

# Simultaneous extraction and analysis of preservatives and artificial sweeteners in juices by salting out liquid-liquid extraction method prior to ultra-high performance liquid ...

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## Description

A novel and fast salting out liquid-liquid extraction method was developed for simultaneous determination of food additives with different polarities in juices. Chromatographic separation was achieved in less than 6 min using Acquity UPLC BEH C 18 (100 mm × 2.1 mm d.i. × 1.7 μm) column with ammonium acetate with 0.01% of trifluoroacetic acid as eluent A and acetonitrile as eluent B at a flow rate of 0.2 mL min<sup>-1</sup>. The main factors affecting the extraction efficiency were optimized. The method was validated applying accuracy profile based on total error. The extraction recoveries ranged from 84.97 to 122%. Relative standard deviation ranged from 1.24 to 7.99% for intraday assay and from 1.69 to 9.16% for intermediate precision. The limits of detection for five food additives were from 0.3 to 1.42 μg mL<sup>-1</sup>. The method was successfully applied to 47 samples of juices from nine brands.