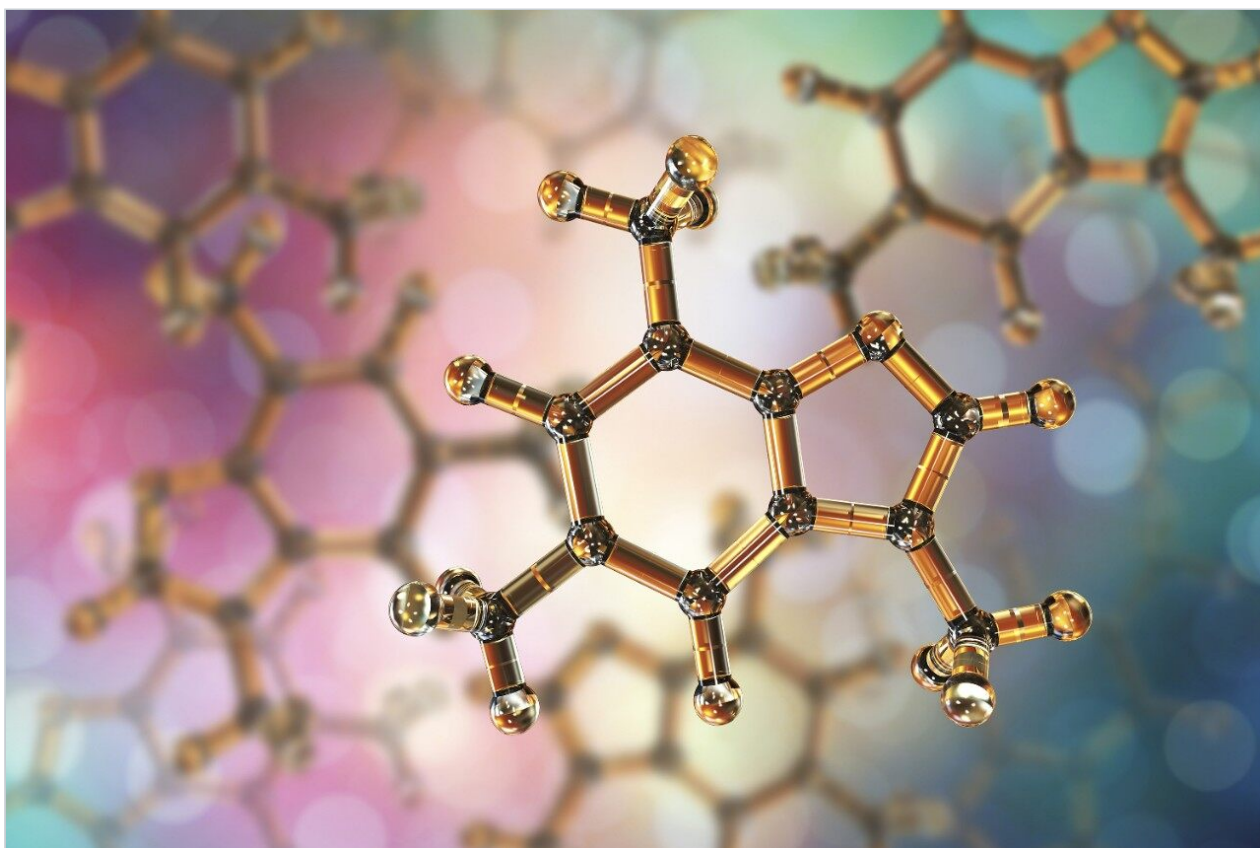




Caffeine Metabolites- pH 2.45

Waters Corporation



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

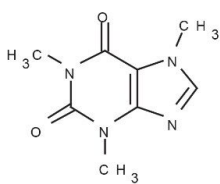
Abstract

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

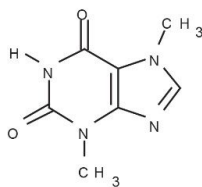
Introduction

The compounds analyzed in this study are:

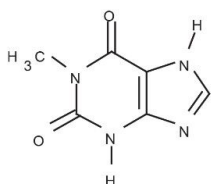
1. 1-Methylxanthine
2. 1, 3-Dimethyluric acid
3. Theobromine
4. 1, 7-Dimethyluric acid
5. 1, 7-Dimethylxanthine
6. Caffeine



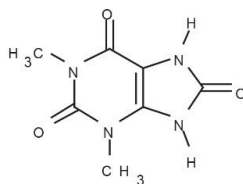
Caffeine



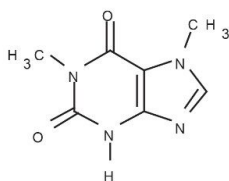
Theobromine



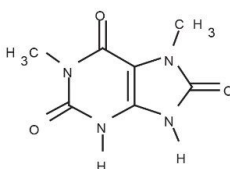
1-Methylxanthine



1, 3-Dimethyluric acid



1, 7-Dimethylxanthine



1, 7-Dimethyluric acid

Experimental

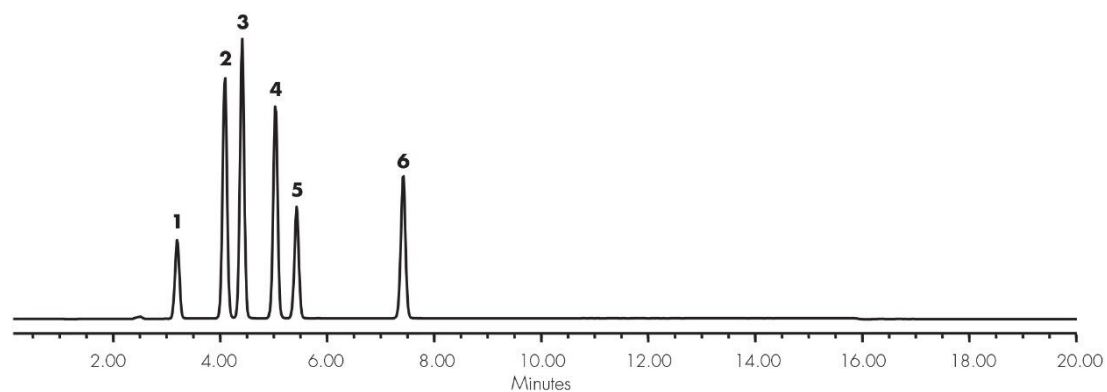
Conditions

Column:	XTerra Phenyl, 4.6 x 150 mm, 5 µm
Part number:	186001146
Mobile phase A:	H ₂ O
Mobile phase B:	ACN
Mobile phase C:	50 mM NH ₄ HCO ₃ , 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