

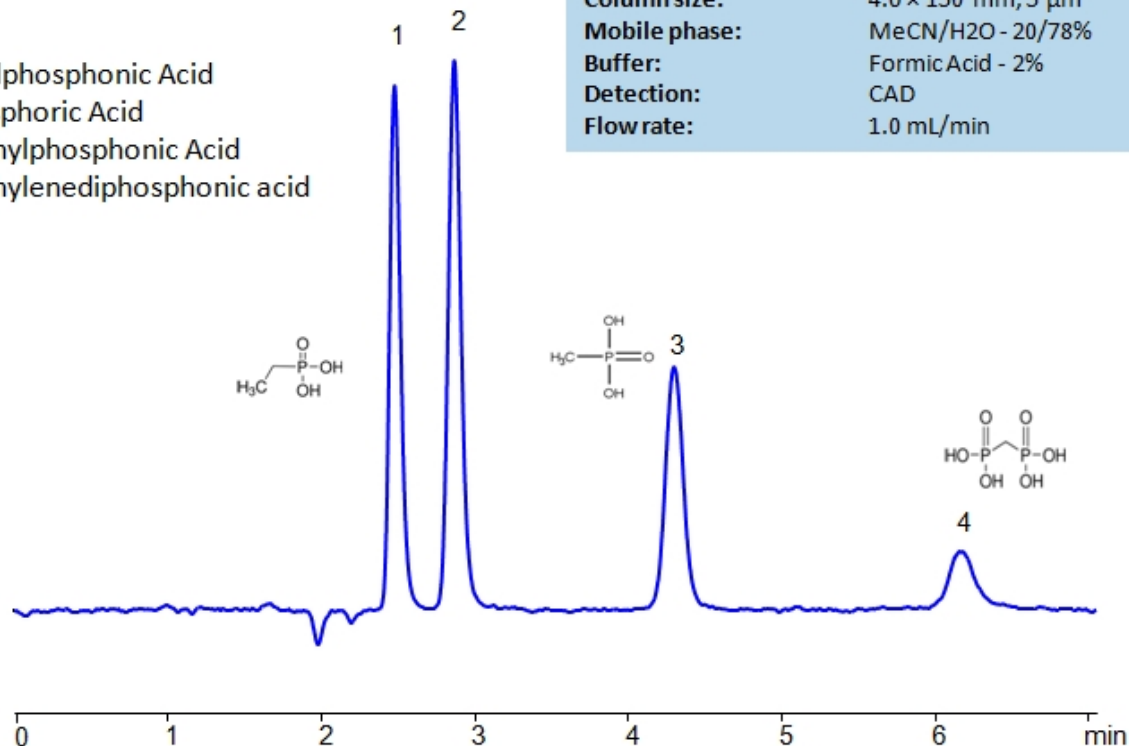
HPLC Separation of Ethylphosphonic, Methylphosphonic, Methylene diphosphonic and Phosphoric Acids on Newcrom B Column

<https://sielc.com/hplc-separation-of-phosphate-and-phosphonate-ions>

Chromatogram

1. Ethylphosphonic Acid
2. Phosphoric Acid
3. Methylphosphonic Acid
4. Methylene diphosphonic acid

Column:	Newcrom B
Column size:	4.6 × 150 mm, 5 μm
Mobile phase:	MeCN/H ₂ O - 20/78%
Buffer:	Formic Acid - 2%
Detection:	CAD
Flowrate:	1.0 mL/min



Description

HPLC Method for Ethylphosphonic Acid , Methylphosphonic Acid , Methylene diphosphonic acid , Phosphate , Phosphoric Acid on Newcrom B by SIELC Technologies High Performance Liquid Chromatography (HPLC) Method for Analysis of Ethylphosphonic Acid , Methylphosphonic Acid , Methylene diphosphonic acid , Phosphate , Phosphoric Acid

Ethylphosphonic acid has a $C_2H_5P(O)(OH)_2$ 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. Glyphosate is an herbicide with a chemical formula of $C_3H_8NO_5P$. 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.

Methylphosphonic acid is an organophosphorus compound with the chemical formula $CH_3P(O)(OH)_2$. It is often used in some lubricant additives, textile treatments, and in synthesis of phosphonate compounds, like the previously mentioned Glyphosate.

Methylene diphosphonic 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 methylene diphosphonic acids.

Ethylphosphonic Acid , Methylphosphonic Acid , Methylene diphosphonic acid , Phosphate , Phosphoric Acid can be retained and analyzed using the Newcrom B stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN) with a formic acid buffer. Detection is performed using CAD.

Method Parameters

Mobile Phase	MeCN/H ₂ O – 20/78%
Buffer	Formic Acid – 2%
Flow Rate	1.0 ml/min
Detection	CAD
Class of Compounds	Acids, Hydrophilic, Ionizable
Analyzing Compounds	Ethylphosphonic Acid, Methylphosphonic Acid, Methylenediphosphonic acid, Phosphate, Phosphoric Acid

HPLC Column Used

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

[Order this column at hplc-shop.de →](#)