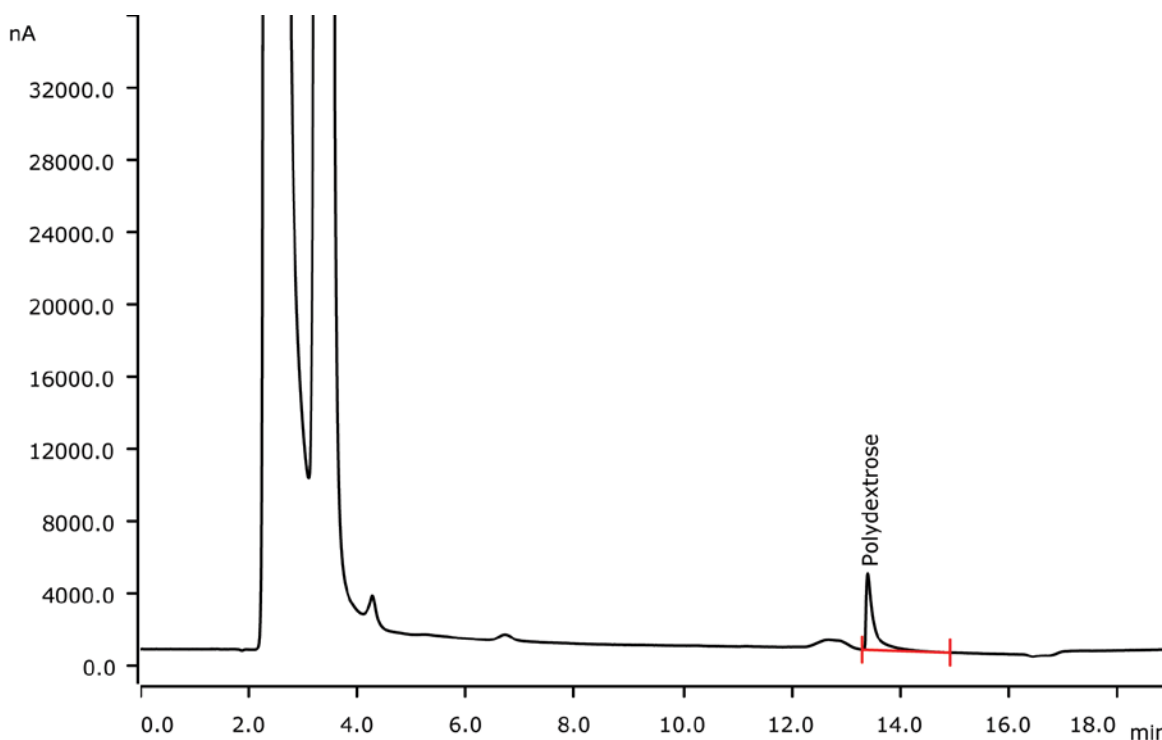


Polydextrose in biscuits with IC-PAD in line to AOAC 2000.11



Polydextrose is a low calorie synthetic polymer of glucose. It is an accepted additive for food. Polydextrose is extracted from food samples with hot water and centrifuged. Subsequent digestion removes maltooligomers and fructans. Finally, polydextrose is quantified by anion-exchange chromatography followed by pulsed amperometric detection.

Results

	Concentration [mg/g]	RSD [%] n = 3
Polydextrose	44.6	2.9

Sample

Biscuit

Sample preparation

Extraction, ultrafiltration, and digestion according AOAC Method 2000.11

Columns

Hamilton RCX-30 – 250/4.6 6.1018.000

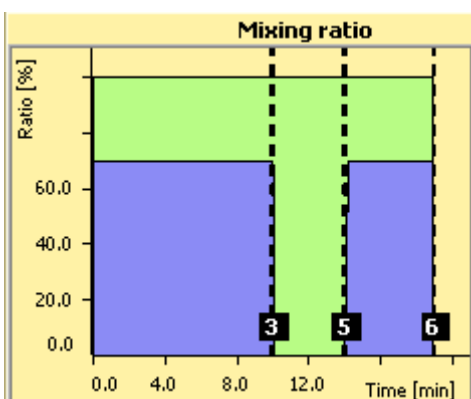
Solutions

Eluent A	150 mmol/L sodium hydroxide
Eluent B	150 mmol/L sodium hydroxide 500 mmol/L sodium acetate

High-pressure gradient

Gradient

	Time [min]	Eluent A [%]	Eluent B [%]	Curve	Flow
▶ 1	Start	70	30		1.2
2	10.0	70	30	Linear	1.2
3	10.1	0	100	Linear	1.2
4	14.0	0	100	Linear	1.2
5	14.1	70	30	Linear	1.2
6	19.0	70	30	Linear	1.2
7					



Parameters

Flow rate	1.2 mL/min
Injection volume	20 µL
Recording time	19 min
Column temperature	32 °C

PAD parameters

Cell	Wall-Jet cell
Working electrode	Gold (3 mm)
Reference electrode	Palladium
Spacer	50 µm
Measuring potential	50 mV
Meas. range	200 µA
Meas. duration	100 ms
Cycle duration	550 ms
Temperature	35 °C
Mode	PAD

Analysis

Pulsed amperometric detection

Instrumentation

940 Professional IC Vario ONE/HPG	2.940.1140
IC Amperometric Detector	2.850.9110
863 Compact IC Autosampler	2.863.0010
IC equipment Wall-Jet cell: Carb (Au, Pd)	6.5337.010

