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Application Note

Theophylline and Related Compounds

Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

Abstract

This application brief highlights the analysis of theophylline and related compounds using Symmetry Shield RP₁₈ Columns.

Introduction

The compounds analyzed in this study are:

- 1. Theobromine
- 2. Theophylline
- 3. 7-(2-hydroxyethyl) Theophylline

1. Theobromine

$$H_3C$$
 N
 CH_3

2. Theophylline

3. 7-(2-hydroxyethyl) Theophylline

Experimental

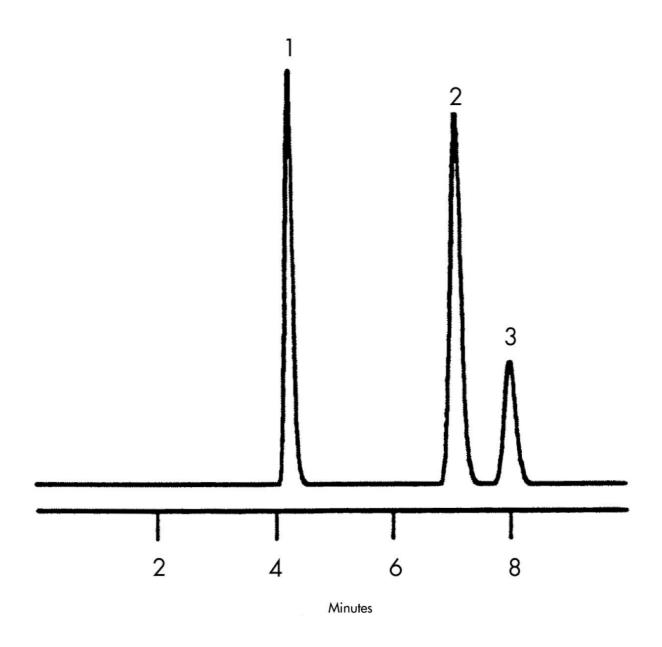
HPLC Method

Column:

Symmetry Shield RP₁₈, 3.0 x 150 mm, 5 μm

Part number:	186000692
Mobile phase:	5 mM potassium phosphate, pH 2.0/acetonitrile 95:5
Flow rate:	0.6 mL/min
Injection volume:	5 μL injection of solution containing theobromine (0.22 mg/mL), theophylline (0.26 mg/mL), and 7-(2-hydroxyethyl) theophylline (0.13 mg/mL)
Detection:	UV @ 270 nm

Results and Discussion



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WA31763.169, June 2003

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