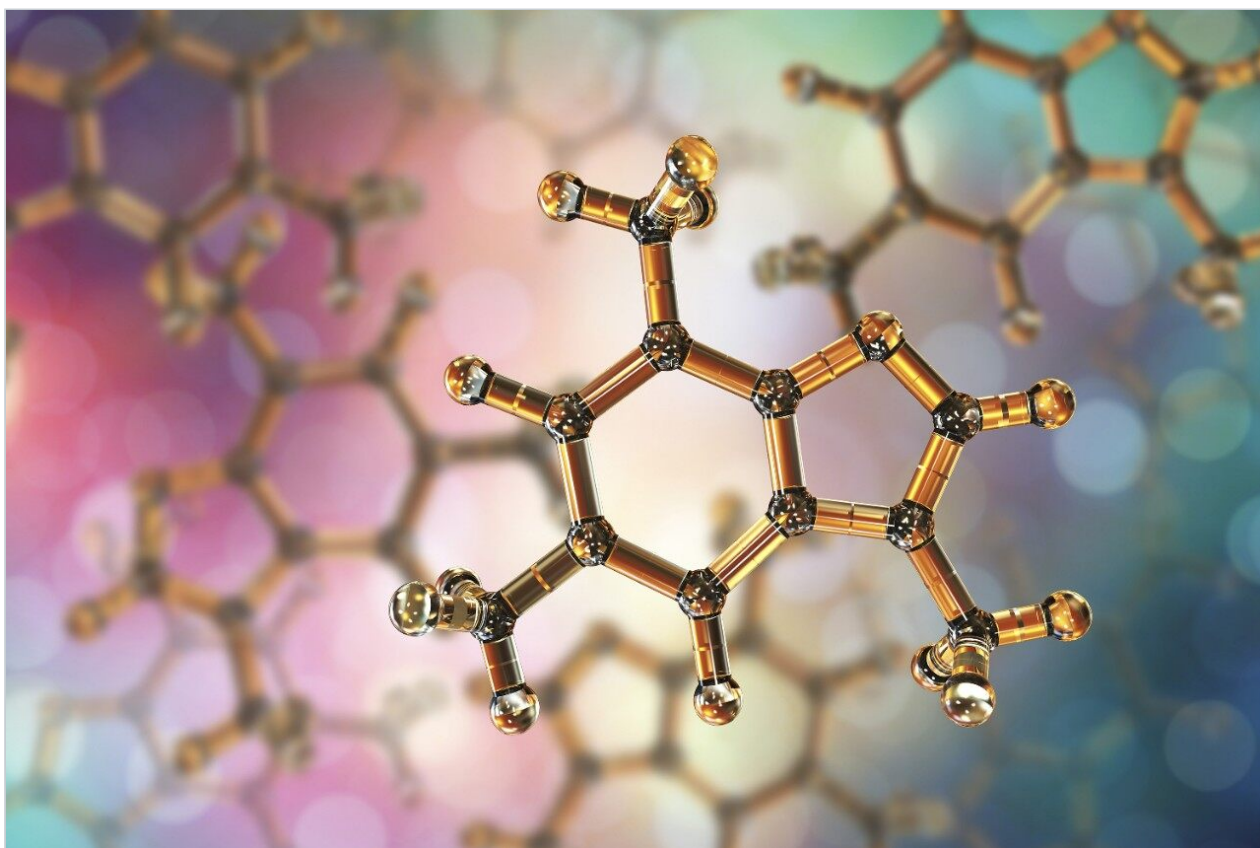


Caffeine Metabolites- pH 2.45

Waters Corporation



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

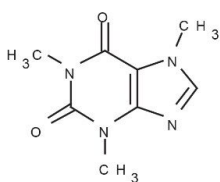
Abstract

This application brief highlights the analysis of caffeine metabolites using XTerra Phenyl Columns.

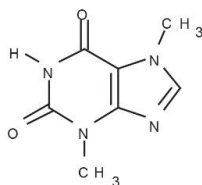
Introduction

The compounds analyzed in this study are:

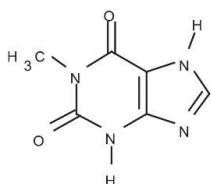
1. 1-Methylxanthine
2. 1, 3-Dimethyluric acid
3. Theobromine
4. 1, 7-Dimethyluric acid
5. 1, 7-Dimethylxanthine
6. Caffeine



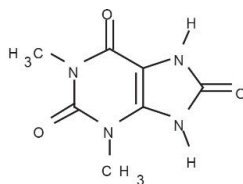
Caffeine



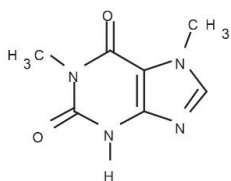
Theobromine



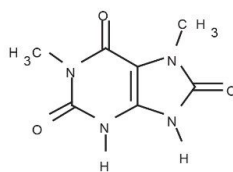
1-Methylxanthine



1, 3-Dimethyluric acid



1, 7-Dimethylxanthine



1, 7-Dimethyluric acid

Experimental

Conditions

Column: XTerra Phenyl, 4.6 x 150 mm, 5 µm

Part number: 186001146

Mobile phase A: H₂O

Mobile phase B: ACN

Mobile phase C: 50 mM NH₄HCO₃, pH 2.45

Flow rate: 2.0 mL/min

Injection volume: 10 µL

Temperature: 30 °C

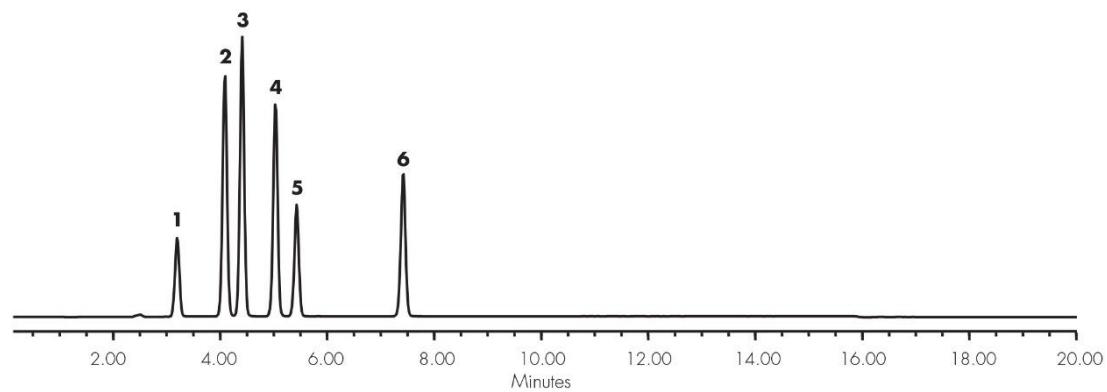
Detection: UV @ 280 nm

Instrument: Alliance 2695, 2996 PDA

Gradient

Time (min)	Profile		
	%A	%B	%C
0.0	90	0	10
15.0	70	20	10

Results and Discussion



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Alliance HPLC System <<https://www.waters.com/534293>>

2998 Photodiode Array (PDA) Detector <<https://www.waters.com/1001362>>

WA20738.020, June 2002