



Determination of **bromide** and **iodide anions** in water samples

INTRODUCTION

The method is used for the determination of the mass concentration of bromide and iodide ions in **natural, potable (incl. bottled), mineral water and other aqueous matrices** by capillary electrophoresis.

MEASUREMENT METHOD

The measurement method is based on capillary zone electrophoresis. Identification and quantification of bromide and iodide ions is performed by registering absorbance at 200 nm wavelength.

MEASUREMENT RANGE

The measurement ranges of the analyzed anions in the samples are:

- for bromide ions **0.05–100 mg/L**,
- iodide ions **0.1–100 mg/L**.

Chlorides with mass concentration ratio 4000:1 do not influence determination of bromides.

EQUIPMENT AND REAGENTS

The Capel capillary electrophoresis system is used in measurements. Data acquisition, collection, processing and output are performed using a personal computer running under Windows® operating system with Elforun software installed.

Lumex Instruments set, **order No. 0300001781**.

EXAMPLES OF REAL ANALYSES

BGE: sulfate, with CTA-OH

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

Injection: 600 mbar $\times$ s

Voltage: -20 kV

Temperature: 20 °C

Detection: 200 nm, indirect

Sample: mineral water (dilution factor – 100)

Found (mg/L):

- 1 – chloride
- 2 – bromide (59)
- 3 – iodide (7.5)

