

CAPILLARY ELECTROPHORESIS SYSTEM CAPEL-105M

NEW!



METHOD

High performance capillary electrophoresis (HPCE)

PRINCIPLE OF OPERATION

Based on the differential migration of components of aqueous samples within a narrow quartz capillary under the influence of the applied electric field. Separated solutes are quantitatively detected at the capillary outlet by high sensitive optical system based on direct or indirect UV absorbance.

ADVANTAGES OF CAPEL-105M

new modification of Lumex HPCE system, developed on the basis of the Capel-105 instrument

- Full control of the instrument from the PC
- Highly efficient capillary liquid cooling with broadened range of pre-set temperatures
- Fully automated programmable system with different levels of task complexity – from manual operation through simple analysis to complex sequence of runs
- Extended operation options such as spectra scanning and broader injection pressure range
- Ability to apply controlled pressure simultaneously with the high voltage during analysis
- Substantially modified capillary cassette to provide liquid cooling, simplify capillary replacement and increase the sensitivity

The HPCE system Capel-105M enables implementation of various HPCE modes – Capillary Zone Electrophoresis, Micellar Electrokinetic Chromatography, Affinity Capillary Electrophoresis, Capillary Isoelectric Focusing, Capillary Gel Electrophoresis, Capillary Isotachopheresis

The system is especially well suited for the routine analysis of natural and waste water samples for inorganic ions



ADVANTAGES OF HPCE METHOD

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

APPLICATIONS

Environmental analysis	Water quality monitoring (cations, anions, herbicides, pesticides) Soils (cations, anions, herbicides, pesticides)
Food industry	<ul style="list-style-type: none">• Beverages and juices (cations, anions, vitamins, organic acids, preservatives, antioxidants, dyes, sweeteners)• Mineral water (cations and anions)• Vodka (cations and anions)• Wines and brandies (cations)• Tee, coffee (caffeine, catechin)• Foodstuff (vitamins, amino acids, amines, mycotoxins)
Agriculture	Grain and grain products (amino acids, mycotoxins) Premixes, mixed fodder (amino acids, amines, vitamins, mycotoxins)
Chemical industry	Technological monitoring Composition determination of raw material and inters
Pharmaceutics	Patent medicines analysis Technological monitoring Enantiomers separation to confirm the medicine identity
Biochemistry	Analysis of proteins by capillary isoelectric focusing technique Analysis of amino acids in blood serum Pharmacokinetics studies Hemoglobin HbA1c determination Analysis of fermentation activity
Forensic studies	Analysis of explosives, trace detection Analysis of drugs of abuse

EQUIPMENT AND OPTIONS

- Capillary electrophoresis system CAPEL-105M
- Software package
- Spare capillary cassette
- Kits for analysis [by request]

SPECIFICATIONS

CAPEL-105M	
Detection wavelength	190-380 nm, light source – deuterium lamp
Analysis	Constant voltage 1 – 25 kV in 1kV steps, manual polarity switching, current 0 – 200 µA
Injection	By voltage 0-25 kV; by pressure 10-60 mbar
Rinsing	By pressure 1000 mbar
Capillary	Length/Internal diameter: 30-100 cm/50, 75, 100 µm
Capillary cooling	Liquid cooling with thermostabilisation, from –10 up to + 30 °C with respect to ambient
Sampler	Autosamplers for 10 inlet and 10 outlet vials
Power requirements	110/220 Vac 50/60 Hz
Power consumption	150 W
Dimensions/Weight	420x360x440 mm, 25kg
Control	By software

WARRANTY

All CAPEL HPCE systems are covered by a 12-month warranty.

SERVICES

Installation and commissioning of LUMEX instruments can be carried out at a Customer site by our service engineers. Personnel training specific to the Customer needs can be also provided. Free delivery of spare parts and repair of the instruments are provided within the warranty period.

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