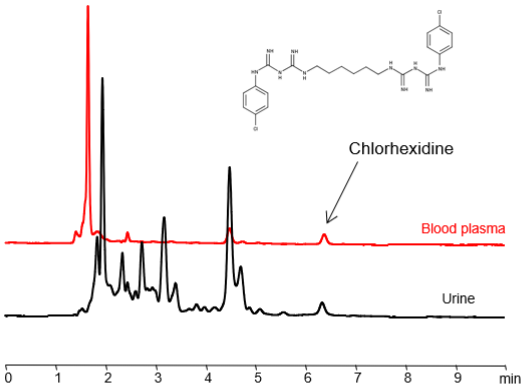
HPLC Method for Analysis of Chlorhexidine in Biofluids: Blood Plasma and Urine on BIST B+ Column



Column:	BIST B+
Column size:	4.6 × 150 mm, 5 µm
Column part number:	TBP-46.150.0510
Mobile phase:	Gradient MeCN – 80-60%, 10 min
Buffer:	H_2SO_4 - 0.2%
Flow rate:	1.0 mL/min
Detection:	UV 260 nm
Injection volume:	25 µL
Sample:	0.002 mg/mL Chlorhexidine in sample
LOD:	50 ppb

Chlorhexidine is a common antiseptic used intensively in hand sanitizers and other antibacterial products. It has the chemical formula C22H30Cl2N10 . It is primarily used for skin surgical instrument disinfection. Despite being used in mouthwash, one of the most common side effects is tooth discoloration. You can find detailed UV spectra of Chlorhexidine and information about its various lambda maxima by visiting the following link.

Typical HPLC methods used to analyze this product are done in reverse phase (RP) mode, but this is complicated by the presence of two basic groups which, with the overall hydrophobic characteristics of the molecule, usually produce asymmetrical peaks.

Chlorhexidine can be retained and analyzed using the BIST B+ stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN) with a sulfuric acid buffer. Detection is performed using UV.

Method Parameters

Column	BIST B+, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN
Buffer	H2SO4 – 0.2%
Flow Rate	1.0 mL/min
Detection	UV 260 nm

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Quelle: https://sielc.com/hplc-method-of-chlorhexidine-in-plasma