MICROSOLV

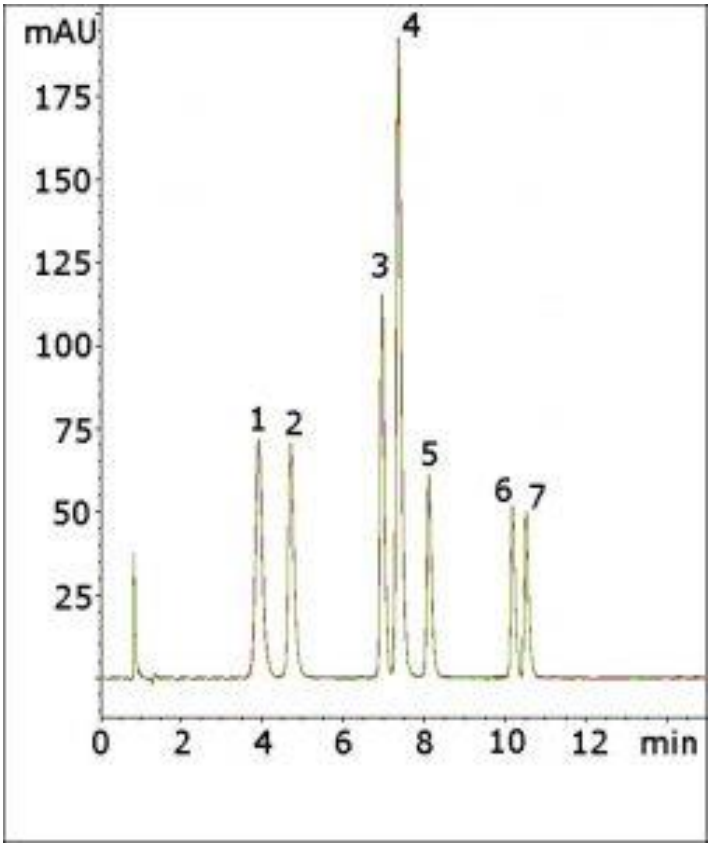
Cough Syrup Ingredients Analysis by HPLC - AppNote

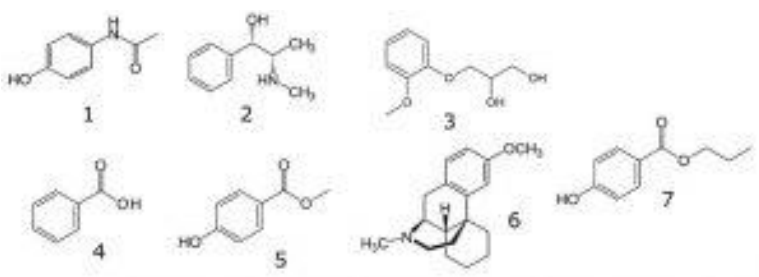
Separation of Antitussives, Analgesics, Decongestants, and Preservatives

Click HERE for Column Ordering Information .

Cold and cough formulations may contain a number of components such as antitussives (Dextromethorphan), decongestants (Pseudoephedrine, Guaifenesin), analgesics (Acetaminophen), and preservatives (Methyl Paraben, Propyl Paraben, Benzoic Acid). The method illustrates good separation between a variety of these compounds, also that symmetric Peak shapes can be obtained in each case.

Dextromethorphan in particular is often problematic in terms of tailing due to the tertiary amine. The method is also very reproducible, as the five run overlay demonstrates.





Peaks:

1. Acetaminophen
2. Pseudoephedrine
3. Guaifenesin
4. Benzoic Acid
5. Methyl Paraben
6. Dextromethorphan
7. Propyl Paraben

Method Conditions

Column: Cogent Phenyl Hydride™, 4µm, 100Å
Catalog No.: 69020-7.5P
Dimensions: 4.6 x 75mm
Mobile Phase:
A: DI Water / 0.1% TFA (v/v)
B: Acetonitrile / 0.1% TFA (v/v)
Gradient:

Time *(minutes)*	%B
0	5
2	5
11	50
12	5

Post Time: 3 minutes
Flow rate: 1.0 mL / minute
Detection: UV @ 210nm *(0-6 min)* , 230nm *(6-15 min)*
Injection vol.: 2µL
Sample Preparation:
Stock Solution: 1mg / mL solutions of each analyte were made using a 50 / 50 Solvent A / Solvent B diluent (v/v).
Working Solution: 0.1 mg / mL dilutions were made of the stock solutions and used for Peak identity confirmations. A 0.1 mg / mL mixture of all the analytes was also made from the stock solutions.
t_0 **:** 0.9 minutes

Note: *Although cough medicines are widely used as over-the-counter cold remedies, the efficacy of some formulations has been shown to be no more effective than placebo.*

COGENT HPLC Columns™

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