DETERMINATION OF BROMIDE AND IODIDE ANIONS IN WATER SAMPLES
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® capillary electrophoresis system is used in measurements. Data acquisition, collection, processing and output are performed using a personal computer running under WINDOWS® XP/7/8 operating system with installed dedicated software package ELFORUN®. All reagents must be of analytical grade or better.

EXAMPLE OF A REAL ANALYSIS
BGE: sulfate, with CTA-OH
Capillary: L_eff/L_tot 50/60 cm, ID 75 µm
Injection: 600 mbar x sec
Voltage: – 20 kV
Temperature: +20 °C
Detection: 200 nm, indirect

Sample: “Matzesta” mineral water (dilution 1:100)
Measurement results:
1 – chloride
2 – bromide (59 mg/L)
3 – iodide (7.5 mg/L)

The information in this leaflet is supplemental. To get more specific, please contact the manufacturer of CAPEL® CE systems LUMEX INSTRUMENTS Group.

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