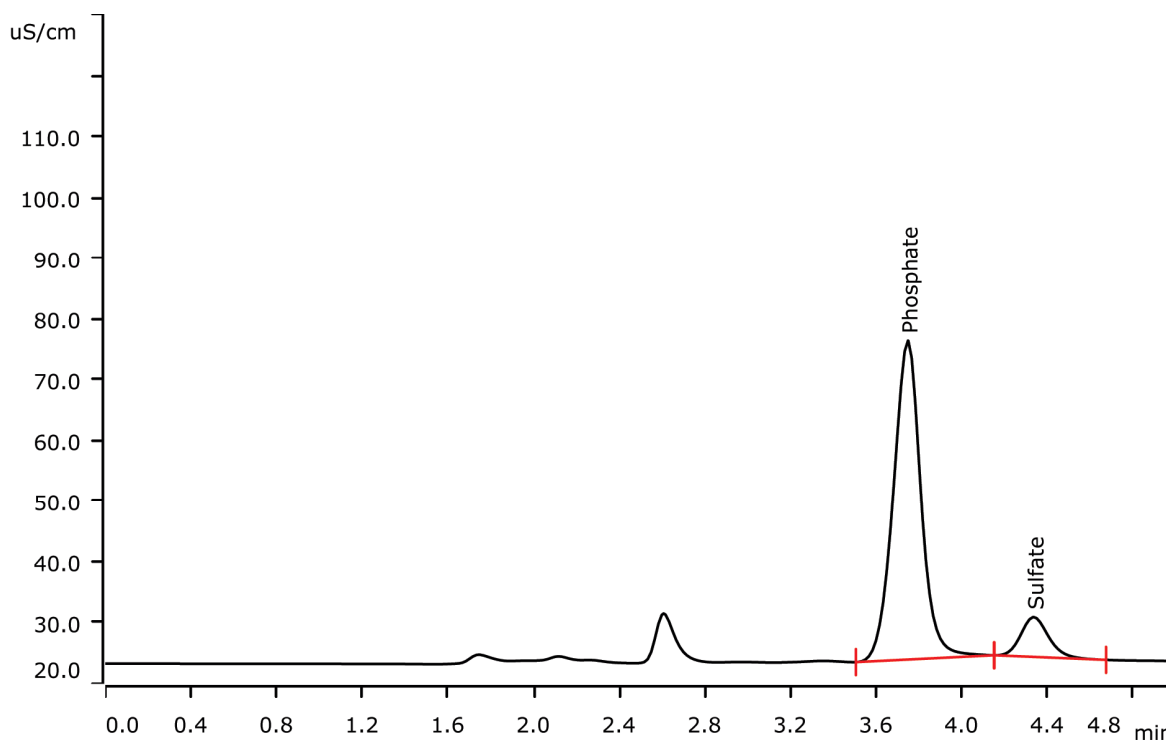


Phosphate in cola drinks



Cola drinks (also known as soft drinks) contain a high amount of phosphoric acid. Quality control of these beverages includes determining the phosphate content. Phosphate analysis also indicates the dilution factor of the phosphate concentrate during cola processing. Achieving proper dilution of the concentrates is in the best interest of soft drink producers and bottling companies to ensure the highest quality beverages are made for consumers.

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 µL
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

