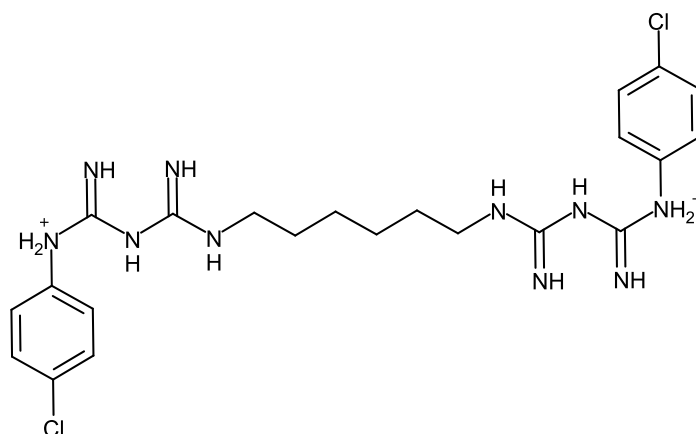
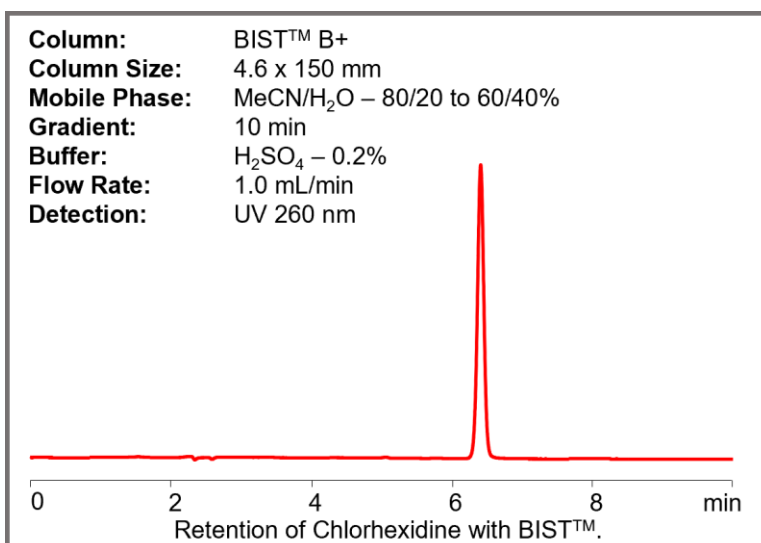


New Method for Chlorhexidine Analysis in Antiseptic Formulations and Biofluids

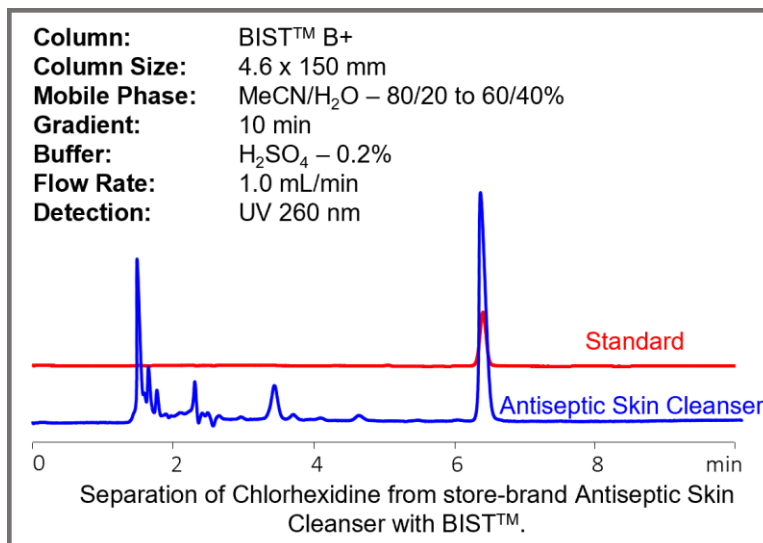
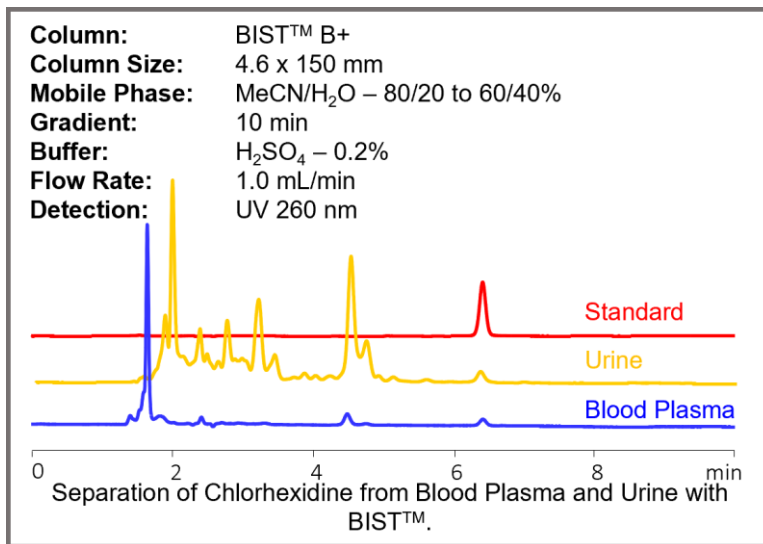
Chlorhexidine is a common antiseptic used intensively in hand sanitizers and other antibacterial products. Typical HPLC methods used to analyze this product are done in reverse phase (RP) mode, but this is complicated by the presence of two basic groups which, with the overall hydrophobic characteristics of the molecule, usually produce asymmetrical peaks.



Contrary to RP mode, SIELC Technology's new BIST™ mode of separation is based on the presence of charges in the molecule and provides good retention, high efficiency, and symmetrical peaks for this type of compound.



This HPLC method is not only applicable for the analysis of standard chlorhexidine formulations, but can also be efficiently used for the analysis of its presence in biofluids, such as blood plasma and urine, and in antiseptic cleaners. This method can allow for quantitation down to a concentration of 50 ppb.



Usually in RP separation, the sample diluent should have an equal or lower amount of organic modifier compared to the mobile phase. BIST™, however, operates in contrast to RP and requires a high organic concentration in the mobile phase and in the diluent of the sample to produce good chromatography. This is a convenient property because it allows chemists to remove plasma proteins by precipitation with acetonitrile and to have direct sample injection after the precipitate is removed.

With BIST™, chemists now have a simple, efficient separation method with great peak shape for separating and analyzing Chlorhexidine. To find out more information about BIST™ and to purchase your own BIST™ column, check out our [website](#). If you have any questions about this method or any of our other published methods, send an email to research@sielc.com and we'll be happy answer.

Sample preparation: Plasma/urine sample was spiked with a small amount of Chlorhexidine and then diluted 5 times with acetonitrile. A formed precipitate was removed by centrifugation and filtration, and the cleared solution was used directly for injection.

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U.S. Patents Pending. All data were obtained in SIELC Technologies labs.