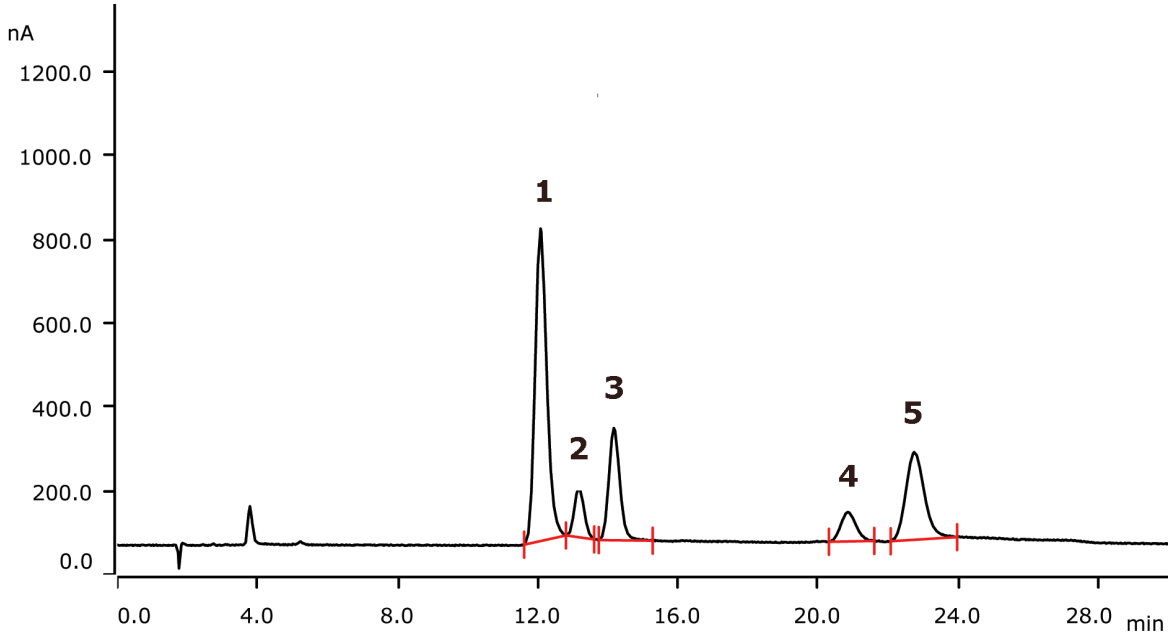
IC Application Note P–71

Sugar analysis in fruit yoghurt applying Inline Dialysis 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 five sugars in cherry yoghurt after Inline Dialysis on a Metrosep Carb 2 - 150/2.0 column.

Results

	Compound	Conc. [g/kg]	RSD (%, n = 3)		Compound	Conc. [g/kg]	RSD (%, n = 3)
1	Sucrose	65.6	1.0	5	Fructose	15.6	1.9
2	Galactose	4.1	1.3	6	Lactose	31.4	5.4
3	Glucose	9.9	1.4				

Metrohm

Sample

Cherry yoghurt

Sample preparation

0.5 g weighed in and filled up to 100 g with ultrapure water. Injection after Inline Dialysis.

Columns

Metrosep Carb 2 - 150/2.0	6.01090.220
Metrosep Carb 2 Guard/2.0	6.01090.600
Metrosep CO_3^{2-} Trap 1 - 100/4.0	6.1015.300

Solutions

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

Parameters

Flow rate	0.13 mL/min
Injection volume	5 µL
Recording time	30 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 Dialysis	6.5330.100