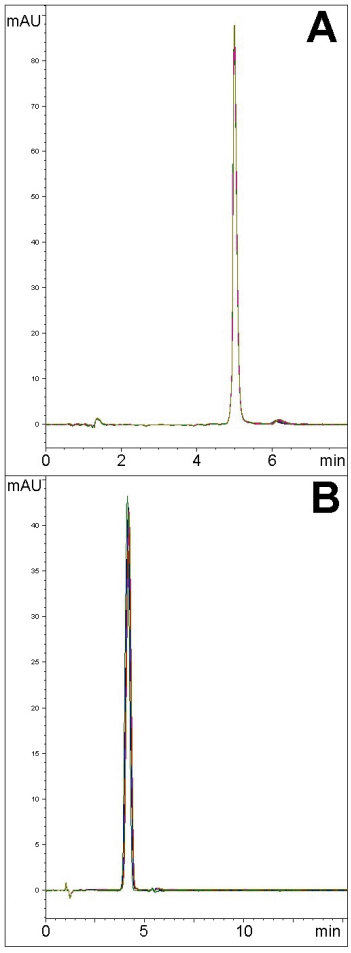
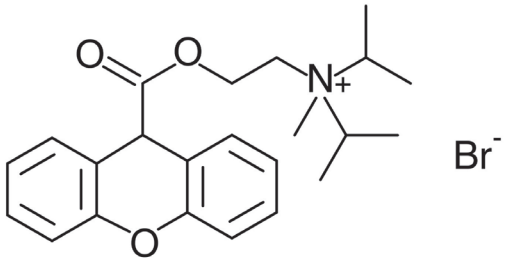
Orthogonal Methods for Propantheline Bromide

Simple methods without use of ion-pairing agents





Note: Propantheline bromide is a muscarinic acetylcholine receptor antagonist which is used for the treatment of ulcers, cramps and spasms of the digestive system, and hyperhidrosis.

Method Conditions

Column: **Fig. A:** **Cogent Phenyl Hydride™**, 4µm, 100Å
Fig. B: **Cogent Diamond Hydride™**, 4µm, 100Å

Catalog No.: **Fig. A:** 69020-7.5P **Fig. B:** 70000-7.5P

Dimensions: 4.6 x 75 mm

Solvents: A: DI H_2O / 0.1% formic acid
B: 97% acetonitrile / 3% DI H_2O / 0.1% formic acid

Gradient:

Fig. A	
time (min.)	%B
0	10
4	50
5	10

Fig. B	
time (min.)	%B
0	80
4	70
5	80

Temperature: **Fig. A:** 35˚C **Fig. B:** 25˚C

Injection vol.: 10µL

Flow rate: 1.0 mL/min

Detection: UV 254 nm

Sample: **Stock Solution:** 1.0 mg propantheline bromide diluted with 1 mL of 50:50 A:B.
Working Solution: 100 µL stock diluted with 900 µL 50:50 solvent A: solvent B.

Peaks: Propantheline bromide

Discussion

In the USP assay method for propantheline bromide tablets, sodium dodecyl sulfate (SDS) is used as an ion-pairing agent in the mobile phase. The long alkyl chain of this additive makes it particularly difficult and time-consuming to load and remove from the HPLC column. Using Cogent™ HPLC columns, not only is the need for ionpairing agents eliminated but the assay can be performed in either the reversed phase (Cogent Phenyl Hydride, Figure A) or aqueous normal phase mode (Cogent Diamond Hydride, Figure B). The mobile phase solvents can be used for many methods using these columns, which saves a laboratory both time and money by not having to prepare specialized mobile phases for every analysis. Both methods illustrate good repeatability, with each run from the five-run overlays shown in a different color.

MANUFACTURED BY:
MICROSOLV TECHNOLOGY CORPORATION
9158 Industrial Blvd NE
Leland, NC 28451
p: 1.732.380.8900
f: 1.910.769.9435
customers@mtc-usa.com
www.Cogent-HPLC.com