

Glyphosate in Human Urine Sample Filtration

1. Intended Use

For the detection of Glyphosate in human urine.

2. Range of Detection

The range of detection is 0.6 ppb to 32 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

Timer

Microcentrifuge capable of rotating at 8,000 x g

Microcentrifuge tubes

Micropipettes with disposable plastic tips

4 mL glass vials with Teflon-lined screw cap

Test tube rack

Millipore Amicon Ultra 0.5mL 10k centrifugal filter units

Ethyl acetate

ABRAXIS® Glyphosate Sample Diluent (PN 500082)

ABRAXIS® Glyphosate Plate ELISA Kit (PN 500205)

4. Notes and Precautions

This procedure is intended for human urine samples. 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.
- Analysis should be performed with the ABRAXIS® Glyphosate Plate ELISA Kit as soon as possible after extraction.

5. Filtration Procedure

- 5.1 Place a filter from the Millipore Amicon Ultra kit into an appropriately labeled 2 mL microcentrifuge tubes and pipette 500 µL of urine sample into the filter.
- 5.2 Centrifuge the filter/tube apparatus at 8,000 x g for 15 minutes.
- 5.3 Transfer 300 µL of the filtrate into a new, appropriately labeled microcentrifuge tube.
- 5.4 Add 200 µL of ethyl acetate into this tube and vortex for 30 seconds.
- 5.5 Centrifuge the sample at 8,000 x g for 3 minutes.
- 5.6 Add 350 µL of ABRAXIS® Glyphosate Sample Diluent to an appropriately labeled 4 mL glass vial and transfer 50 µL of the bottom aqueous layer (from Step 5.5). Cap and vortex.
- 5.7 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 8 to account for the necessary dilution. Samples showing a concentration lower than Standard 1 (0.075 ppb) should be reported as < 0.6 ppb of Glyphosate. Samples showing a higher concentration than Standard 5 (4.0 ppb) can be reported as > 32 ppb or diluted further and re-analyzed to obtain an accurate quantitative result.

7. For ordering or technical assistance contact:

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