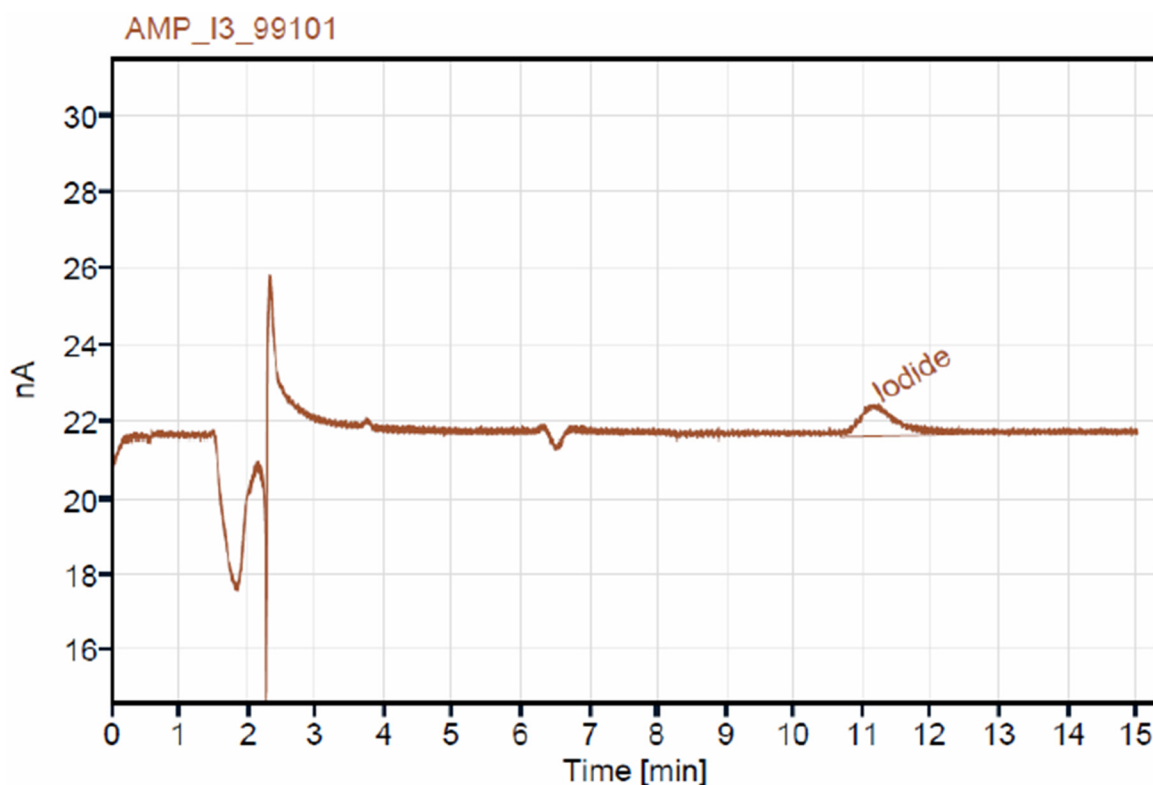


IC Application Note S-384

Metrohm IC Driver for OpenLab CDS: Iodide measurement with amperometric detection

Determination of iodide by applying amperometric detection (DC mode) at a silver working electrode.



Anion chromatogram of 1 µg/L iodide, acquired by OpenLab CDS.

OpenLab CDS is the newest generation of the Agilent chromatography data systems platform. The Metrohm IC Driver 1.0 for OpenLab CDS enables introducing Metrohm IC instruments to this platform for full control and data acquisition. This application shows the analysis of iodide by amperometric detection, enabling detection at trace levels. The eluent is produced automatically by the 941 Eluent Production Module. In this way, amperometric detection can be executed with the same functionality and performance as with MagIC Net.

Results

Anion	Result [mg/L]
1 Iodide	1.0

Sample

Standard solution

Sample preparation

Direct injection

Anion columns

Metrosep A Supp 4 - 250/4.0	6.1006.430
Metrosep A Supp 4 Guard/4.0	6.01021.500

Solutions

Eluent	1.8 mmol/L sodium carbonate 1.7 mmol/L sodium hydrogen carbonate
Eluent (concentrate)	36 mmol/L sodium carbonate 34 mmol/L sodium hydrogen carbonate

Instrumentation

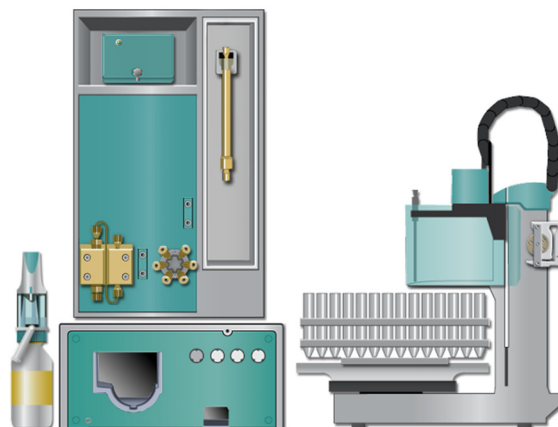
930 Compact IV Flex Oven/Deg	2.930.2160
IC Amperometric Detector	2.850.9110
858 Professional Sample Processor	2.858.0020
Accessory kit: IC Amperometric Detector	6.5000.200
IC equipment Wall-Jet cell: Cyanide (Ag, Pd)	6.1257.010
Ag/AgCl reference electrode	61257.720
Metrohm IC Driver 1.0 for OpenLab CDS	6.6080.100
OpenLab CDS 2.4 (Agilent)	

Analysis

Amperometric detection (DC)

Parameters

Flow rate	1.6 mL/min
Injection volume	1000 µL
P _{max} (anions)	12 MPa
Column temperature	25 °C
Recording time	15 min
Cell	Wall-Jet
Mode	DC
Working electrode	Ag
Reference electrode	Ag/AgCl
Potential	150mV
Cell temperature	32 °C



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