Determination of glyphosate and aminomethylphosphonic acid (AMPA) in water using HPLC

Application Note

Environmental

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Introduction
Glyphosate [N-(phosphonomethyl) glycine] is a herbicide. Glyphosate’s major metabolite or degradation product is aminomethylphosphonic acid (AMPA). The HPLC method used here consists of sample derivatization, using 9-fluorenylmethylchloroformate (FMOC), followed by HPLC analysis with fluorescence detection.
Conditions

Column: Agilent Microsorb-MV 100-5 Amino, 4.6 x 250 mm id
Part no. R0086700C5

Solvent: 70% KH₂PO₄ 0.05 M buffer with pH 5.4 / 30% Acetonitrile

Column temp.: 30 °C

Injection: 50 μL

Injector: Agilent ProStar 410 Autosampler

Detector: Agilent ProStar 363 Fluorescence Detector; λ excitation: 260 nm and λ emission: 310 nm

Standards: 0.1 μg/L & 0.5 μg/L

Courtesy: Mr Charrêteur, Centre de Génie Industriel, 56270 Ploemeur, France