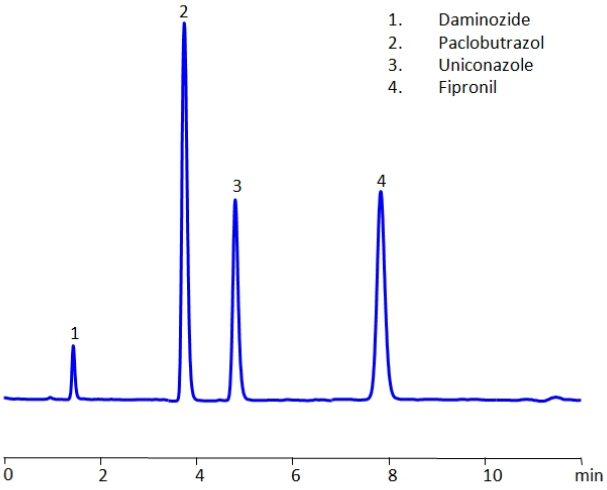
HPLC Separation of Pesticides on Newcrom R1 Column



Column:	Newcrom R1
Column size:	4.6 × 150 mm, 5 µm
Mobile phase:	MeCN/H2O – 60/40%
Buffer:	No
Detection:	200 nm
Flow rate:	1.0 ml/min

High Performance Liquid Chromatography (HPLC) Method for Analysis of Paclobutrazol , Uniconazole-P , Fipronil , Daminozide .

Daminozide is a plant growth regulator with the chemical formula C6H12N2O3 . It has a variety of alternate names including: aminozide, Alar, Kylar, SADH, B-995, B-nine, and DMASA. As a pesticide, works through inhibiting the production of gibberellins. It was typically used in trees that produced fruit for consumption, but was withdrawn due to concerns of it being a carcinogen. It is still occasionally used in ornamental plants.

Paclobutrazol (PBZ) is an organic fungicide with the chemical formula C15H20ClN3O . It works through inhibiting the production of gibberellins, which are plant growth hormones. Through reducing reducing internodal growth, it causes stronger stems, greater root growth, and earlier fruitset. It can also reduce frost sensitivity in plants.

Uniconazole is a plant growth regulator with the chemical formula C15H18ClN3O . As a pesticide, works through inhibiting the production of gibberellins, which are plant growth hormones. It is typically used in perennials and ornamental plants to ensure they are a marketable size before they bloom.

Fipronil is an insecticide with the chemical formula C12H4Cl2F6N4OS . It works through causing hyperexcitation of the nerves and muscles in contaminated insects. In Texas, it is often used to control invasive species of ants and wasps. It is also an active ingredient in flea and tick treatments for pets. WHO classifies it as a Class II, moderately hazardous, pesticide.

Paclobutrazol , Uniconazole-P , Fipronil , Daminozide can be retained and analyzed using the Newcrom R1 stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase

consisting of water and acetonitrile (MeCN) without a buffer. Detection is performed using UV.

Method Parameters

Column	Newcrom R1, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN/H2O
Buffer	No
Flow Rate	1.0 mL/min
Detection	UV 200 nm

Quelle: https://sielc.com/hplc-separation-of-pesticides-on-newcrom-r1-column