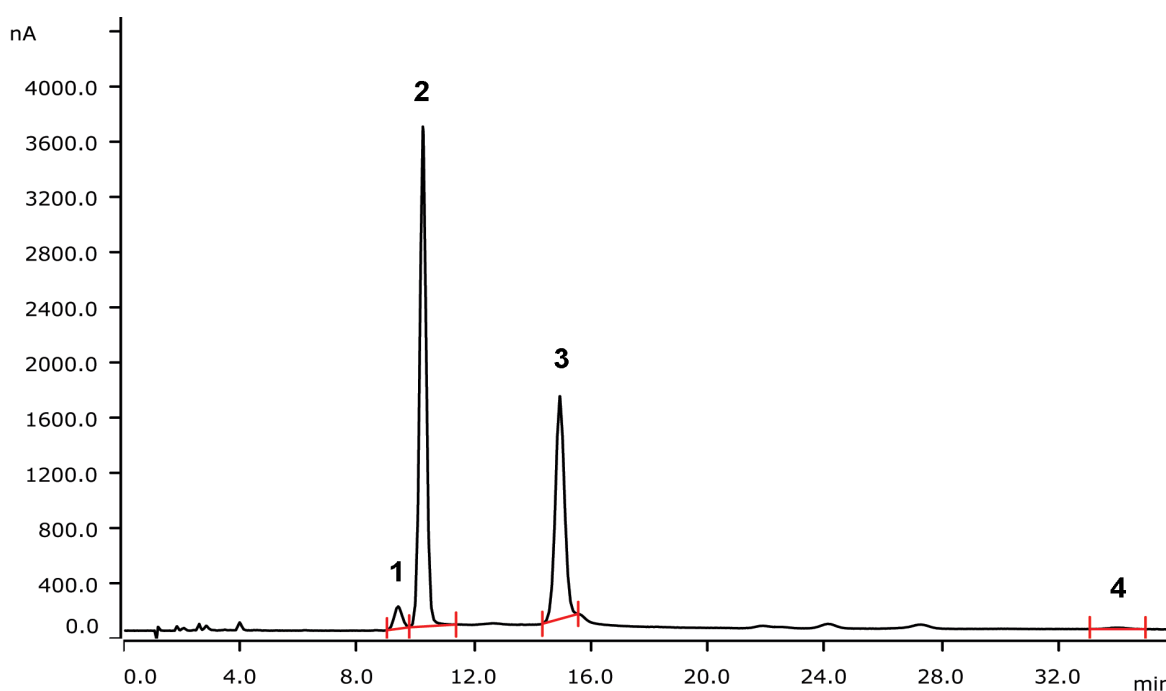


IC-amperometric analysis of sugar in honey according to EU regulation 1169/2011



The EU Regulation 1169/2011 lays out specifications for nutrition labelling. Therein, sugar is a major aspect, given its role relating to human health. This Application Note shows the determination of four sugars in honey.

Results

Compound	Concentration [g/100 g]	RSD (% , n = 4)
1 Galactose	1.6	1.1
2 Glucose	34.3	1.4
3 Fructose	39.2	1.3
4 Maltose	0.9	4.8

Sample

Honey

Sample preparation

0.3 g honey dissolved in 100 mL ultrapure water, further dilution 1:50 with ultrapure water. Injection after Inline Ultrafiltration.

Columns

Metrosep Carb 2 - 150/4.0	6.1090.420
Metrosep Carb 2 Guard/4.0	6.1090.500
Metrosep CO ₃ ³⁻ Trap 1 - 100/4.0	6.1015.300

Solutions

Eluent	5 mmol/L sodium hydroxide 2 mmol/L sodium acetate
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Parameters

Flow rate	0.8 mL/min
Injection volume	20 µL
Recording time	36 min
Column temperature	40 °C

PAD Parameters

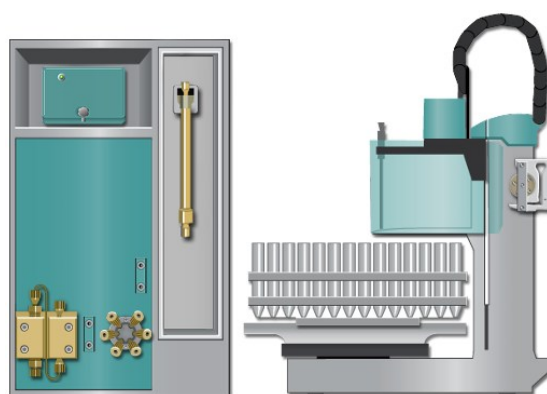
Cell	Wall-Jet cell
Working electrode	Gold
Reference electrode	Palladium
Spacer	50 µm
Measuring potential	0.05 V
Measuring duration	100 ms
Cycle duration	550 ms
Measuring range	200 µA
Temperature	35 °C
Mode	PAD

Analysis

Pulsed amperometric detection

Instrumentation

930 Compact IC Flex Oven/Deg	2.930.2160
IC Amperometric Detector	2.850.9110
858 Professional Sample Processor	2.858.0020
IC equipment Wall-Jet cell: Carb (Au, Pd)	6.5337.010
IC equipment: Inline Ultrafiltration	6.5330.110



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