

## Glyphosate in Honey and Corn Syrup Sample Preparation

### 1. Intended Use

For the detection of Glyphosate in honey and corn syrup.

### 2. Sensitivity

15 ppb in matrix

### 3. Materials and Reagents Required

Analytical balance

Microcentrifuge tubes

4 mL glass vials with Teflon-lined caps

Disposable pipettes

Micropipettes with disposable plastic tips

Vortex mixer

Microcentrifuge

Timer

Plate shaker or Micro-well plate holder with insert retainer for vortex mixer

1 N Hydrochloric Acid (HCl)

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

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

50°C water bath or equivalent (optional)

### 4. Notes and Precautions

This procedure is intended for use with honey and corn syrup (light and dark). Other matrices should be thoroughly validated before use with this procedure.

- Hydrochloric Acid must be handled with care. Wear appropriate protective clothing (gloves, glasses, etc.). Avoid contact with skin and mucous membranes. If contact occurs, wash with copious amounts of water and seek appropriate medical attention.
- Due to the viscous nature of the prepared samples, the microtiter plate should be placed on a plate shaker or vortex mixer fitted with a micro-well plate holder adapter for the incubations with the antibody and conjugate solutions. This will allow for the appropriate mixing of all reagents in the microtiter wells.

### 5. Procedure

5.1 Weigh 0.5 g of sample into an appropriately labeled microcentrifuge tube.

5.2 Add 0.5 mL of 1N HCl to sample.

5.3 Place sample in a 50°C water bath to facilitate the dissolution of honey in 1N HCl.

5.4 Vortex for 2 minutes.

5.5 Add 3.96 mL of ABRAXIS<sup>®</sup> Glyphosate Diluent to a clean, appropriately labeled 4 mL glass vial. Add 40 µL of the acid-treated sample (from step 5.2) to the Glyphosate Diluent in the vial (1:100 sample dilution). Vortex.

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

### 6. Evaluation of Results

The Glyphosate concentration in the samples is determined by multiplying the ELISA results by a factor of 200. Samples showing a concentration lower than standard 1 (0.075 ppb) should be reported as containing < 15 ppb of Glyphosate. Samples showing a higher concentration than standard 5 (4.0 ppb) can be reported as containing > 800 ppb of Glyphosate or diluted further and re-analyzed to obtain an accurate quantitative result.

**7. For ordering or technical assistance contact:**

Gold Standard Diagnostics

124 Railroad Drive

Warminster, PA 18974

WEB: [www.abraxiskits.com](http://www.abraxiskits.com)

Phone: (215) 357 3911

Fax: (215) 357 5232

Ordering: [info.abraxis@us.goldstandarddiagnostics.com](mailto:info.abraxis@us.goldstandarddiagnostics.com)

Technical Support: [support.abraxis@us.goldstandarddiagnostics.com](mailto:support.abraxis@us.goldstandarddiagnostics.com)

Date this Technical Bulletin is effective: 28FEB2022

Version: 01