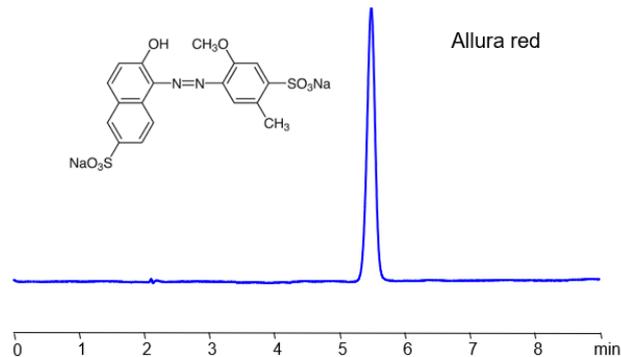


HPLC Method for Analysis of Allura Red (FD&C Red 40, E129) on a BIST A Column



Column:	BIST A
Column size:	4.6 × 150 mm, 5 µm
Column part number:	TA-46.150.0510
Mobile phase:	MeCN - 70%
Buffer:	TMDAP Formate – 5 mM pH 4.0
Flow rate:	1.0 mL/min
Detection:	UV 500 nm

Allura Red AC, also known as FD&C Red No. 40, is a red azo dye that is the most commonly used red dye in the United States. It is used anywhere from tattoos to children's medications to drinks and food. If used in food it also has the E number E129. Allura red is sold as a dark red sodium salt, but when dissolved in water, the solution appears orange-red.

Using SIELC's newly introduced BIST™ method, Allura Red (Red #40) which ionizes in water, can be retained on a negatively-charged, cation-exchange BIST A column. There are two keys to this retention method: 1) a multi-charged, positive buffer, such as N,N,N',N'-Tetramethyl-1,3-propanediamine (TMDAP), which acts as a bridge, linking the negatively-charged Acid Red 1 analytes to the negatively-charged column surface and 2) a mobile phase consisting mostly of organic solvent (such as MeCN) to minimize the formation of a solvation layer around the charged analytes. Using this new and unique analysis method, Allura Red can be retained and UV detected at 500 nm.

Method Parameters

Column	BIST A, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN
Buffer	TMDAP phosphate – 5 mM pH 4.0
Flow Rate	2.0 mL/min
Detection	Vis 600 nm

Quelle: <https://sielc.com/hplc-method-for-allura-red>