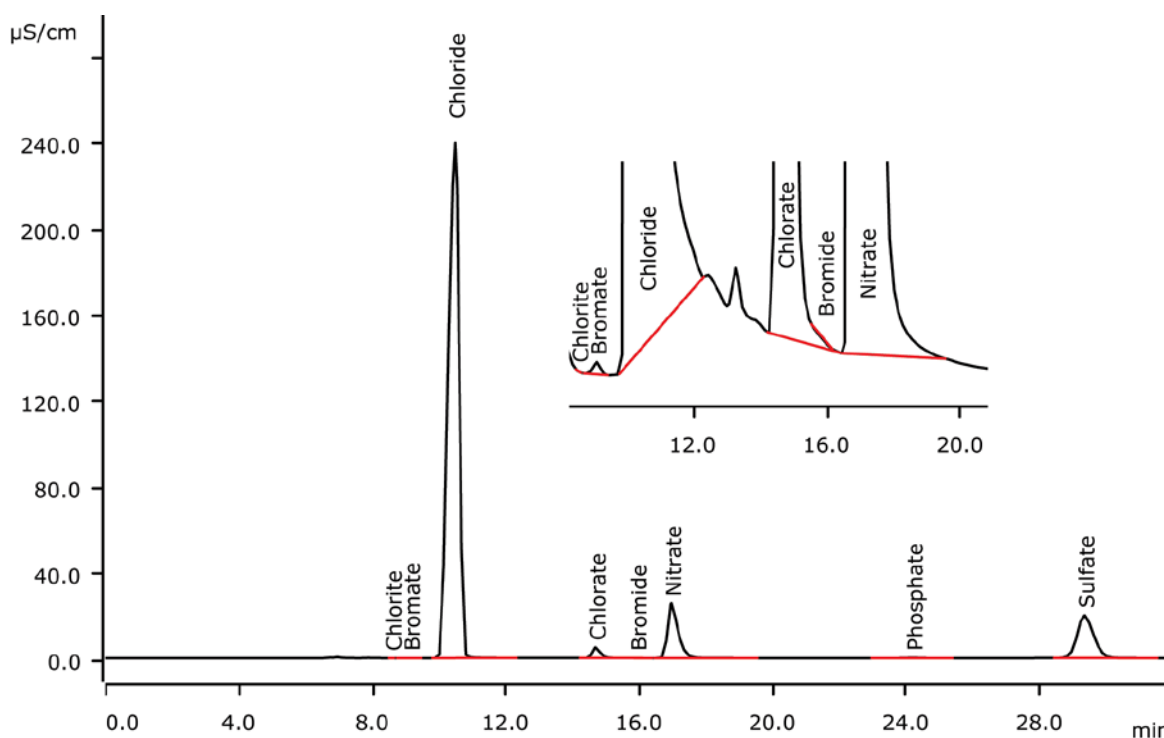


Oxyhalides besides standard anions in swimming pool water



Swimming pool water needs to be disinfected thoroughly. Often ozone is used. As a result of this strong oxidation, oxyhalides may build up and need to be analyzed. Here, the separation and determination of oxyhalides besides standard anions is performed on a Metrosep A Supp 5 - 250/4.0 column with subsequent sequential suppression followed by conductivity detection.

Results

Anion	Concentration [mg/L]	Anion	Concentration [mg/L]
Chlorite	< 0.01	Bromide	<0.01
Bromate	0.02	Nitrate	23.2
Chloride	121	Phosphate	0.42
Chlorate	4.89	Sulfate	23.2

Sample

Swimming pool water

Sample preparation

Filtration through 0.45 µm

Columns

Metrosep A Supp 5 - 250/4.0	6.1006.530
Metrosep A Supp 1 Guard/4.6	6.1005.340

Solutions

Eluent	3.2 mmol/L sodium carbonate 1.0 mmol/L sodium hydrogen carbonate
Suppressor regenerant	100 mmol/L sulfuric acid
Rinsing solution	STREAM

Analysis

Conductivity detection after sequential suppression

Instrumentation

930 Compact IC Flex Oven/SeS/PP/Deg	2.930.2560
IC Conductivity Detector	2.850.9010
858 Professional Sample Processor	2.858.0020
MSM Rotor A	6.2832.000

Parameters

Flow rate	0.7 mL/min
Injection volume	50 µL
P _{max}	15 MPa
Recording time	32 min
Column temperature	25 °C

