



Determination of **fructose**, **glucose**, and **saccharose** in beverages, fruit and vegetable products, honey, dietary supplements

INTRODUCTION

The method is used for the determination of the mass concentration of fructose, glucose, and saccharose in samples of

- non-alcoholic and alcoholic beverages (including juices and wines);
- fruit and vegetable products;
- honey;
- dietary supplements

by capillary electrophoresis.



MEASUREMENT METHOD

The measurement method is based on the extraction of sugars from a solid sample by water (dilution of a liquid sample) and their determination by capillary electrophoresis with indirect UV detection at the wavelength of 254 nm.

MEASUREMENT RANGE

The measurement range for the sugars is **2–800 g/L** (mass concentration), **0.2–80 %** (mass fraction).

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 installed dedicated software package Elforun.

Lumex Instruments kit, order **No. 0300001587**.

EXAMPLES OF REAL ANALYSES

BGE: potassium sorbate with CTAB

Capillary: $L_{\text{eff}}/L_{\text{tot}}$ 75/65 cm, ID 50 μm

Injection: 150 mbar \times s

Voltage: -25 kV

Temperature: 20 °C

Detection: 254 nm

Sample: orange juice (dilution factor 100)

Found (g/L):

1 – fructose (28.5)

2 – glucose (28)

3 – saccharose (49)

