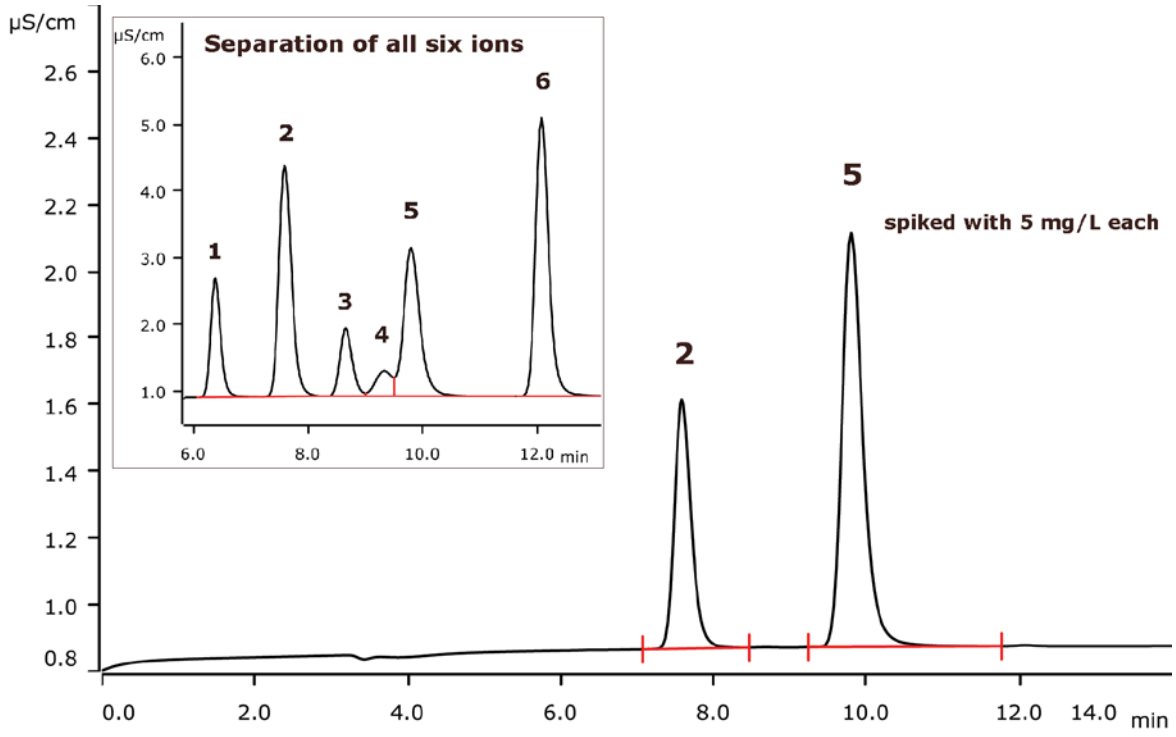
IC Application Note S–351

# Determination of glycolate and lactate in varnish remover




Glycolate and lactate have to be determined in a dual phase varnish remover.Analyzed is only the upper aqueous phase. The separation is achieved on a Metrosep A Supp 16 - 250/4.0 column. The eluent composition is adapted to get a sufficient separation of glycolate and lactate without interference by formate and acetate. Conductivity detection after sequential suppression is applied.

## Results

| Anion | Conc. [mg/L] | RT [min] | Recovery [%] | Anion | Conc. [mg/L] | RT [min] | Recovery [%] |
|---|---|---|---|---|---|---|---|
| 1 Fluoride | - | 6.4 | - | 4 Acetate | - | 9.3 | - |
| 2 Glycolate | n.d. | 7.6 | 101 | 5 Lactate | 17.9 | 9.8 | 104 |
| 3 Formate | - | 8.7 | - | 6 Chloride | - | 12.1 | - |

Concentrations in the diluted solution. Small picture shows the achieved separation under the applied condiction.

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## Sample

Varnish remover

## Sample preparation

Aqueous phase is diluted 1:5000 with ultrapure water.

## Columns

| | |
|---|---|
| Metrosep A Supp 16 - 250/4.0 | 6.1031.430 |
| Metrosep RP 2 Guard/3.5 | 6.1011.030 |

## Solutions

| | |
|---|---|
| Eluent | 3.75 mmol/L sodium carbonate<br>0.375 mmol/L sodium hydroxide |
| Suppressor regenerant | 100 mmol/L sulfuric acid |
| Rinsing solution | STREAM |

## Analysis

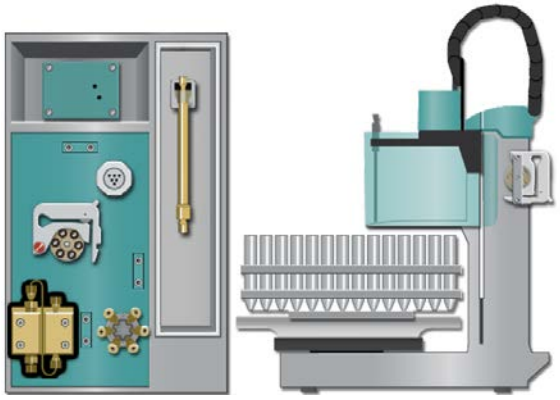
| |
|---|
| Conductivity detection after sequential suppression |

## Instrumentation

| | |
|---|---|
| 930 Compact IC Flex Oven/SeS/PP/Deg | 2.930.2560 |
| IC Conductivity Detector | 2.850.9010 |
| 858 Professional Sample Processor | 2.858.0020 |
| MSM Rotor A | 6.2832.000 |
| Adapter sleeve for Suppressor Vario | 6.2842.020 |

## Parameters

| | |
|---|---|
| Flow rate | 0.8 mL/min |
| Injection volume | 20 µL |
| $P_{max}$ | 20 MPa |
| Recording time | 14 min |
| Column temperature | 45 °C |



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