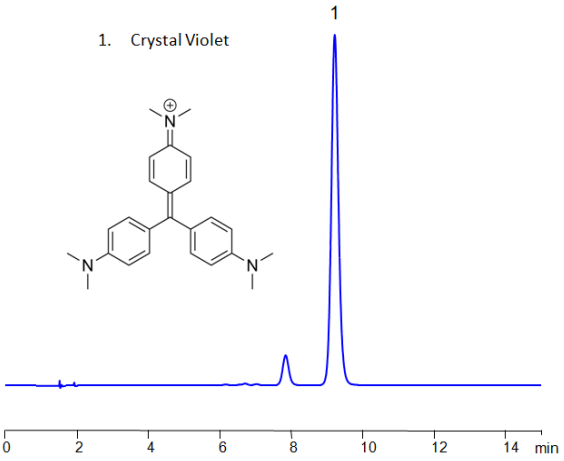
HPLC Method for Analysis of Crystal Violet on Primesep 100 Column



Column:	Primesep 100
Column size:	4.6 × 150 mm, 5 µm
Column part number:	100-46.150.0510
Mobile phase:	MeCN/H_2O – 80/20%
Buffer:	H_2SO_4 - 0.2%
Flow rate:	1.0 mL/min
Detection:	Vis 590 nm

Separation type: Liquid Chromatography Mixed-mode

Crystal Violet, also known as Methyl Violet 10B, is a synthetic dye belonging to the triarylmethane dye family. It has the molecular formula C25H30ClN3. This dye is primarily known for its use in microbiology as a stain, but it has other applications as well.

Crystal Violet can be retained, and analyzed on a Primesep 100 mixed-mode stationary phase column using an isocratic analytical method with a simple mobile phase of water, Acetonitrile (MeCN), and a sulfuric acid (H2SO4) buffer. This analysis method can be detected in the UV-Vis regime at 540, 590, and 200 nm.

Method Parameters

Column	Primesep 100, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN/H2O – 80/20%
Buffer	H3PO4 – 0.2%
Flow Rate	1.0 mL/min
Detection	Vis, 590 nm
Limit of Detection	10 ppb
Injection Volume	5 µl

Quelle: https://sielc.com/hplc-determination-of-crystal-violet