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HPLC Columns and Chromatography Accessories

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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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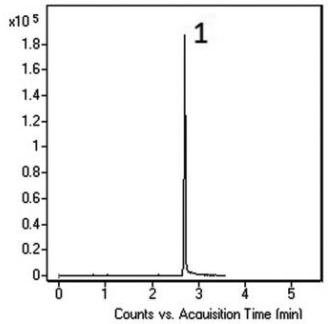

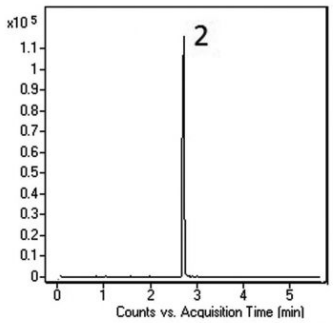

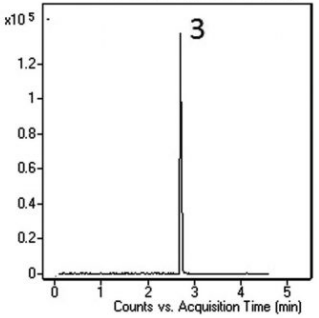

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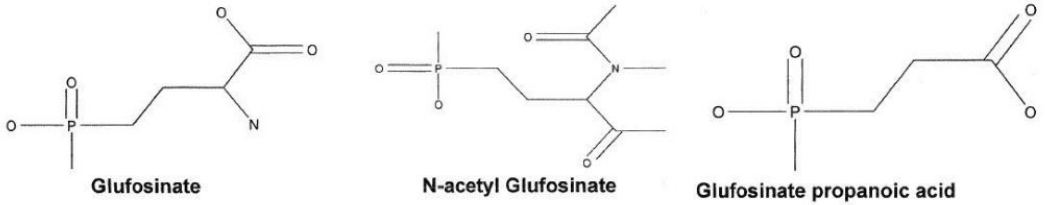

Peaks:

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
t_0: 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®.

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Attachment

Herbicide and Metabolites by LC-MS pdf Download File