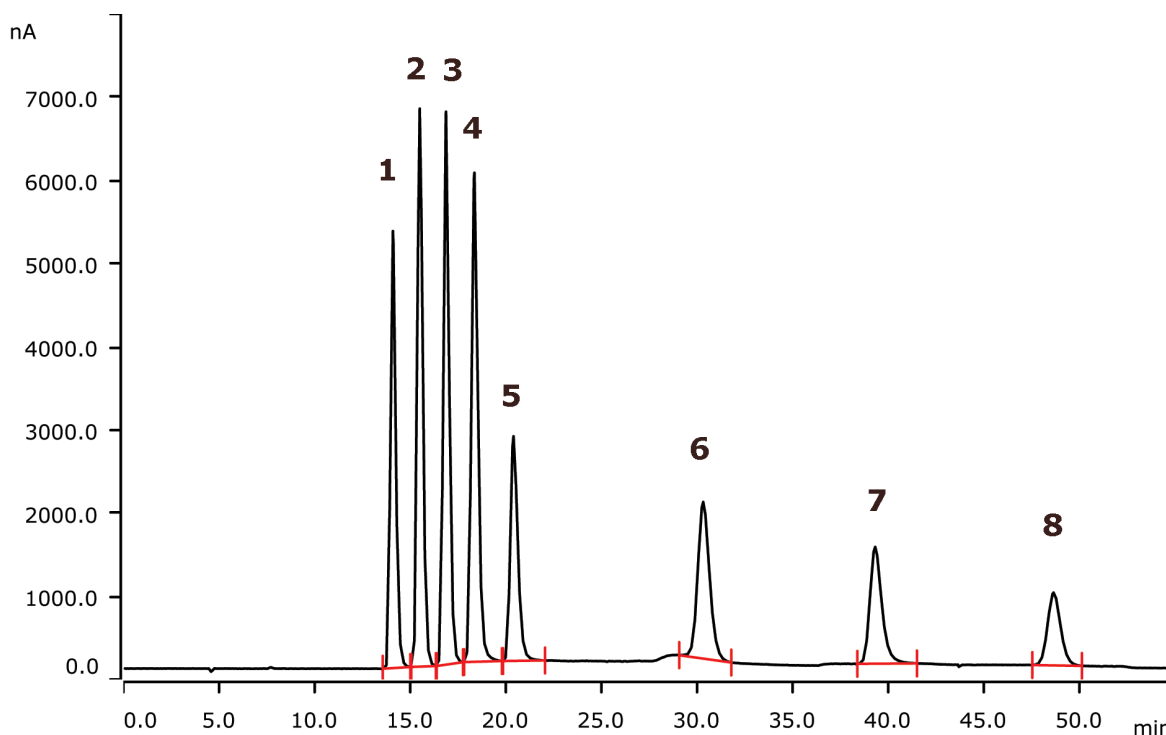


Mono- and disaccharides on a Metrosep Carb 2 column using a flow gradient



Mono- and disaccharides, often just called sugars, are constituents in many food products. They need to be quantified for declaration reasons. A flow gradient – on a microbore Metrosep Carb 2 - 250/4.0 column – ensures the separation of the monosaccharides while the disaccharides still elute before 50 min.

Results

Compound	Concentration [mg/L]	Compound	Concentration [mg/L]
1 Rhamnose	10.0	5 Fructose	10.0
2 Mannose	10.0	6 Lactose	10.0
3 Glucose	10.0	7 Sucrose	10.0
4 Galactose	10.0	8 Maltose	10.0

Sample

Standard solution

Sample preparation

None

Columns

Metrosep Carb 2 - 250/4.0	6.1090.430
Metrosep Carb 2 Guard/4.0	6.1090.500

Solutions

Eluent	200 mmol/L sodium hydroxide 1.0 mmol/L sodium acetate
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Parameters

Flow rate (gradient)	0.4 mL/min (0...35 min) 0.6 mL/min (36...51 min) 0.4 mL/min (52...62 min)
Injection volume	20 µL
P _{max}	20 MPa
Recording time	55 min
Column temperature	30 °C

PAD Parameters

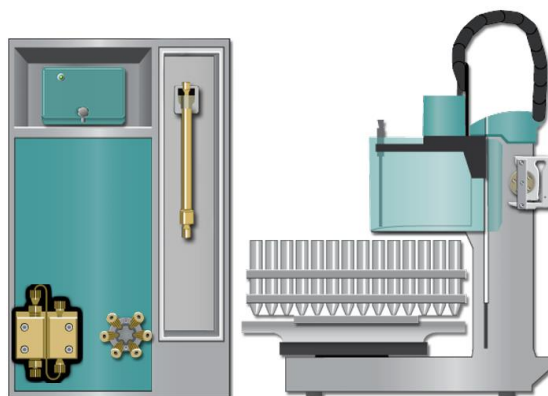
Cell	Wall-Jet cell
Working electrode	Gold
Reference electrode	Palladium
Spacer	50 µm
Measuring potential	0.05 V
Measuring duration	100 ms
Cycle duration	550 ms
Measuring range	200 µA
Temperature	35 °C
Mode	PAD

Analysis

Pulsed amperometric detection

Instrumentation

930 Compact IC Compact Flex Oven	2.930.2100
IC Amperometric Detector	2.850.9110
858 Professional Sample Processor	2.858.0020
IC equipment Wall-Jet cell: Carb (Au, Pd)	6.5337.010



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