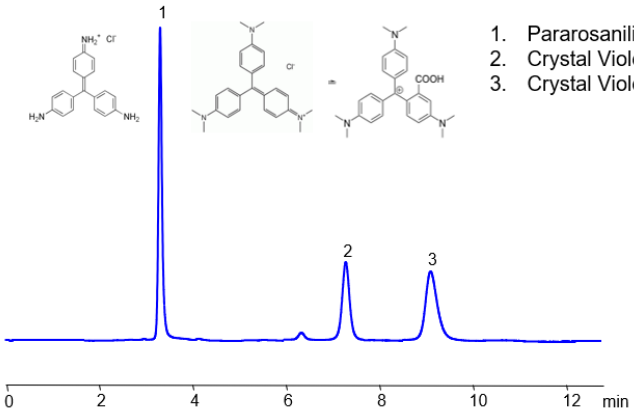
HPLC Method for Analysis of Pararosaniline, Crystal Violet, and Crystal Violet Lactone on Primesep 100 Column



1. Pararosaniline
2. Crystal Violet
3. Crystal Violet Lactone

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:	UV 540, 590, 200 nm

Pararosaniline (Basic Red 9) is a popular basic magenta dye and part of the triarylmethane family of dyes with the chemical formula C19H17N3 . It is a free base version of pararosaniline hydrochloride. Primarily, it is used to dye synthetic materials, to detect sulfur dioxide, and as an antischistosomal. You can find detailed UV spectra of Pararosaniline and information about its various lambda maxima by visiting the following link.

Crystal Violet (Methyl Violet 10B), another basic triarylmethane dye, has the C25H30ClN3 . It is frequently used for histological stains and for identifying Gram-positive bacteria. It is said to have antibacterial, antifungal, and anthelmintic properties. It is a common component of navy blue and black inks in printing, inkjet printers, and ball-point pens. You can find detailed UV spectra of Crystal Violet and information about its various lambda maxima by visiting the following link.

Crystal Violet Lactone , a derivative of Crystal Violet , is a basic thermochromic dye with the chemical formula C26H29N3O2 . It is widely used as a security marker for various types of fuels as well as carbonless copy papers. It is a slightly yellow crystalline powder that is soluble in nonpolar organic solvents.

These three basic dyes can be separated, 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.

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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	UV, 540, 590, 200 nm

Quelle: https://sielc.com/hplc-determination-of-pararosanilineyl-crystal-violet-2