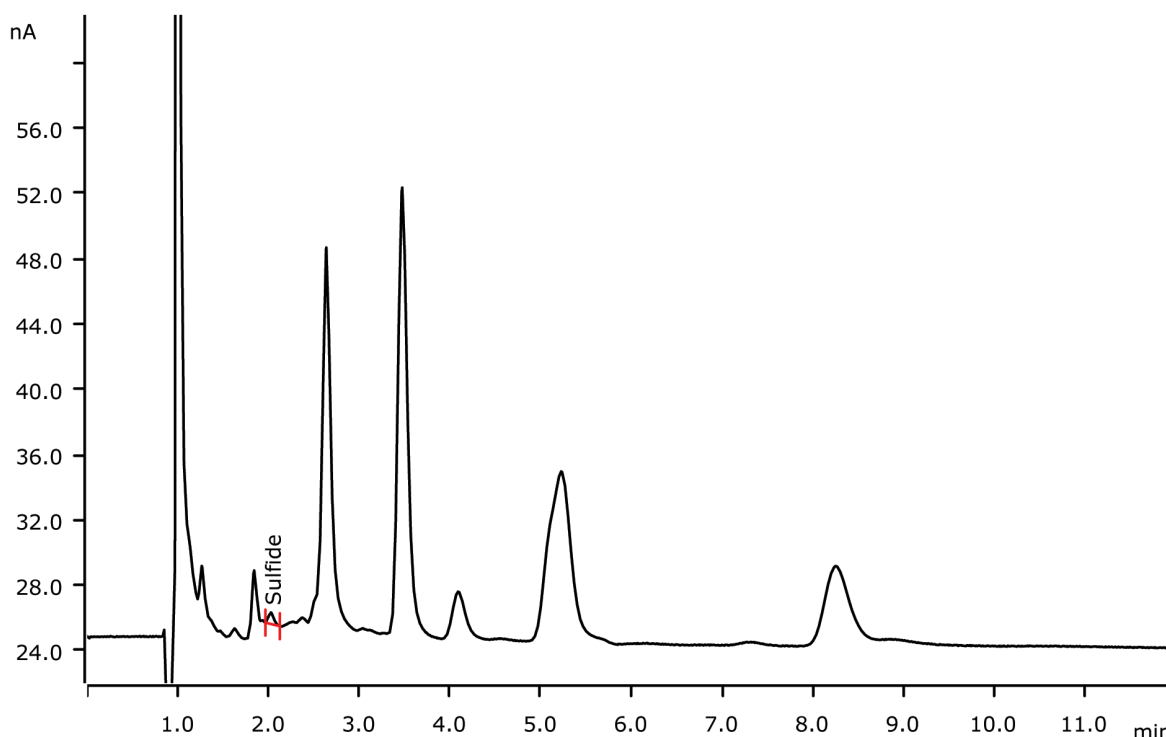


Sulfide in wastewater on Metrosep A Supp 10 - 100/4.0 with amperometric detection



Sulfide determination in wastewater by ion chromatography is performed using an alkaline eluent and amperometric detection. The sample needs to be set to an alkaline pH as well to ensure that the sulfide is stable. DC amperometric detection at a silver electrode offers high selectivity and sensitivity. Separation takes place on a Metrosep A Supp 10 - 100/4.0 column.

Results

Compound	Concentration [µg/L]
Sulfide	0.5

Sample

Wastewater

Sample preparation

Direct injection after manual filtration (0.45 µm)

Columns

Metrosep A Supp 10 - 100/4.0	6.1020.010
Metrosep A Supp 10 Guard/4.0	6.1020.500

Solutions

Eluent	100 mmol/L sodium hydroxide
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Parameters

Flow rate	1.0 mL/min
Injection volume	20 µL
Recording time	12 min
Column temperature	35 °C

PAD Parameters

Cell	Wall-Jet cell
Working electrode	Silver
Reference electrode	Palladium
Spacer	50 µm
Measuring potential	0.0 V
Temperature	35 °C
Mode	DC
Measuring mode	Current

Analysis

Amperometric detection

Instrumentation

930 Compact IC Flex Oven/Deg	2.930.2160
IC Amperometric Detector	2.850.9110
858 Professional Sample Processor	2.858.0020
IC equipment Wall-Jet cell: Cyanide (Ag, Pd)	6.5337.020

