

アプリケーションノート

Analysis of Caffeine Metabolites Using XBridge Phenyl

Waters Corporation

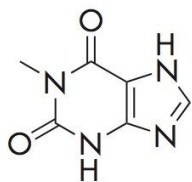


This is an Application Brief and does not contain a detailed Experimental section.

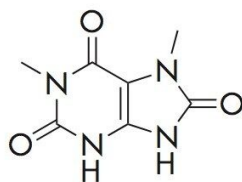
Abstract

This application brief highlights the analysis of caffeine metabolites using XBridge Phenyl columns.

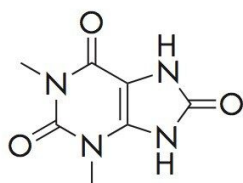
Introduction



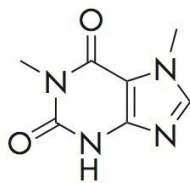
1. 1-Methylxanthine



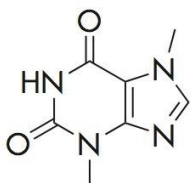
2. 1,7-Dimethyluric acid



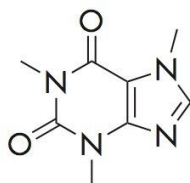
3. 1,3-Dimethyluric acid



4. 1,7-Dimethylxanthine



5. Theobromine



6. Caffeine

Experimental

Test Conditions

Columns:	XBridge Phenyl, 4.6 x 100 mm, 3.5 μ m p/n: 186003334
Mobile phase A:	H ₂ O
Mobile phase B:	ACN
Mobile phase C:	100 mM NH ₄ HCO ₃

Flow rate: 1.0 mL/min

Injection volume: 10 µL

Sample: Caffeine (10 µg/mL), Theobromine (10 µg/mL),
 1-Methyl xanthine (10 µg/mL),
 1,3-Dimethyluric Acid (10 µg/mL),
 1,7-Dimethyl xanthine (10 µg/mL),
 1,7-Dimethyluric Acid (10 µg/mL) in H₂O/NH₄
 HCO₃ (90/10)

Column temp.: 30 °C

Sampling temp.: 15 °C

Detection: UV @ 280 nm

Sampling Rate: 5 points/sec

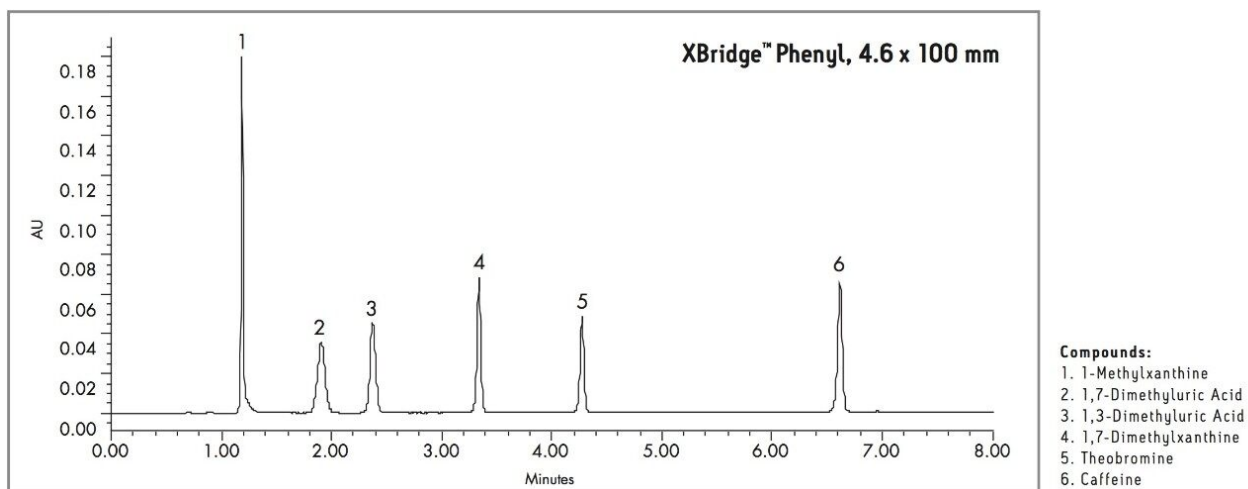
Filter Response: 0.2

Instrument: Alliance 2695 with 2996 PDA

Gradient

Time(min)	%A	%B	%C
0	89	1	10
9	66	24	10
10	89	1	10
20	89	1	10

Results and Discussion



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WA60187, June 2007