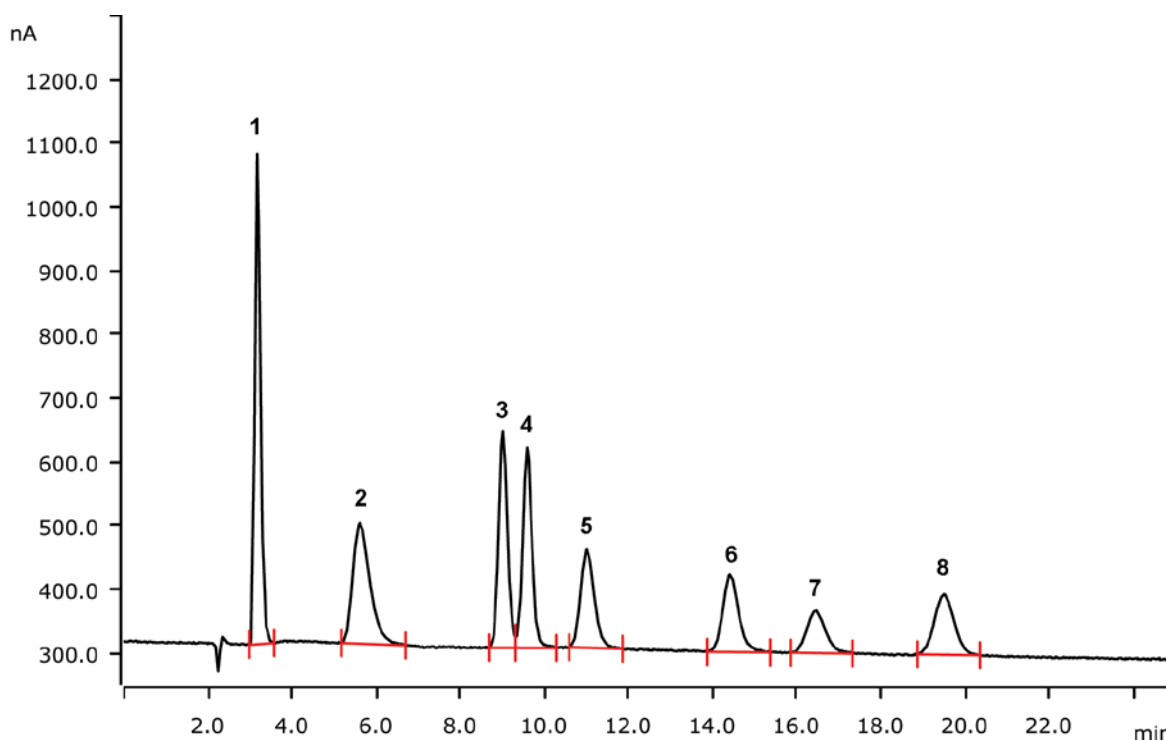


Sugars and sugar alcohols including sucrose and cellobiose



Separation of inositol, mannitol, glucose, xylose, fructose, lactose, sucrose, and cellobiose on a Metrosep Carb 2 - 150/4.0 column with subsequent pulsed amperometric detection (PAD).

Results

| Compound | Standard [mg/L] | Compound | Standard [mg/L] |
|------------|-----------------|--------------|-----------------|
| 1 Inositol | 1.0 | 5 Fructose | 1.0 |
| 2 Mannitol | 1.0 | 6 Lactose | 1.0 |
| 3 Glucose | 1.0 | 7 Sucrose | 1.0 |
| 4 Xylose | 1.0 | 8 Cellobiose | 1.0 |

Sample

Standard

Sample preparation

Direct injection

Columns

| | |
|---|------------|
| Metrosep Carb 2 - 150/4.0 | 6.1090.420 |
| Metrosep Carb 2 Guard/4.0 | 6.1090.500 |
| Metrosep BO ₃ ³⁻ Trap 1 - 100/4.0 | 6.1015.200 |

Solutions

| | |
|---------------|---|
| <u>Eluent</u> | 100 mmol/L sodium hydroxide 10 mmol/L sodium acetate |
|---------------|---|

Parameters

| | |
|--------------------|------------|
| Flow rate | 0.5 mL/min |
| Injection volume | 20 µL |
| P _{max} | 20 MPa |
| Recording time | 25 min |
| Column temperature | 30 °C |

PAD Parameters

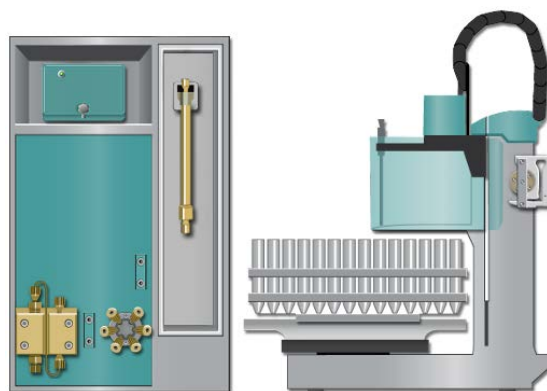
| | |
|---------------------|---------------|
| Cell | Wall-Jet cell |
| Working electrode | Gold |
| Reference electrode | Palladium |
| Spacer | 50 µm |
| Measuring potential | 0.05 V |
| Measuring duration | 100 ms |
| Cycle duration | 550 ms |
| Measuring range | 200 µA |
| Temperature | 35 °C |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

Analysis

Pulsed amperometric detection

Instrumentation

| | |
|---|------------|
| 930 Compact IC 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 |



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