

## Glyphosate in Grapes Sample Preparation

### 1. Intended Use

For the detection of Glyphosate in grapes.

### 2. Range of Detection

The range of detection is 0.375 ppb to 20 ppb in matrix. If samples exceed calibration, are known to contain higher analyte levels, or a higher detection range is necessary, samples should be diluted further prior to analysis.

### 3. Materials Required (not provided)

Vortex mixer

Micropipettes with disposable plastic tips 12 x 75 mm glass test tubes

Test tube rack

Clean-up Reagent (PN 500094) Microcentrifuge tubes, 2.0 mL

Microcentrifuge capable of spinning at 8100 g

Millipore Amicon Ultra 0.5 mL 10k centrifugal filter units (For use with Method 5.2)

Funnel

Coffee filters

Beaker

Blender

ABRAXIS® Glyphosate Sample Diluent (PN 500082)

ABRAXIS® Glyphosate Plate ELISA Kit (PN 500205)

### 4. Notes and Precautions

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

- Before dispensing any volume of liquid, condition each pipette tip by drawing the liquid in and out of the tip 3 times before the final dispense. This will ensure that an accurate volume is transferred.

### 5. Procedure

#### 5.1 Procedure for blending grapes and filtering extract

5.1.1 Place 1-2 handfuls of grapes into a blender and blend until a homogeneous mixture is obtained.

5.1.2 Place coffee filter into the funnel and the funnel into the beaker.

5.1.3 Pour blended grape mixture into funnel and allow it to drain into the beaker.

*Note: If time does not allow for gravity to pull liquid through the filter, carefully squeeze the liquid through the filter, being careful not to cause the filter to rip and allow the blended grapes to fall into the beaker.*

**Choose either Method 5.2 or 5.3 below to continue extraction procedure:**

#### 5.2 Using Millipore Amicon Ultra Filters

5.2.1 Place a filter from the Millipore Amicon Ultra kit into an appropriately labeled 2 mL microcentrifuge tube and pipette 500 µL of blended grape extract sample into the filter.

5.2.2 Centrifuge filter/tube unit at 8100 x g for 5 minutes.

5.2.3 Pipette 200 µL of the filtrate that is collected in the microcentrifuge tube to a clean, appropriately labeled test tube and dilute with 800 µL of ABRAXIS® Glyphosate Sample Diluent. Vortex to mix.

5.2.4 This will then be analyzed as sample, see *Derivatization of Standards, Control and Samples* in the Test Preparation section of the ABRAXIS® Glyphosate Plate ELISA Kit user's guide.

#### 5.3 Using Clean-up Reagent

5.3.1 Add 2.0 mL of blended grape extract sample to a clean, appropriately labeled 2 mL microcentrifuge tube containing 50 mg of Clean-up Reagent and vortex for 30 seconds.

- 5.3.2 Centrifuge Clean-up Reagent vials at 8100 x g for 5 minutes.
- 5.3.3 Pipette 200 µL of the supernatant solution from the microcentrifuge tube to a clean, appropriately labeled test tube and dilute with 800 µL of ABRAXIS® Glyphosate Sample Diluent. Vortex to mix.
- 5.3.4 This will then be analyzed as sample, see *Derivatization of Standards, Control and Samples* in the Test Preparation section of the ABRAXIS® Glyphosate Plate ELISA Kit user's guide.

## 6. Evaluation of Results

The ELISA results must be multiplied by a factor of 5 to account for the necessary dilution. Samples showing a concentration lower than Standard 1 (0.075 ppb) should be reported as < 0.375 ppb of Glyphosate. Samples showing a higher concentration than Standard 5 (4.0 ppb) can be reported as > 20 ppb or diluted further and re-analyzed to obtain an accurate quantitative result.

## 7. For ordering or technical assistance contact:

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