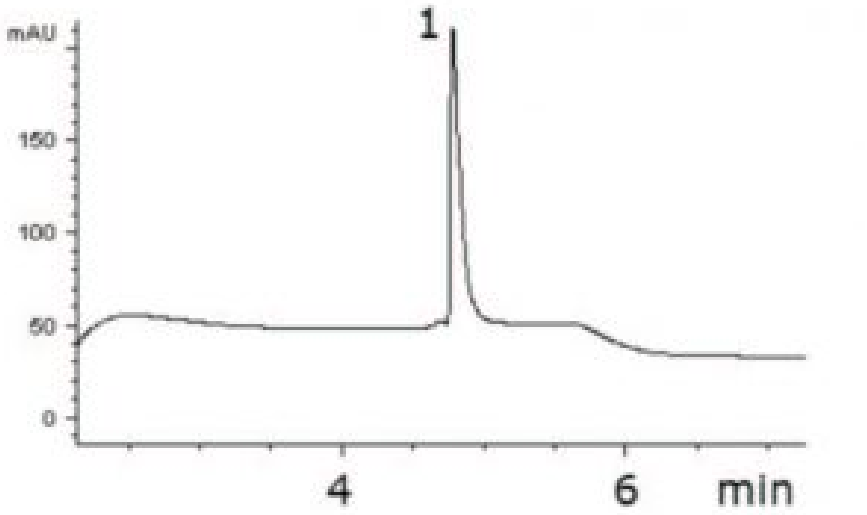
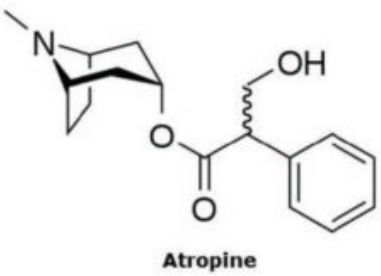
Atropine Analyzed with a Gradient Method – AppNote

No Ion Pair Reagent Necessary

Chromatographic separation and quantification methods of Atropa 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 reproducibility. The retention times are extremely repeatable but one of the best advantages to this method is the time savings between runs.





Atropine

Peak:

Atropine

Injection 1: RT = 4.772 minutes

Injection 2: RT = 4.773 minutes

Injection 3: RT = 4.772 minutes

Injection 4: RT = 4.774 minutes

Method Conditions

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

Catalog No.: 40018-7.5P

Dimensions: 4.6 x 75mm

Mobile Phase:

A: DI Water + 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 Syringe Filter

Gradient:

Time *(minutes)*	%B
0	10
4	30
6	30
6.01	10

Flow rate: 1.0mL /minute

Detection: UV @ 214nm

Injection vol.: 1µL

Sample Preparation: Prepared in 50% Solution A / 50% Solution B, concentration 1mg / mL and was filtered through a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.).

Note: *After a simple sample clean up proce-dure, 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.*

COGENT HPLC Columns™

Attachment

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