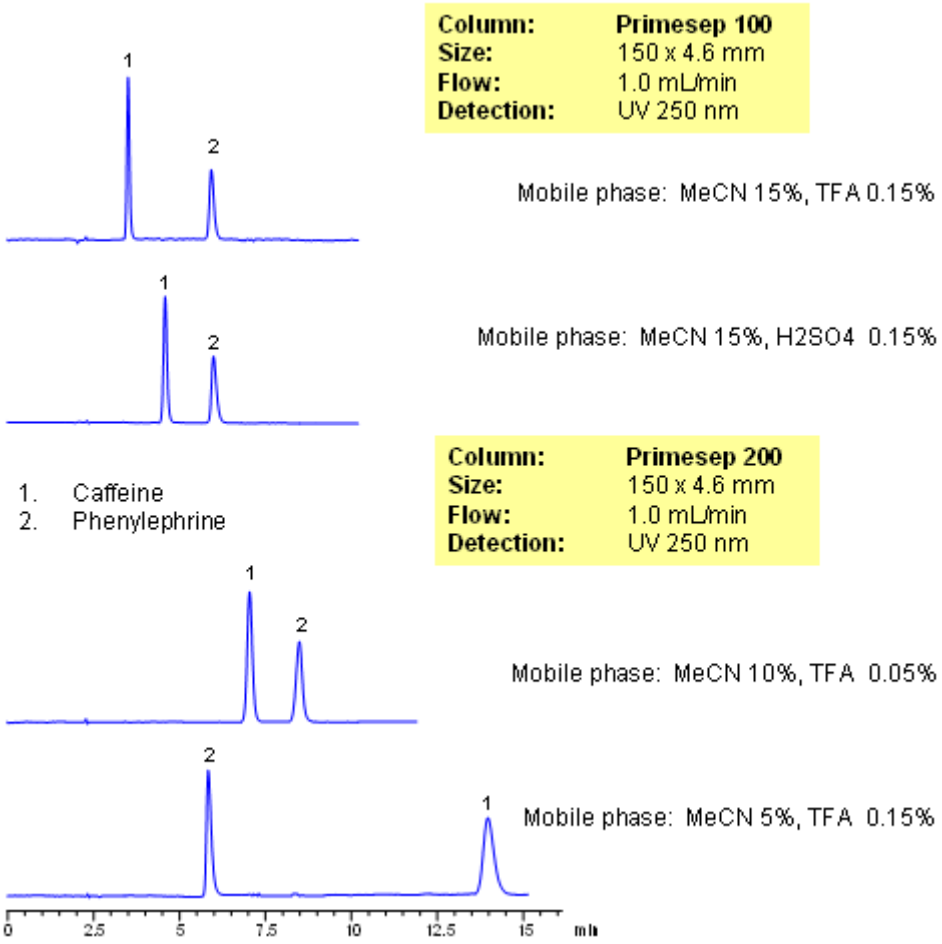
HPLC Separation of Caffeine and Phenylephrine on Primesep 200

https://sielc.com/Application-HPLC-Separation-of-Caffeine-and-Phenylephrine-Primesep-200

Chromatogram



Description

Caffeine and phenylephrine are some of the components of various pain killer/fever reducers/cough compositions. In this application, both of these compounds are separated on Primesep 100 and Primesep 200 columns. Caffeine is retained by reversed-phase mechanisms and phenylephrine is retained by combination of reversed-phase and cation-exchange mechanisms. Retention time for caffeine is controlled by the amount of acetonitrile, while retention time of phenylephrine is controlled by amount of the acetonitrile, buffer concentration and buffer pH. The method can be used for analysis of components of pain, cough and cold medication in pharmaceutical production. Method is robust and reproducible and provides good retention and peak shape. Compounds are monitored by UV, ELSD, CAD or LC/MS. Analysis of active components on biofluids (urine, plasma, blood, etc) is possible with additional sample preparation (protein precipitation, SPE, etc.)