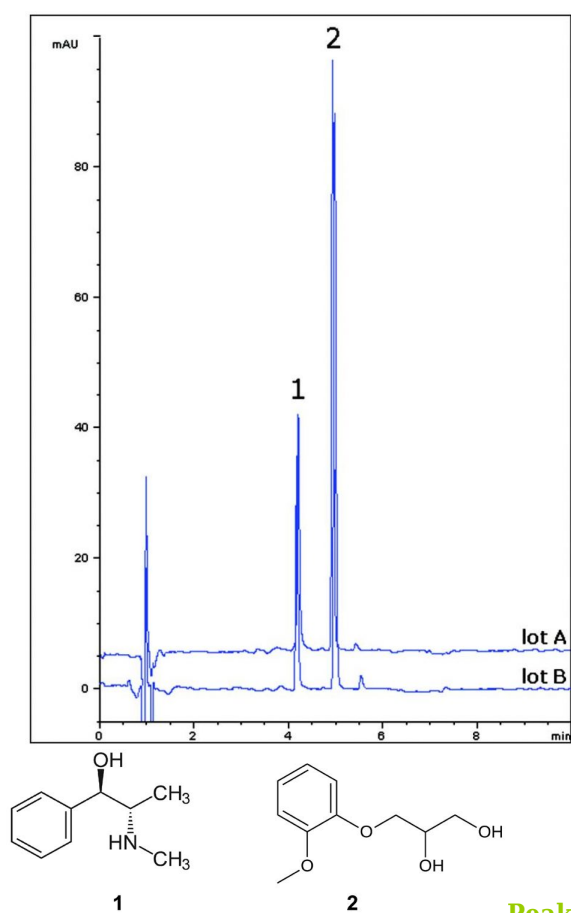


Primatene Tablet Analyzed with HPLC – AppNote

Separation of Guaifenesin and Ephedrine from an OTC Formulation

These two compounds are used together in the Primatene® formulation for the purpose of treating Bronchial Asthma. The Separation obtained illustrates the application of this Method in the Analysis of an Over the Counter Formulation.

A wavelength change was used in order to make the two peak heights more comparable (*there is much more Guaifenesin than Ephedrine in the tablet*). Data from two different Column lots is shown in the figure in order to demonstrate the reproducibility of this Method.



1. Ephedrine
2. Guaifenesin

Method Conditions

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

Catalog No.: 40018-75P

Dimensions: 4.6 x 75mm

Mobile Phase:

A: DI Water with 0.1% TFA (v/v)

B: Acetonitrile with 0.1% TFA (v/v)

Gradient:

Time (minutes)	%B
0	5
1	5
6	50
7	5

Post Time: 3 minutes (3.3 Column Volumes)

Injection vol.: 2 μ L

Flow rate: 1.0mL / minute

Detection: UV @ 214nm (0-4.5 minutes), then 285nm (4.5-10 minutes)

Sample Preparation:

The stock solution was prepared by dissolving 1.0mg of standards in 10.00mL of the Mobile Phase (50:50 Solvent A / Solvent B). The solution was then filtered with a 0.45 μ m Nylon Syringe Filter (MicroSolv Tech Corp.). The injection sample was diluted 1:10.

A Primatene® Tablet containing 12.5mg Ephedrine HCL and 200mg Guaifenesin was ground and added to a 25mL volumetric flask. A portion of 50:50 Solvent A / Solvent B diluent was added and the flask was sonicated 10 minutes. It was then diluted to mark and mixed. A portion was filtered with a 0.45 μ m Nylon Syringe Filter (MicroSolv Tech Corp.) and diluted 1:10.

t₀: 0.9 minutes

**Attachment**

No 252 Primatene Tablet Analyzed with HPLC pdf 0.3 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: 07-22-2024