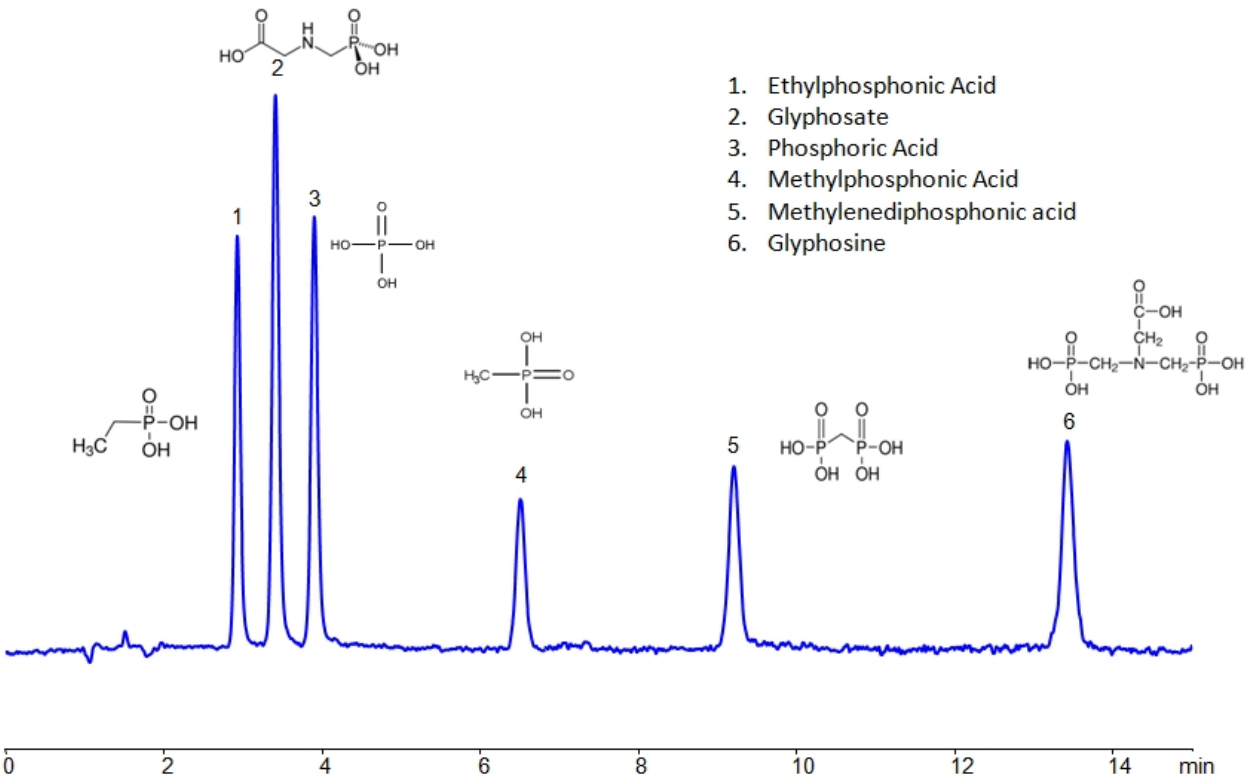
# HPLC Separation of Glyphosate, Glyphosine, Ethylphosphonic, Methylphosphonic, Methylenediphosphonic and Phosphoric Acids on Newcrom B Column

https://sielc.com/hplc-separation-of-glyphosate-glyphosine-and-phosphoric-acid

## Chromatogram

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| **Column:** | Newcrom B |
| **Column size:** | 4.6 × 150 mm, 5 µm |
| **Mobile phase:** | Gradient MeCN – 40-10%, 15 min |
| **Buffer:** | Gradient Formic Acid – 1.0-5.0%, 15 min |
| **Flow rate:** | 1.0 ml/min |
| **Detection:** | CAD |

## Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of Ethylphosphonic Acid , Methylphosphonic Acid , Glyphosate , Glyphosine , Methylenediphosphonic acid , Phosphate , Phosphoric Acid .

Glyphosate is an herbicide with a chemical formula of C 3 H 8 NO 5 P . It works through blocking enzymes, like 5-enolpyruvylshikimate-3-phosphate synthase, essential for plant growth. It is typically found in agricultural work, but can occasionally be found in forestry and garden care.

Glyphosine is a synthetic plant growth regulator with the chemical formula of C 4 H 11 NO 8 P 2 . It is a colorless liquid that works through decreasing chlorophyll production.

Ethylphosphonic acid has a C 2 H 5 P(O)(OH) 2 chemical formula. It is typically found as white crystals or crystalline powder. It is often used as an internal standard when researching fosfomycin in human plasma as well as a synthetic nucleotide analog.

Methylphosphonic acid is an organophosphorus compound with the chemical formula CH 3 P(OH) 2 . It is often used in some lubricant additives, textile treatments, and in synthesis of phosphonate compounds, like the previously mentioned Glyphosate.

Methylenediphosphonic acid has the chemical formula CH 2 [P(O)(OH) 2 ] 2 . It is typically seen as a precursor in synthesis of Mesoporous aluminum organophosphate, if alkyltrimethylammonium, and Tetraester of methylenediphosphonic acids.

Phosphoric acid is an inorganic compound with chemical formula H 3 PO 4 . It is odorless and colorless, which leads to it’s common use in soft drunks to help preserve the product. It is also used in fertilizers, metal treatment, and corrosion inhibition. Excessive intake of it is not recommended.

### Method Parameters

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| **Mobile Phase** | MeCN Gradient -40-10%, 15 min |
| **Buffer** | Formic Acid Gradient -1- 5%, 15 min |
| **Flow Rate** | 1.0 ml/min |
| **Detection** | CAD |
| **Class of Compounds** | Acids, Plant growth regulator, Herbicide, Hydrophilic, Ionizable |
| **Analyzing Compounds** | Ethylphosphonic Acid,Methylphosphonic Acid,Glyphosate,Glyphosine,Methylenediphosphonic acid,Phosphate,Phosphoric Acid |

### HPLC Column Used

**Newcrom B, 4.6 x 150 mm, 5 µm, 100 A, dual ended**

Order this column at hplc-shop.de →