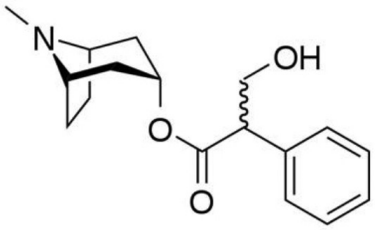
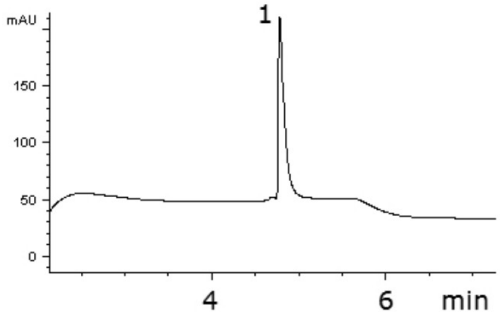
Precise Determination of Atropine using a simple gradient

No Ion Pair Reagent Necessary



Atropine



Note: After a simple sample clean up procedure, the method can be applied for monitoring atropine concentrations in biological specimens in cases of drug poisoning. The recoveries of atropine added to drug-free specimens which were analyzed using the described method were satisfactory with coefficients of variation of 4% or less.

Method Conditions

Column: **Cogent Bidentate C18™**, 4µm, 100Å

Catalog No.: 40018-75P

Dimensions: 4.6 x 75 mm

Mobile Phase: A: DI H_2O + 0.1% acetic acid + 0.005% TFA
B: Acetonitrile + 0.1% acetic acid + 0.005% TFA
Both solutions were vacuum filtered through a 0.45µm nylon filter

Gradient:

time (min.)	%B
0	10
4	30
6	30
6.01	10

Injection vol.: 1µL

Flow rate: 1 mL/min

Detection: UV 214 nm

Sample: Prepared in 50% solution A/50% solution B, concentration 1 mg/mL and was filtered through a 0.45µm nylon membrane

Peak: 1. Atropine
Injection 1: RT = 4.772 min
Injection 2: RT = 4.773 min
Injection 3: RT = 4.772 min
Injection 4: RT = 4.774 min

Discussion

Chromatographic separation and quantification methods of tropa alkaloids are often described in the literature and the method of choice is usually ion-pair chromatography (IPC), which requires long equilibration times and it is not very robust. This method shows a symmetrical peak for atropine using a simple gradient method that does not include any ion pair reagents which can cause damage to columns and lack eproducibility. The retention times are extremely repeatable but one of the best advantages to this method is the time savings between runs. Using a Cogent Bidentate C18 column the equilibration time was very short (5 min between every gradient run).

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