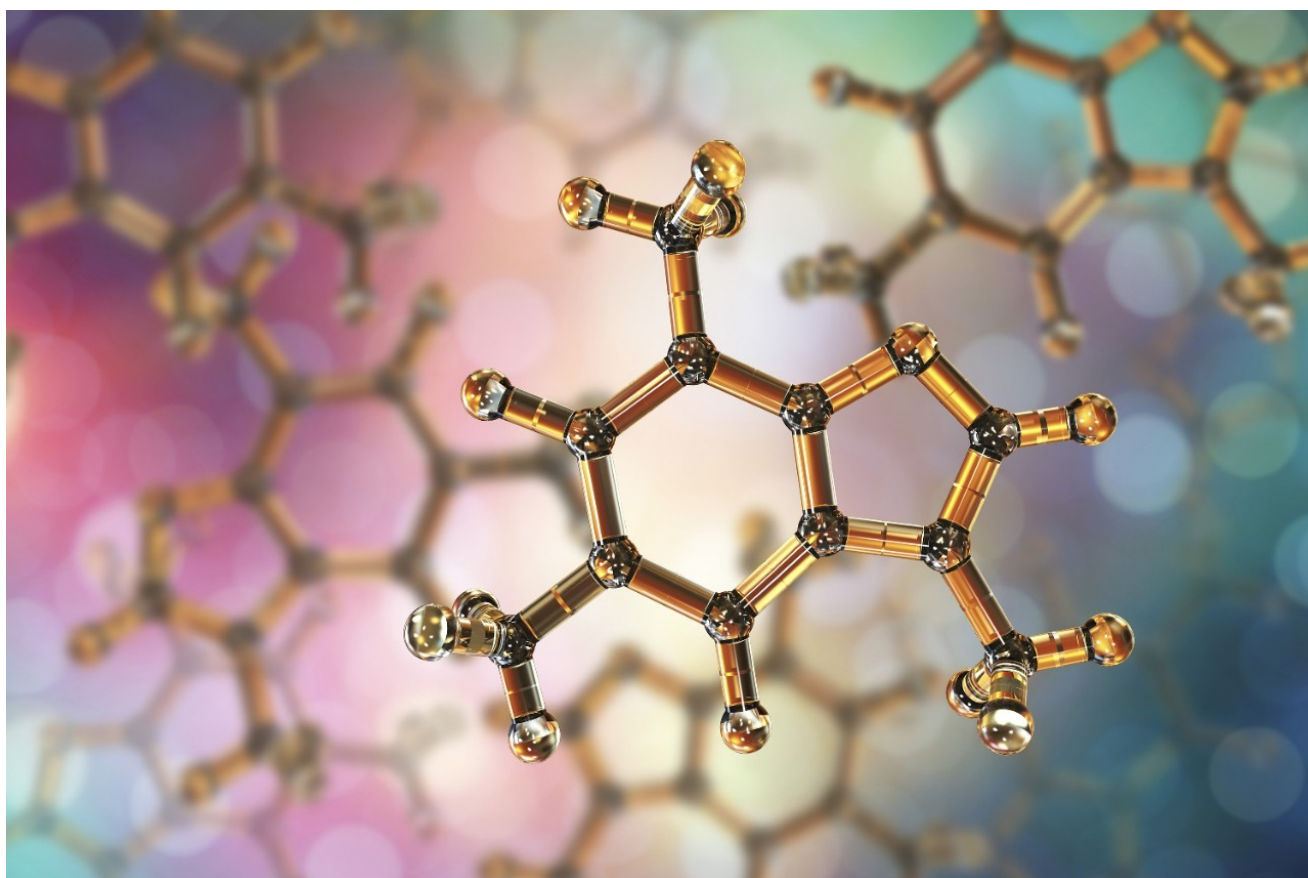


Caffeine Metabolites- pH 10.0

Waters Corporation



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

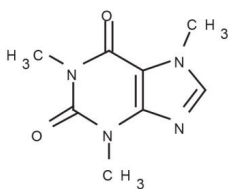
Abstract

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

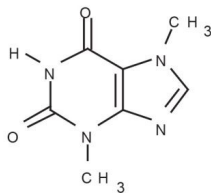
Introduction

The compounds analyzed in this study are:

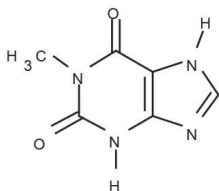
1. 1-Methylxanthine
2. 1, 7-Dimethyluric acid
3. 1, 3-Dimethyluric acid
4. Impurity of 1, 7-Dimethylxanthine
5. 1, 7-Dimethylxanthine
6. Theobromine
7. Caffeine



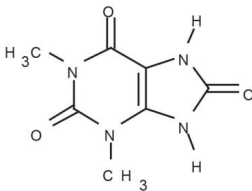
Caffeine



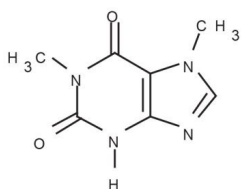
Theobromine



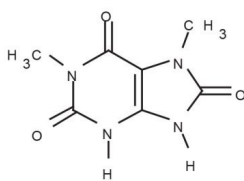
1-Methylxanthine



1, 3-Dimethyluric acid



1, 7-Dimethylxanthine



1, 7-Dimethyluric acid

Experimental

Conditions

Column:	XTerra Phenyl, 4.6 x 150 mm, 5 μ m
Part number:	186001146
Mobile phase A:	H ₂ O
Mobile phase B:	ACN

Mobile phase C: 100 mM NH₄HCO₃, pH 10.0

Flow rate: 1.0 mL/min

Injection volume: 10 µL

Temperature: 30 °C

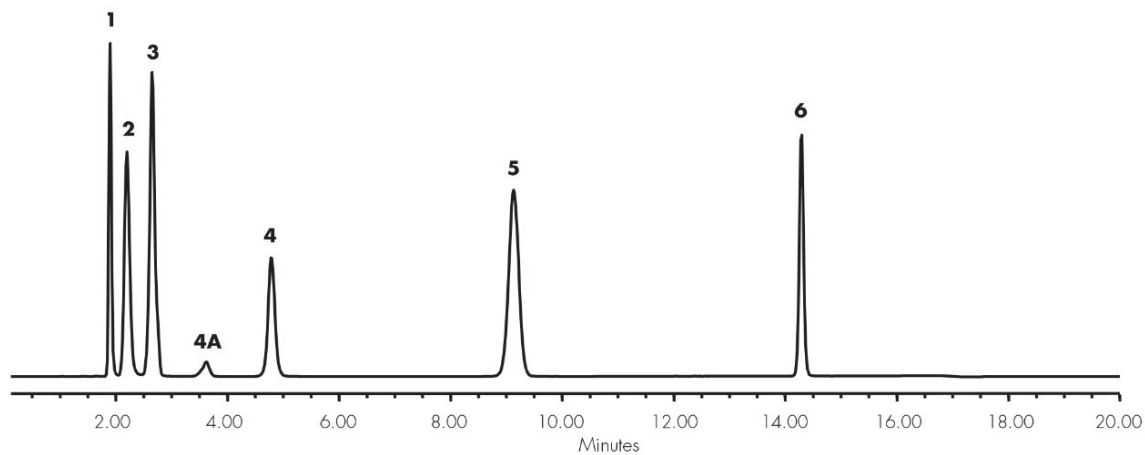
Detection: UV @ 280 nm

Instrument: Alliance 2695, 2996 PDA

Gradient Table

Time (min)	Profile		
	%A	%B	%C
0.0	90	0	10
8.0	88	2	10
15.0	70	20	10

Results and Discussion



Featured Products

- [Alliance HPLC System <https://www.waters.com/534293>](https://www.waters.com/534293)
- [2998 Photodiode Array \(PDA\) Detector <https://www.waters.com/1001362>](https://www.waters.com/1001362)

WA20738.019, June 2002



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