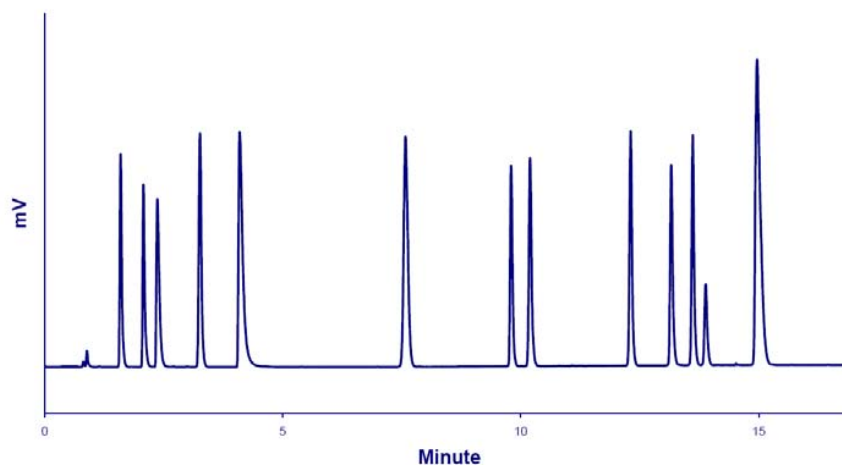


HPLC/LT-ELSD Analysis of Organic Acids



Chromatogram of the Simultaneous HPLC/LT-ELSD Analysis of Organic and Phenolic Acids.

Standard mixture: 12 Compounds (see Table next slide)

Injection volume: 2 μ L

Column: Imtakt Scherzo SM-C18 (3 μ m, 2 x 150mm), 30°C

Flowrate: 0.3mL/min

Eluent: A: H₂O + 0,3% HCOOH - B: ACN + 1% HCOOH

Gradient: 0-2 minutes: 100%A, 2-10 minutes: from 0%B to 20%B, 10-15 minutes: 20%B

Detector: SEDEX 90LT, 30°C, 3.5Bar

HPLC/LT-ELSD Analysis of Organic Acids

| | RT | %RSD (n=8) | | LOD (S/N=3) |
|-------------------------|---------|------------|----------|----------------|
| | Minutes | RT | Response | ng (o.c.) |
| 1 - Quinic acid | 1.60 | 0.09 | 2.1 | 4.5 |
| 2 - Malic acid | 2.08 | 0.09 | 1.9 | 7.7 |
| 3 - Tartaric acid | 2.37 | 0.11 | 2.7 | 20.9 |
| 4 - Succinic acid | 3.27 | 0.20 | 2.2 | 9.0 |
| 5 - Citric acid | 4.11 | 0.25 | 1.3 | 25.3 |
| 6 - Gallic acid | 7.60 | 0.31 | 1.9 | 8.0 |
| 7 - Lactic acid | 9.81 | 0.18 | 2.4 | 55.9* |
| 8 - Protocatechuic acid | 10.21 | 0.14 | 2.4 | 3.7 |
| 9 - 4-HPAC | 12.32 | 0.09 | 1.7 | 3.4 |
| 10 - Chlorogenic acid | 13.16 | 0.07 | 2.2 | 4.0 |
| 11 - Syringic acid | 13.62 | 0.07 | 3.0 | 2.3 |
| 12 - Gentisic acid | 14.97 | 0.06 | 1.9 | 6.2 |

* Semi-volatile compound