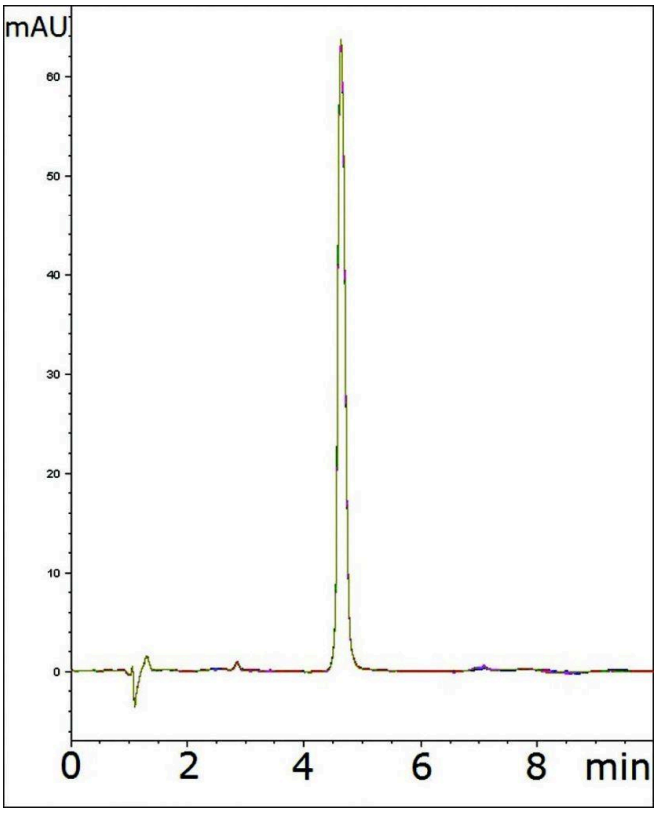
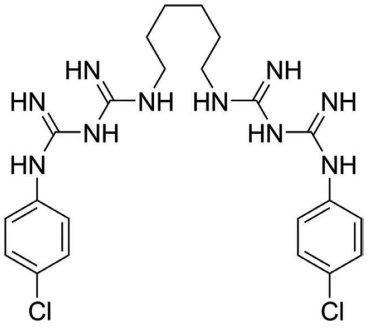
Chlorhexidine Analyzed with HPLC - AppNote

Rapid, Reliable Assay without Ion Pairing Agents

Chlorhexidine contains numerous amine functional groups that can have a detrimental effect on Peak Shape in HPLC. The USP Assay Method uses Triethylamine as an Ion Pairing Agent in the Mobile Phase for this reason. The Method developed in this Application Note uses only Formic Acid as the Mobile Phase Additive.

The *Figure* below illustrates how this Method avoids Peak Shape issues encountered in the USP Reversed Phase Monograph. In addition, this Method shows excellent Repeatability, shown by the five Chromatogram overlay.





Peak:

Chlorhexidine

Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100Å
Catalog No.: 70000-7.5P
Dimensions: 4.6 x 75mm
Mobile Phase:
A: DI Water / 0.1% Formic Acid
B: 97% Acetonitrile / 3% DI Water / 0.1% Formic Acid
Gradient:

Time *(minutes)*	%B
0	75
5	10
6	75

Injection vol.: 2µL
Flow rate: 1.0mL / minute
Detection: UV @ 239nm
Sample Preparation:
Stock Solution: 1mg / mL Chlorhexidine in Methanol diluent.
Working Solution: A 100µL aliquot of the Stock Solution was diluted to 0.1mg / mL using 900µL 50:50 Solvent A / Solvent B mixture diluent.
to: 1.0 minute

Note: *Chlorhexidine is an antiseptic which is used in a variety of common products, including contact lens solutions and mouthwash.*

COGENT HPLC Columns™

Attachment

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