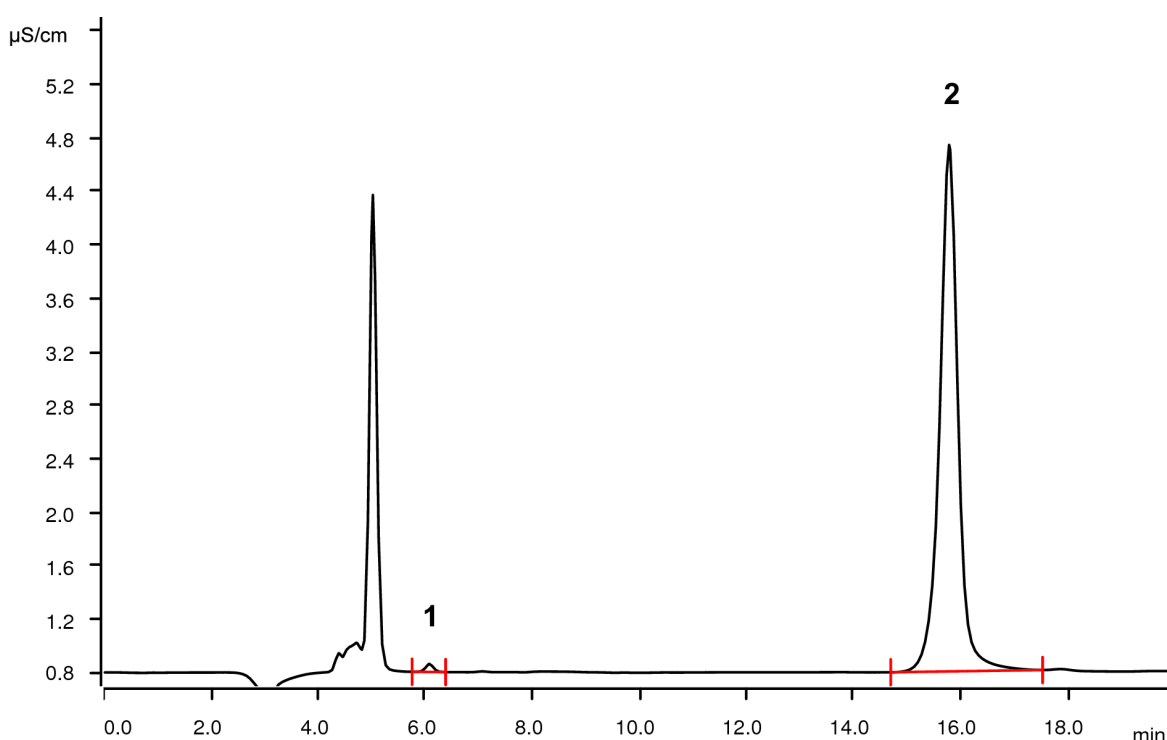


# Organic chloride in naphtha fraction of crude oil distillation according to ASTM D8150



The content of organic chloride in crude oil is determined according to ASTM D8150 in the naphtha fraction after distillation. The naphtha fraction is washed with caustic and water, respectively, to remove hydrogen sulfide and inorganic halides. Here, the determination of organic chloride after inline combustion is presented. Although the sulfur content was of no interest in this application, the same setup allows sulfur quantification.

## Results

	Mean [mg/kg] (N = 3)	RSD [%] (N = 3)
1 Chlorine	0.4	0.7
2 Sulfur	146.3	0.5

## Sample

Crude oil distillate

## Sample preparation

The sample is analyzed by Combustion IC with flame sensor technology and intelligent Partial Loop Injection Technique with Inline Matrix Elimination.

## Columns

Metrosep A Supp 5 - 150/4.0	6.1006.520
Metrosep A Supp 5 Guard/4.0	6.1006.500
Metrosep A PCC 2 HC/4.0	6.1006.340

## 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
Absorber solution	100 mg/L hydrogen peroxide

## Parameters

Flow rate	0.7 mL/min
Injection volume (IC)	50 µL (MiPT)
P <sub>max</sub>	15 MPa
Recording time	20 min
Column temperature	30 °C

## Combustion parameters

Argon	100 mL/min
Oxygen	300 mL/min
Oven temperature	1050 °C
Post-combustion time	120 s
Initial volume of absorption solution	2.0 mL
Water inlet	0.1 mL/min

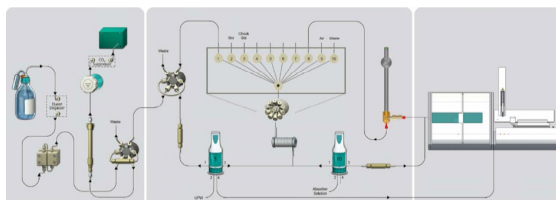
## Analysis

Conductivity after sequential suppression

## Instrumentation

930 Compact IC Flex Oven/SeS/PP/Deg	2.930.2560*
IC Conductivity Detector	2.850.9010*
MSM Rotor A	6.2832.000*
Adapter sleeve for Suppressor Vario	6.2842.020*
920 Absorber Module	2.920.0010*
Combustion Module (oven and ABD)	2.136.0700*
Autosampler MMS 5000	2.136.0800
Kit for liquid sampling	6.7303.000

\* available as 930 Metrohm Combustion IC (2.930.9010)



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