Glyphosate in Tofu
Sample Preparation

1. Intended Use
For the detection of Glyphosate in tofu (silken, soft, medium, firm, extra firm).

2. Sensitivity
0.075 ppm in matrix

3. Materials and Reagents Required
Analytical balance
20 mL glass vials with Teflon-lined caps
Microcentrifuge tubes
4 mL glass vials with Teflon-lined caps
Disposable pipettes
Scoopula
Food processor or resealable plastic bags
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® Glyphosate Sample Diluent (PN 500082)
ABRAXIS® Glyphosate Plate ELISA Kit (PN 500205)

4. Notes and Precautions
This procedure is intended for use with tofu (silken, soft, medium, firm, extra firm). Other matrices should be thoroughly validated before use with this procedure.

- Samples must be thoroughly homogenized before extraction. Samples packed in liquid should be drained prior to homogenizing. Samples can be homogenized in a food processor or by placing in an appropriately labeled resealable plastic bag and kneading thoroughly, until a uniform, smooth consistency is obtained.
- 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 sample extracts, 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 allowfor the appropriate mixing of all reagents in the microtiter wells.

5. Procedure
5.1 Weigh 1 g of homogenized sample into an appropriately labeled 20 mL glass vial.
5.2 Add 10 mL of 1 N HCl. Vortex for 2 minutes.
5.3 Allow the sample to separate for 2 minutes.
5.4 Pipette approximately 1 mL of the supernatant into an appropriately labeled microcentrifuge tube.
5.5 Centrifuge at 6000 rpm for 5 minutes.
5.6 Pipette the supernatant into an appropriately labeled 4 mL glass vial with a Teflon-lined cap.

Note: Samples will separate into three distinct layers, a solid bottom layer, a slightly cloudy liquid supernatant layer, and a thin white layer on top of the liquid supernatant. Pipette only the center liquid supernatant portion into the 4 mL glass vial.

5.7 Add 3.96 mL of ABRAXIS® Glyphosate Diluent to a clean, appropriately labeled 4 mL glass vial. Add 40 µL of the supernatant (from step 5.6) to the ABRAXIS® Glyphosate Diluent in the vial (1:100 sample dilution). Vortex.

5.8 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 Glyphosate concentration in the samples is determined by multiplying the ELISA results by a factor of 1000. Sample extracts showing a concentration lower than standard 1 (0.075 ppb) should be reported as containing < 0.075 ppm of Glyphosate. Samples showing a higher concentration than standard 5 (4.0 ppb) can be reported as containing > 4ppm of Glyphosate or diluted further and re-analyzed to obtain an accurate quantitative result.

7. Performance Data

Recovery

Tofu samples (silken, soft, medium, firm, and extra firm) were spiked with various amounts of Glyphosate, extracted asdescribed above, and then derivatized and assayed using the ABRAXIS® Glyphosate Plate ELISA. Average recovery was 93.5%.**7.**

8. For ordering or technical assistance contact

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