



## DETERMINATION OF **BROMIDE** AND **IODIDE** ANIONS IN WATER SAMPLES BY "CAPEL<sup>®</sup>-105M" CAPILLARY ELECTROPHORESIS SYSTEM

Lumex Method M 01-45 (2009)

### INTRODUCTION

The method allows determination of bromide and iodide ions in natural, potable (incl. bottled), and mineral water using capillary electrophoresis (CE) method.

### MEASUREMENT METHOD

Measurement method is based on sample filtration and its subsequent separation in a fused silica capillary under the influence of the applied electric field. Identification and quantification of bromide and iodide ions is performed by registering their intrinsic absorbance at 200 nm wavelength.

### MEASUREMENT RANGE

Measurement ranges of the analyzed anions in the samples are:

for bromide ions **0.05–100 mg/L**,

for iodide ions **0.1–100 mg/L**.

Chloride ions with mass concentration ratio 4000:1 do not influence determination of bromide ions.

### EQUIPMENT AND REAGENTS

The "CAPEL<sup>®</sup>-105M" CE system with high-voltage negative polarity is used in measurements.

All reagents must be of analytical grade or better.

The "CAPEL<sup>®</sup>-105M" CE system is controlled and the data are acquired and processed by "ELFORUN<sup>®</sup>" software.

### EXAMPLE OF A REAL ANALYSIS

**Buffer:** sulphate buffer with CTA-OH

**Capillary:**  $L_{\text{eff}}/L_{\text{tot}}$  50/60 cm, ID 75  $\mu\text{m}$

**Injection:** 600 mbar x sec

**Voltage:** -20 kV

**Detection:** 200 nm, direct

**Temperature:** +20 °C

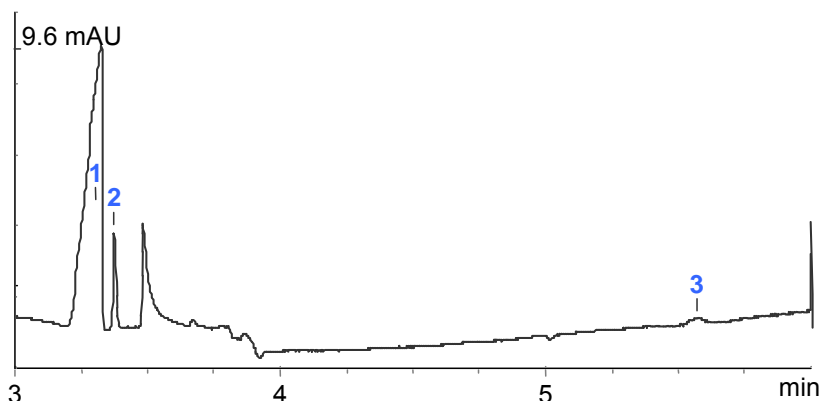
**Sample:** "Matzesta" mineral water (dilution 1:100)

**Determined ions:**

1 – chloride

2 – bromide (59 mg/L)

3 – iodide (7.5 mg/L)



The contents on this paper are subject to change without notice.