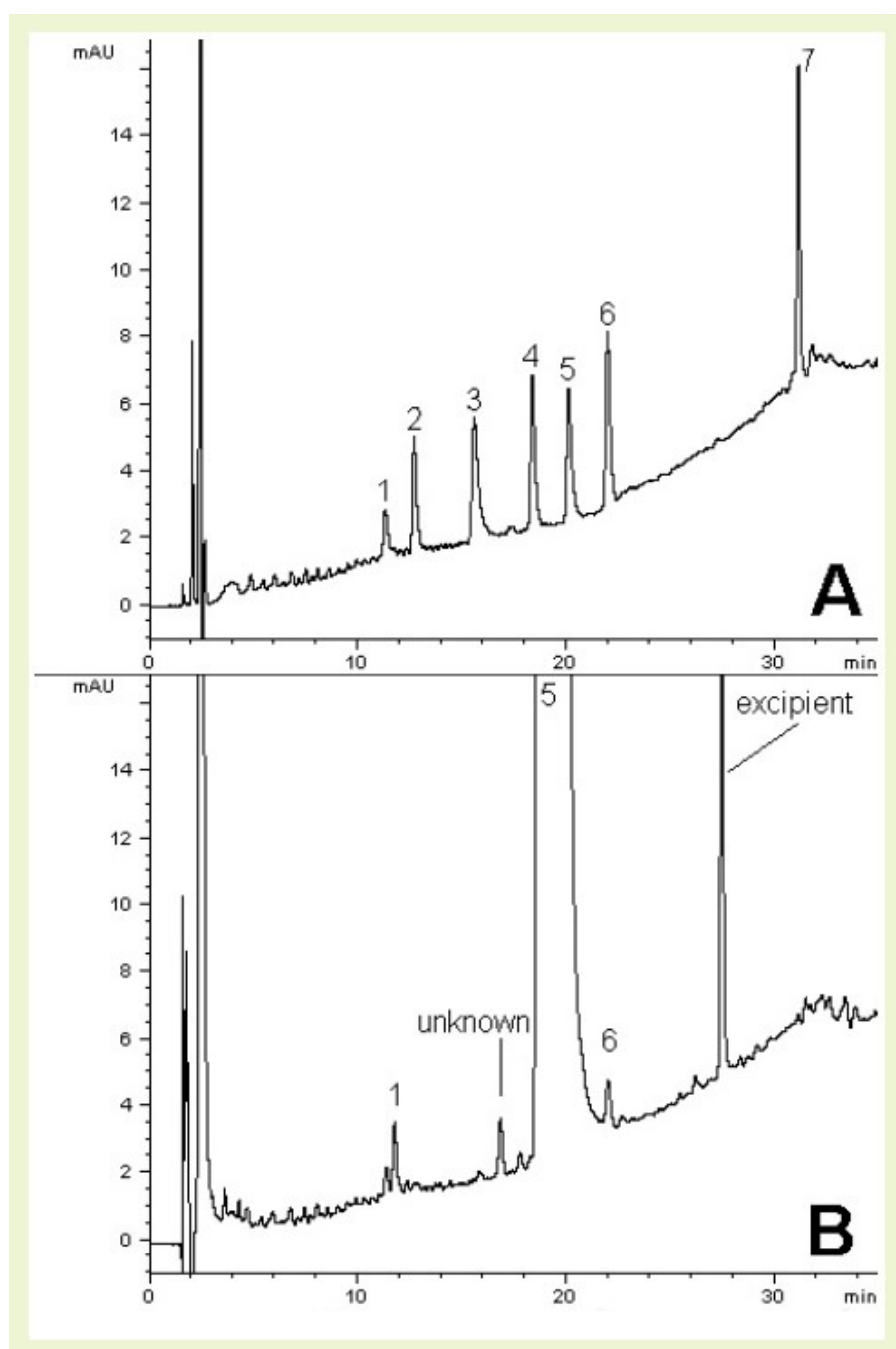


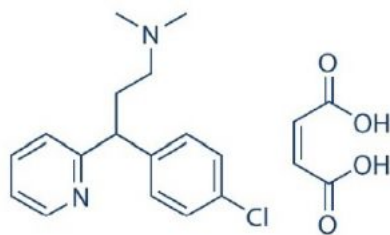
Chlorpheniramine Maleate Organic Impurities Analyzed with HPLC - AppNote

Separation demonstrated in real commercial formulation extracts

Use of the Cogent Bidentate C8™ Column allows for high resolution baseline separation of six specified impurities of Chlorpheniramine Maleate (Fig. A). Fig. B shows how the method can be applied to a real-world formulation, spiked with the N-oxide impurity to demonstrate resolution from the API peak.

Currently, there is no public official standard for Chlorpheniramine impurities analysis, hence this method supports quality testing for safety of products.





Chlorpheniramine Maleate

PEAKS:

1. Pheniramine
2. Chlorpheniramine related compound A
3. Chlorpheniramine related compound B
4. Chlorpheniramine related compound C
5. Chlorpheniramine
6. Chlorpheniramine N-oxide
7. Chlorpheniramine related compound D

Method Conditions

Column: Cogent Bidentate C8™, 4µm, 100Å

Catalog No.: 40008-15P

Dimensions: 4.6 x 150 mm

Solvents:

A: 95% DI Water/ 5% Acetonitrile/ 0.05% TFA (v/v)

B: Acetonitrile/ 0.05% TFA (v/v)

Gradient:

Time (Minutes)	%B
0	0
20	15
30	30
34	30
35	0
40	0

Injection vol.: 10µL

Flow rate: 1.0 mL/minute

Detection: UV 225 nm

Sample:

Fig. A: 4.8 µg/mL each of USP Chlorpheniramine Maleate reference standard (RS), Pheniramine, Chlorpheniramine N-oxide, related compound (RC) A, B, C, and D.

Fig. B: 4 mg strength Chlorpheniramine Maleate tablet extract (2.4 mg/mL) spiked at 0.1% level with Chlorpheniramine N-oxide Dihydrochloride RS solution.

Notes: Chlorpheniramine Maleate is an active pharmaceutical ingredient that is one of numerous over-the-counter antihistamine medicines used to treat allergic reactions such as hay fever and urticaria (hives). As with other first generation antihistamines, drowsiness can be a common side effect of the medication. This is due to their greater ability to cross the blood-brain barrier compared to second generation antihistamines.



Attachment

No 368 Chlorpheniramine Maleate Organic Impurities.pdf 0.2 Mb [Download File](#)

Printed from the Chrom Resource Center

MicroSolv Technology Corporation

9158 Industrial Blvd. NE, Leland, NC 28451

tel. (732) 380-8900, fax (910) 769-9435

Email: customers@mtc-usa.com

Website: www.mtc-usa.com

Date: 05-08-2024