

## Glyphosate in Beer Sample Preparation

### 1. Intended Use

For the detection of Glyphosate in beer (for light colored beers such as ales, lagers, pilsners, maibocks, IPAs; dark beers such as stouts and porters; and wheat beers such as Weiss biers, wit biers, weizenbiers, etc.).

### 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

Vortex mixer

Micropipettes with disposable plastic tips

12 x 75mm glass test tubes

Test tube rack

15 mL conical tubes

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

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

### 4. Notes and Precautions

- 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.
- This procedure involves diluting beer samples by a factor of 5 to account for possible interferences. Because dark colored beers and wheat beers tend to report higher glyphosate concentration on average (based on our own independent research), a higher dilution may be needed when testing beers of these types to generate a value within the linear range of the curve.

### 5. Procedure

5.1. Pour a small amount of beer into a 15 mL conical tube and place cap on tube.

5.2. Vortex tube on a vortex mixer for 2 minutes, stopping to unscrew the cap every 30 seconds to vent carbonation.

5.3. Pipette 200  $\mu$ L of beer into a clean, appropriately labeled test tube and dilute with 800  $\mu$ L of ABRAXIS<sup>®</sup> Glyphosate Sample Diluent.

*Note: If sample still exhibits carbonation, i.e. bubbles, discard tip and vortex sample again, until no bubbles are present upon pipetting.*

5.4. Vortex test tube to thoroughly mix.

5.5. This will then be analyzed as sample, see *Derivatization of Standards, Control and Samples* in the TestPreparation section of the ABRAXIS<sup>®</sup> 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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