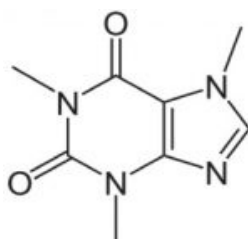
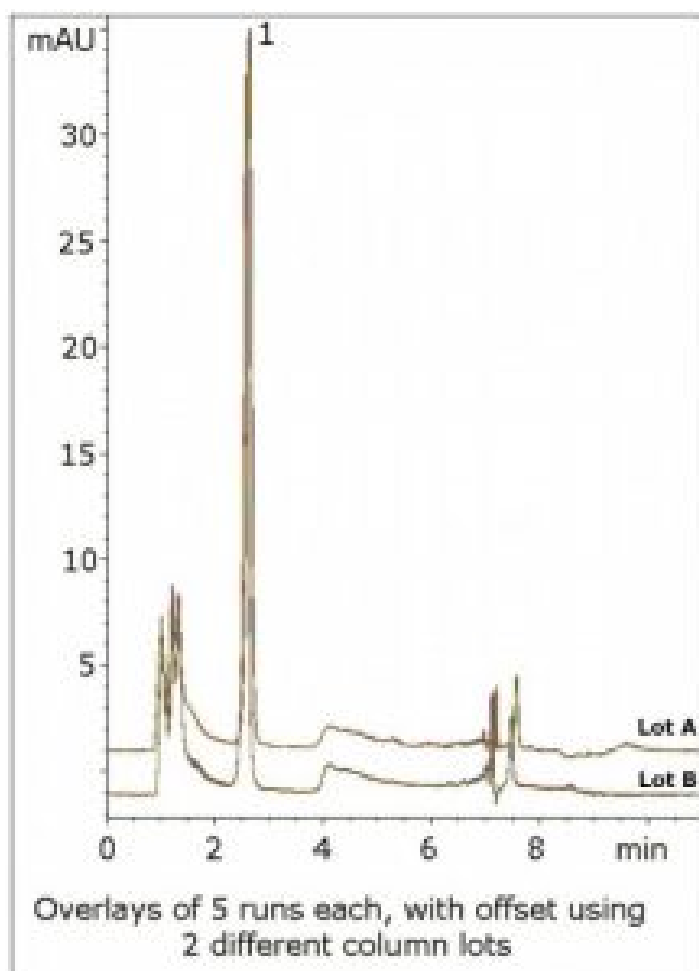


Caffeine in Coffee Analyzed by HPLC- AppNote

Unique Retention Mode Affords Superior Specificity

Although Caffeine retains well in Reversed Phase, it is found to be difficult to obtain a well-resolved Peak free of interference from other matrix peaks with a complex sample such as coffee. In this Method, most of the matrix peaks elute near the void volume and do not interfere with the Caffeine Peak, which is well-resolved from the others.

Complex matrices can also adversely affect run-to-run repeatability due to compounds that do not elute from the Column and change the chromatography. Here the data shows no sign of contaminant build-up on the Column, as the run-to-run overlays show. The lot-to-lot reproducibility is good as well. Finally, the Method conditions are LCMS compatible.



Peak:

Caffeine

Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100Å

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75mm

Mobile Phase:

A: DI Water / 0.1% Formic Acid (v/v)

B: Acetonitrile / 0.1% Formic Acid (v/v)

Gradient:

Time (minutes)	%B
0	98
2	98
7	50
8	98

Post Time: 3 minutes

Injection vol.: 1µL

Flow rate: 1.0mL / minute

Detection: UV @ 275nm

Sample Preparation: Commercially available ground coffee was brewed and filtered with a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.). It was then diluted 1:10 with a diluent of 50:50 Solvent A / Solvent B. The Caffeine Peak identity was confirmed with a USP reference standard.

t₀: 0.9 minutes

Note: Caffeine is a Xanthine Alkaloid found in the coffee plant, the tea bush, the kola nut, and other plants. It is the most commonly consumed psychoactive drug in the world.



Attachment

No 223 Caffeine in Coffee Analyzed by HPLC pdf 0.4 Mb [Download File](#)

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