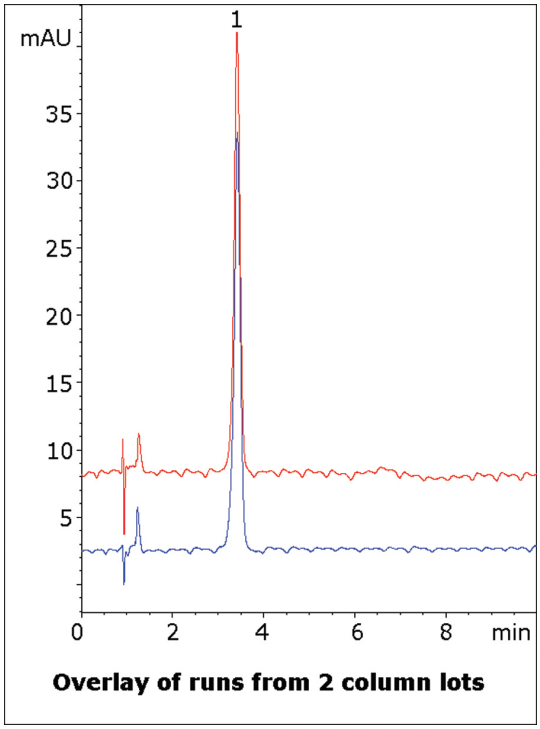
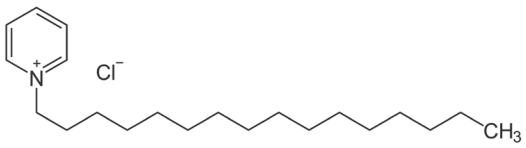
Cetylpyridinium Chloride

Excellent peak shape for cationic compound



Overlay of runs from 2 column lots



Cetylpyridinium chloride

Note: Cetylpyridinium chloride is an antiseptic additive that is used in many common household products such as toothpaste, mouthwash, and nasal sprays.

Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100Å

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75 mm

Mobile Phase: 4% DI H_2O / 96% acetonitrile / 0.1% TFA (v/v)

Injection vol.: 2µL

Flow rate: 1.0 mL/min

Detection: UV 215 nm

Sample: 1mg cetylpyridinium chloride USP reference standard was dissolved in 1mL of 50/50/0.1 DI H_2O / acetonitrile / formic acid. This stock solution was diluted 1:10 for HPLC injections using the same diluent.

Peak: 1. Cetylpyridinium chloride

t_0: 0.9 min

Discussion

This method demonstrates the potential of the Cogent Diamond Hydride column for cationic compounds. In many instances, these types of compounds give significant tailing or peak broadening due to interaction with silanols on the surface of ordinary stationary phases. Tailing may also cause interference with quantitation of a nearby peak of interest as well. Since cetylpyridinium chloride is present in numerous products that may require HPLC analysis, this is an important characteristic even for assays where the analyte peak has good symmetry.

The Cogent Diamond Hydride column however is virtually free of silanols due to the TYPE-C™ Silica surface and therefore excellent peak shapes can be easily obtained for, many cationic amines such as cetylpyridinium chloride.

MANUFACTURED BY:
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