



Herbicide and Metabolites by LCMS – AppNote

Glufosinate, N-Acetylglufosinate, and Glufosinate Propanoic Acid

Analysis of these Compounds can be problematic with other methods and poor peak shape may occur. In contrast, the Peaks obtained in this method are very sharp and symmetrical and can be applied to food products containing these types of Compounds.

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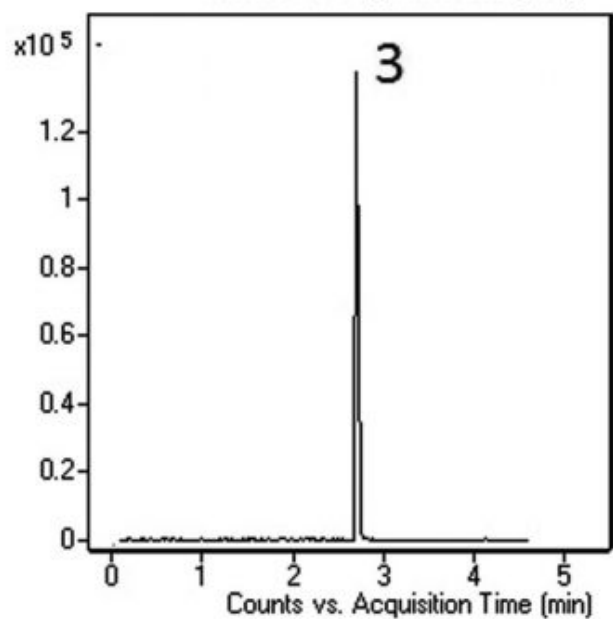
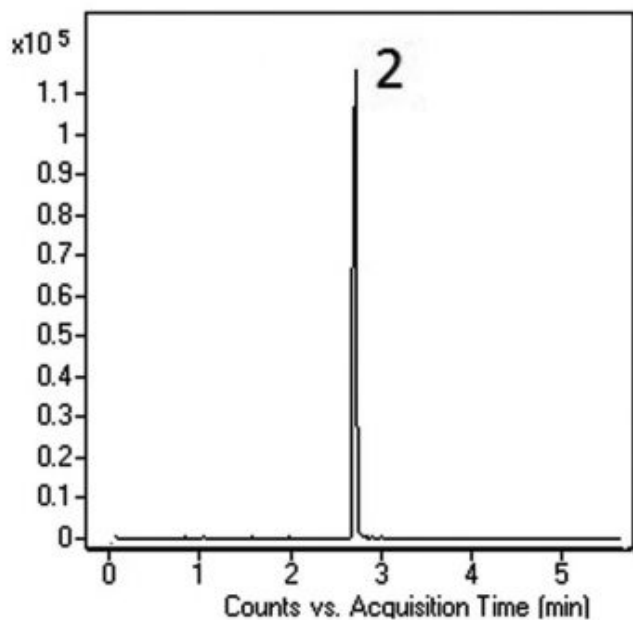
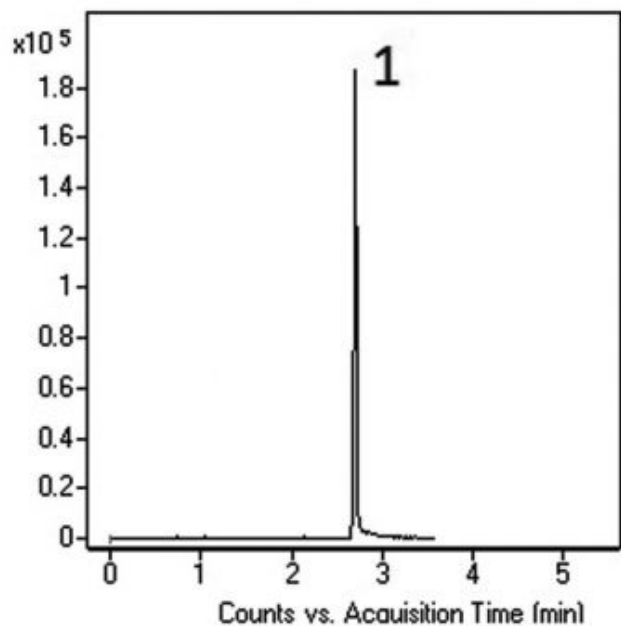
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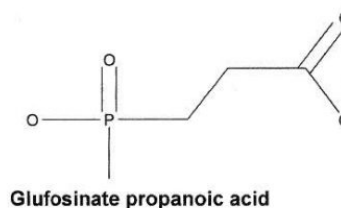
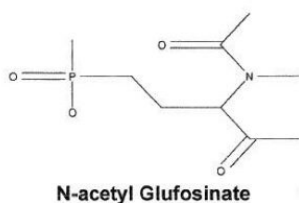
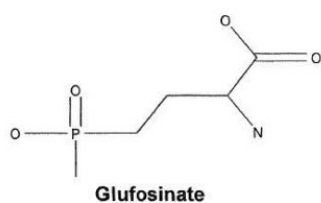
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Peaks:

1. Glufosinate m/z 180.0431 [M-H]⁻
2. N-Acetylglufosinate m/z 222.00 [M-H]⁻
3. Glufosinate Propanoic Acid m/z 151.00 [M-H]⁻

Method Conditions

Column: Cogent Diamond Hydride™, 2.2μm, 120Å

Catalog No.: 70200-05P-2

Dimensions: 2.1 x 150mm

Mobile Phase:

A: DI Water / 10mM Ammonium Acetate

B: 95% Acetonitrile / 5% DI Water / 10mM Ammonium Acetate (v/v)

Gradient:

Time (minutes)	%B
0	90
1	90
1.2	5
5	5
6	90

Post Time: 3 minutes

Flow rate: 0.4 mL/minute

Detection: ESI - NEG - Agilent 6210 MSD TOF Mass Spectrometer

Injection vol.: 1μL

Sample Preparation: Glufosinate (1720.64 ppm), N-Acetylglufosinate (639.2 ppm), and Glufosinate Propanoic Acid (1302.5 ppm) stock solutions were diluted 1:100 with 4:1 DI Water: Methanol

t₀: 0.6 minutes

Note: Glufosinate is an Herbicide which acts by interference with the Ammonia detoxification metabolic pathway. Trade names of formulations featuring the compound include Rely®, Finale®, and Ignite®.

Attachment

Herbicide and Metabolites by LC-MS pdf [Download File](#)