 mL of the filtrate that is collected in the microcentrifuge tube to 0.8 mL of ABRAXIS<sup>®</sup> Glyphosate Sample Diluted in clean, appropriately labeled 4 mL glass vial.

5.11 Derivatize the sample according to Section D Test Preparation in step 7 of *Derivatization of Standards, Control and Samples* instructions of the ABRAXIS<sup>®</sup> ELISA kit.

5.12 Perform assay as noted in Section F Assay Procedure instructions provided in the kit.

## 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. Highly contaminated samples (those outside of the calibration range of the assay) must be diluted and re-analyzed to obtain an accurate quantitative result.

## 7. For ordering or technical assistance contact

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