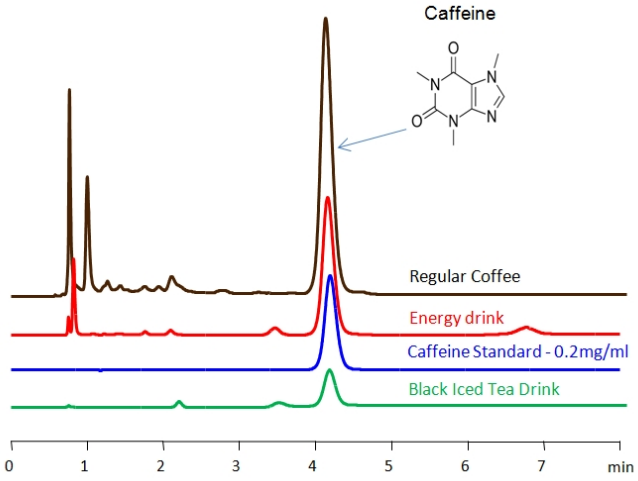
HPLC Analysis of Caffeine in Drinks with Environmentally Friendly Mobile Phase on Primesep SB Column



Column:	Primesep SB
Column size:	3.2 × 100 mm, 5 µm
Mobile phase:	EtOH/H2O - 10/90%
Buffer:	H3PO4 – 0.3%
Flow rate:	0.5 ml/min
Detection:	270 nm

High Performance Liquid Chromatography (HPLC) Method for Analysis of Caffeine .

Caffeine is a natural stimulant and methylxanthine alkaloid. with the molecular formula C6H10N4O2 . Caffeine can be found in a variety of plants, including tea, coffea, cocoa, kola nuts, and guarana. Ingestion of it can increase alertness and cognitive function. It can also cause worsening anxiety, heart palpitations, and headaches.

Caffeine can be retained and analyzed using the Primesep SB stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and ethanol (EtOH) with a phosphoric acid buffer. Detection is performed using UV. You can find detailed UV spectra of Caffeine and information about its various lambda maxima by visiting the following link.

Method Parameters

Column	Primesep SB, 3.2 x 100 mm, 5 µm, 100 Å, dual ended
Mobile Phase	EtOH – 10%
Buffer	H3PO4 – 0.3%
Flow Rate	0.5 mL/min
Detection	UV, 270 nm

Quelle: https://sielc.com/hplc-analysis-of-caffeine-in-drinks-with-environmentally-friendly-mobile-phase