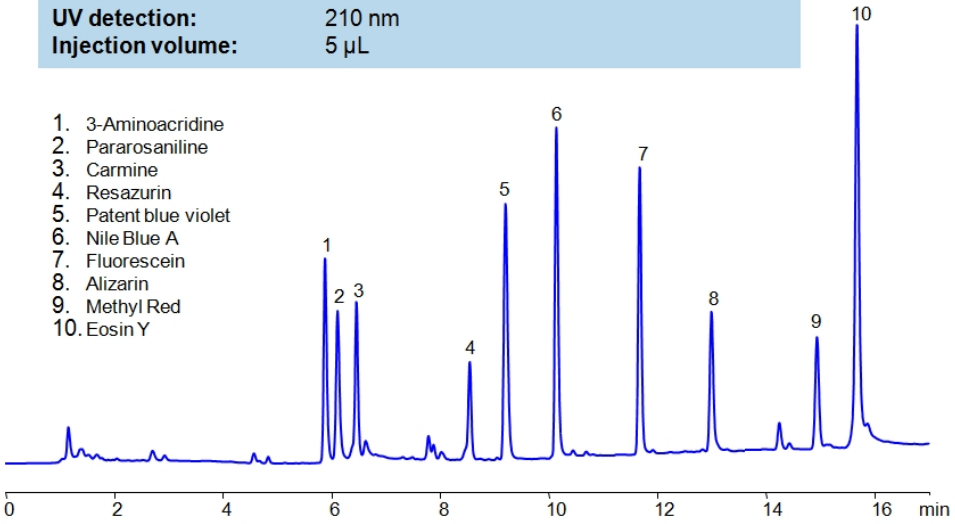
HPLC Method for Analysis of Dyes

Column:	Newcrom R1
Column size:	3.2 × 150 mm, 3 µm
Mobile phase:	Gradient MeCN 10-80% in 15 min, 2 min hold
Buffer:	H3PO4- 0.1%
UV detection:	210 nm
Injection volume:	5 µL



High Performance Liquid Chromatography (HPLC) Method for Analysis of Methyl Red , Alizarin , Eosin Y , Fluorescein , Nile Blue A , Patent Blue Violet (Patent Blue) , Resazurin , Carmine , Pararosaniline Hydrochloride , 3-Aminoacridine , Fluorescein

Alizarin a red pigment that comes as a red powder with a slight orange tint. When dissolved it appears bright red with a slight pink undertone. Alizarin is also known as Mordant Red 11 or Turkey Red. Eosin Y is a pigment that comes as an orange powder that when dissolved in water turns bright orange. Eosin is a fluorescent staining agent. It is used to stain red blood cells, proteins on cytoplasm, collage, and muscle fibers. It is also fluorescence. Fluorescein is a dye that comes in a dark orange powder and is used as a tracer and an indicator. As it says in the name, it is also Fluorescent, obtaining a green-yellow color when under black light. Methyl red an indicator that turns red in acidic solutions (below 4.4 pH), is a shade of orange between 4.5 and 6.1 pH, and turns bright yellow in basic solutions (above pH 6.2). Nile blue, also known as Nile blue A, is used as a stain used in biology and histology as well as a pH indicator. In pH below 7 it becomes lighter shades of glue, and at pH 0 becomes almost completely translucent. At pH of seven it has a dark blue shade, while at pH higher than that it starts becoming more red. Pararosaniline Hydrochloride, also known as Basic Red 9, or C.I. 42500. It is a a magenta solid that is used as a dye. Patent Blue Violet, also known as Patent Blue, is a deep blue pigment that is often used to dye clothes. Resazurin is a blue dye as well as a pH indicator. At pH 3.8 or lower, it is bright orange, but the higher the pH the more blue it becomes, the color stops changing at the pH of 6.5 where it becomes indigo. Newcrom R1, a column that takes advantage of the newest technologies, does not contain embedded acidic nor basic ionizable groups and can retain dyes. The method is UV compatible and can be used as a general approach for analyzing similar compounds.

AugustaChrom - Dr. Roland Kießwetter
Tel.: +49 821 599 783 70
Fax: +49 821 599 783 71
E-Mail: info@hplc-shop.de

Method Parameters

Column	Newcrom R1, 3.2 x 150 mm, 3 µm, 100 Å, dual ended
Mobile Phase	Gradient MeCN – 10-80%
Buffer	Phosphoric Acid
Flow Rate	0.5 mL/min
Detection	UV 210 nm

Quelle: https://sielc.com/hplc-method-for-analysis-of-dyes