Capel-105M

Capillary electrophoresis system

PRINCIPLE OF OPERATION

High performance capillary electrophoresis is based on the differential migration of components of aqueous samples within a narrow-fused silica capillary driven by an electric field.
Separated solutes are quantitatively detected at the capillary outlet by a highly sensitive optical system based on direct or indirect UV absorbance.

MAIN APPLICATIONS

Environmental analysis

- Natural, drinking, and waste water (Br^-, Cl^-, F^-, I^-, NO_2^-, NO_3^-, PO_4^{3-}, SO_4^{2-}, acetate, NH_4^+, Ba^{2+}, Ca^{2+}, K^+, Mg^{2+}, Na^+, and other inorganic and organic ions)
- Soils, sludge, and sediments (inorganic and organic anions and cations)

Animal feed & Veterinary

- Fodder, mixed fodder, and mixed fodder raw materials (amino acids, cations and anions, organic acids, vitamins)
- Veterinary drugs (antibiotics, antiprotozoal agents)

Biopharma

- Quality control of therapeutic recombinant proteins
- Protein separation
- Enantiomers separation
- Pharmacokinetics studies

Food testing

- Bottled water (inorganic and organic anions and cations)
- Carbonated drinks and juices (sweeteners, preservatives, synthetic dyes, antioxidants, vitamins, inorganic cations and anions, organic acids, sugars)
- Beer (inorganic cations and anions, hop and bitter acids (humulones and isohumulones), amino acids, organic acids)
- Wine and strong drinks (inorganic cations and anions, aromatic aldehydes, organic acids, sugars, some metals)
- Tea, coffee (caffeine, polyphenols)
- Foodstuff (preservatives and other food additives, organic acids, amino acids, amines, proteins)
- Milk and milk products (sugars, inorganic cations and anions, organic acids, vitamins, proteins, sweeteners, preservatives)

ADVANTAGES OF CAPEL-105M

Extended instrumental options

- Spectra scanning facilitates peak identification
- Broad range of controlled injection pressures allows analysis of viscous samples
- Reverse sample injection under vacuum: ultra-short analysis time (less than 1 min) and sample stacking to decrease detection limit
- Complete control of the instrument from a PC
- Autosampler for standard microcentrifuge-type vial (1.5 mL)

Precise temperature control of capillary with the circulating liquid (± 0.1 °C)

- Extended range of applied buffers, increased efficiency in separation

Powerful software package «Elforun»

- Increased flexibility in performing analysis of various complexity
- Any kinds of complex runs are possible including those with pre-programming of changes in analysis conditions
- Customized report, data export to other programs

Unique design of the CE instrument

- Capillary cassette change just in a few seconds
- Lower detection limit due to the optimized optical scheme

ADVANTAGES OF HPCE METHOD

- Unique separation power (up to 1000000 TP)
- Extremely low reagents and samples consumption
- Very low analysis cost
- Fast analysis time.

SPECIFICATIONS

Detection wavelength	190–400 nm, light source – deuterium lamp
Analysis	Reversible constant voltage 1–25 kV in 1 kV steps Current 0–200 µA Pressure 0–99 mbar programmable changing of wavelength, pressure and voltage during analysis
Injection	By voltage 1–25 kV; by pressure 1–99 mbar
Rinsing	By pressure, 1000 or 2000 mbar
Capillary	Length 30–100 cm Internal diameter 50, 75, 100 µm
Temperature control of capillary	Liquid thermostating, from -10 up to +30 °C from ambient temperature, ±0.1 °C
Sampler	Autosampler for 10 inlet and 10 outlet vials
Power requirements	110–240 VAC, 50/60 Hz
Power consumption	200 W
Dimensions, weight	500x500x500 mm, 25 kg
Control	Elforun software

SERVICES

Installation of instruments can be carried out at a customer's site by our service engineers. Personnel training specific to the customer needs can be also provided.

WARRANTY

All Capel-105M capillary electrophoresis systems are covered by a full 1-year warranty.
The information and specifications in this publication are subject to change without notice.

Find your local Lumex Instruments distributor:
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