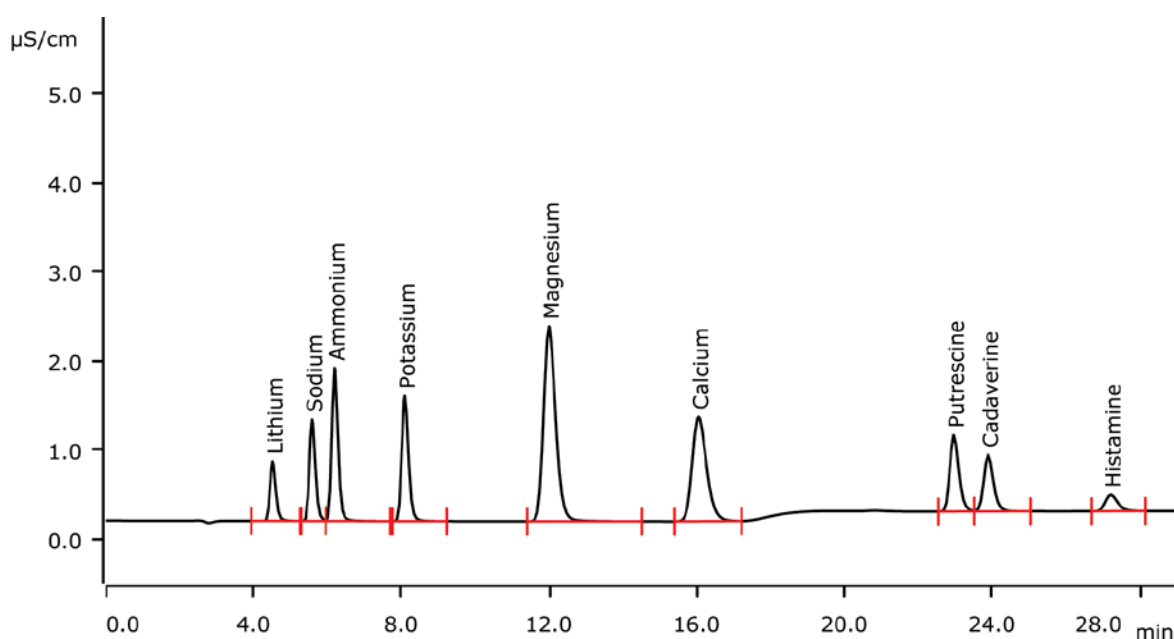


Biogenic amines besides standard cations with suppressed conductivity detection applying a Dose-in Gradient



Biogenic amines are quality markers for food samples as e.g., fish and wine. Here, the simultaneous separation of standard cations, putrescine, cadaverine, and histamine is presented. The separation is performed on a Metrosep C Supp 1 - 250/4.0 applying a Dose-in Gradient with subsequent conductivity detection after sequential suppression.

Results

Cation	Concentration [mg/L]	Cation	Concentration [mg/L]
Li ⁺	0.1	Putrescine	1.0
Na ⁺ , NH ₄ ⁺	0.5	Cadaverine	1.0
K ⁺ , Mg ²⁺ , Ca ²⁺	1.0	Histidine	1.0

Sample

Standard solution

Sample preparation

None

Columns

Metrosep C Supp 1 - 250/4.0	6.1052.430
Metrosep C Supp 1 Guard/4.0	6.1052.500

Solutions

Eluent A	5.0 mmol/L nitric acid 50 µg/L rubidium
Eluent B	25 mmol/L nitric acid 50 µg/L rubidium
Suppressor regenerant	70 mmol/L sodium carbonate 70 mmol/L sodium hydrogen carbonate
Rinsing solution	STREAM

Instrumentation

930 Compact IC Flex Oven/SeS/Deg	2.930.2460
IC Conductivity Detector	2.850.9010
889 IC Sample Center - cool	2.889.0020
2 x 800 Dosino (2 mL / 10 mL)	2.800.0010
MSM-HC Rotor C	6.2842.200
IC equipment: Dose-in Gradient	6.5330.150
IC equipment: Dosino regeneration	6.5330.190

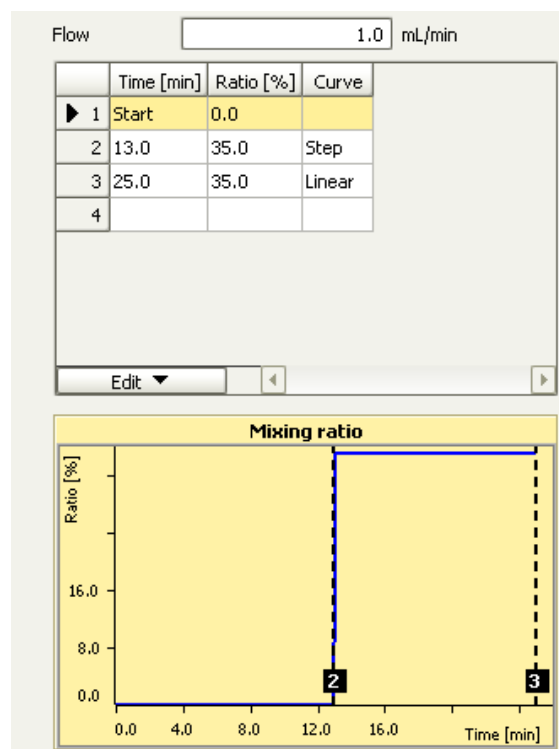
Parameters

Flow rate	1.0 mL/min
Injection volume (MiPT)	100 µL
P _{max}	15 MPa
Recording time	29 min
Column temperature	40 °C
Sample cooling	20 °C

Analysis

Conductivity detection after sequential suppression

Dose-in Gradient



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