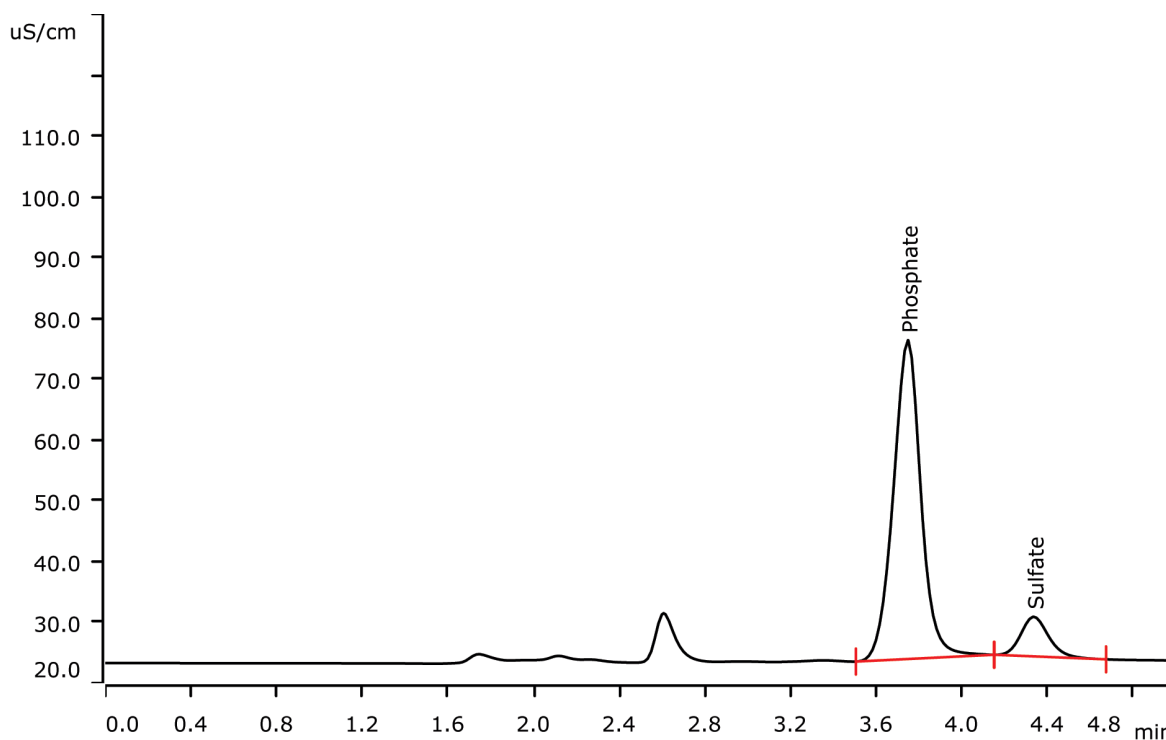


Phosphate in cola drinks



Cola drinks contain a high amount of phosphoric acid. Quality control of cola beverages includes determining the phosphate content. Phosphate analysis also indicates the dilution of the phosphate concentrate during cola processing. Achieving the highest possible dilution of the concentrate is in the interest of bottling companies for economical reasons.

Results

	Concentration [mg/L] n = 20	RSD (Conc.) [%]	RSD (RT) [%]
Phosphoric acid (phosphate)	547.2 mg/L	0.15	0.06

Sample

Cola drink

Sample preparation

Direct injection

Columns

Metrosep A Supp 5 - 100/4.0	6.1006.510
Metrosep RP 2 Guard/3.5	6.1011.030

Solutions

Eluent	7.0 mmol/L sodium carbonate 3.0 mmol/L sodium hydrogen carbonate
Suppressor regenerant	100 mmol/L sulfuric acid
Rinsing solution	STREAM

Parameters

Flow rate	0.8 mL/min
Injection volume	5 μ L
P _{max}	15 MPa
Recording time	5 min
Column temperature	Room temperature

Analysis

Conductivity after chemical suppression

Instrumentation

930 Compact IC Vario Oven/ChS/PP/Deg	2.930.2360
IC Conductivity Detector	2.850.9010
863 Compact Autosampler	2.863.0010
MSM Rotor A	6.2832.000
Adapter sleeve for Suppressor Vario	6.2842.020

