

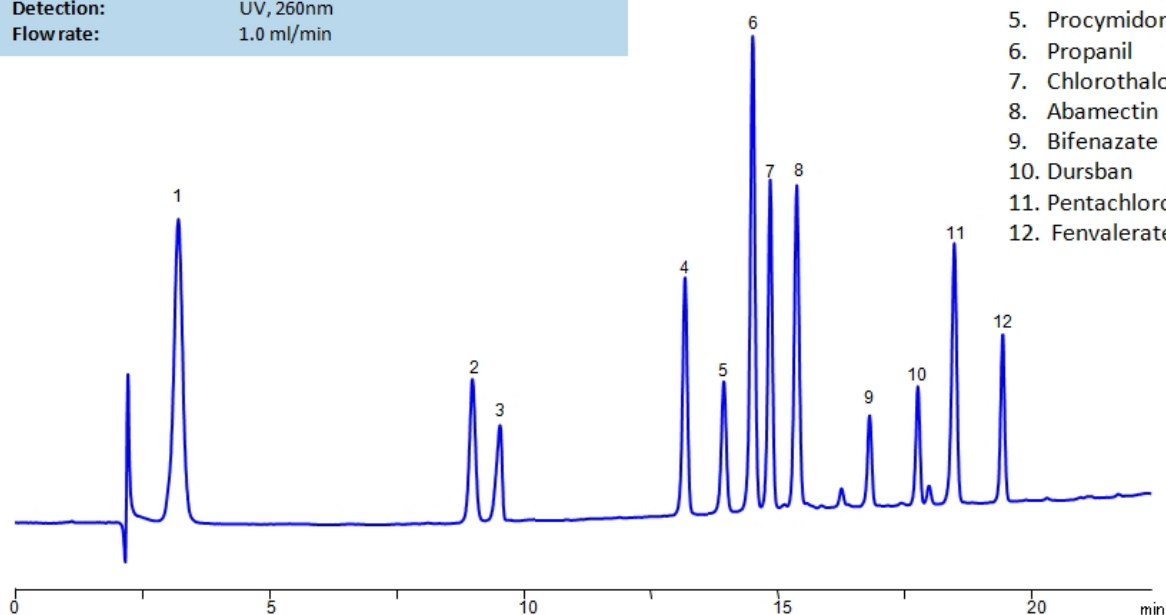
HPLC Separation of 12 Pesticides on Newcrom B Column

<https://sielc.com/hplc-separation-of-12-pesticides-on-newcrom-b-column>

Chromatogram

Column: Newcrom B
Column size: 4.6 × 150 mm, 5 µm
Mobile phase: Gradient MeCN/H₂O – 10–80%, 20 min
Buffer: Gradient Formic Acid – 0.1–0.3%, 20 min
Detection: UV, 260nm
Flow rate: 1.0 ml/min

1. 6-Benzylaminopurine
2. Metalaxyl
3. Prochloraz
4. Paclobutrazol
5. Procymidone
6. Propanil
7. Chlorothalonil
8. Abamectin
9. Bifenazate
10. Dursban
11. Pentachlorophenol
12. Fenvalerate



Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of 6-Benzylaminopurine , Metalaxyl , Prochloraz , Paclobutrazol , Propanil , Chlorothalonil , Chlorpyrifos-methyl (Dursban) , Pentachlorophenol , Fenvalerate , Abamectin , Procymidone , Bifenazate .

6-Benzylaminopurine is a plant growth regulation compound with the molecular formula C₁₂ H₁₁ N₅ . It's presence in asparagus, for example, leads to deeper color, increased firmness, and a decrease in fibrous hardness. In general, it stimulates cell division and differentiation.

Metalaxyl , also known as methyl N-(methoxyacetyl)-N-(2,6-xylyl)-DL-alaninate, is a systemic fungicide with the chemical formula C₁₅ H₂₁ NO₄ . It is used to control Pythium and Phytophthora in vegetables. It has suffered a resistance problem going back to the 1980s.

Prochloraz is an imidazole fungicide with the chemical formula C₁₅ H₁₆ Cl₃ N₃ O₂ . It is used widely across Europe, Asia, South America, and Australia, but is not registered for use in the United States. It works as an inhibitor of the enzyme lanosterol 14α-demethylase.

Paclobutrazol (PBZ) is a synthetic triazole compound with the chemical formula C₁₅ H₂₀ ClN₃ O . It is used to control plant growth as an antagonist of the plant hormone gibberellin. Through reducing internodal growth, it causes stronger stems, greater root growth, and earlier fruitset. It can also reduce frost sensitivity in plants.

Procymidone is a pesticide and fungicide with the chemical formula C₁₃ H₁₁ Cl₂ NO₂ . It is typically used to kill unwanted ferns, nettles, and fungi in lupins, grapes, stone fruit, and strawberries.

Propanil is a contact herbicide with the chemical formula $C_9H_9Cl_2NO$. It is one of the most widely used herbicides in America. It works as an inhibitor of photosynthesis and CO_2 fixation in weeds.

Method Parameters

Mobile Phase	MeCN/H ₂ O
Buffer	Formic Acid
Flow Rate	1.0 ml/min
Detection	UV, 260 nm
Class of Compounds	Hydrophobic, Herbicide, Pesticide
Analyzing Compounds	6-Benzylaminopurine, Metalaxyl, Prochloraz, Paclobutrazol, Propanil, Chlorothalonil, Chlorpyrifos (Dursban), Pentachlorophenol, Fenvalerate, Abamectin, Procymidone, Bifenazate

HPLC Column Used

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

[Order this column at hplc-shop.de →](https://www.hplc-shop.de)