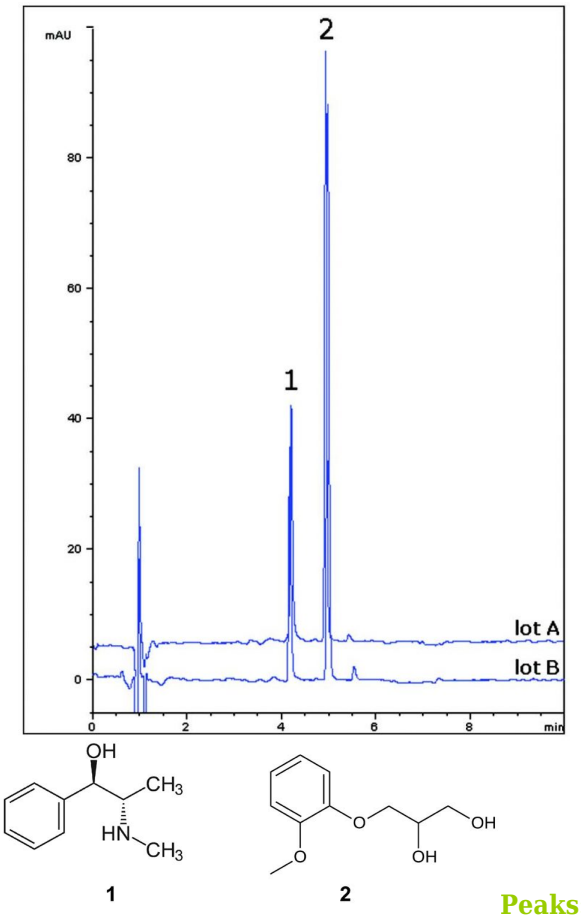
Primatene Tablet Analyzed with HPLC – AppNote

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.



Peaks:

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.: 2µL
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 0.45µm 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 0.45µm 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: 04-05-2024