

CAPILLARY ELECTROPHORESIS SYSTEM CAPEL[®]-105M



METHOD

High performance capillary electrophoresis (HPCE)

PRINCIPLE OF OPERATION

Based on the differential migration of components of aqueous samples within a narrow fused silica 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

Features	Benefits
Complete control of the instrument from a PC	User friendliness
Highly efficient capillary liquid cooling	Extended range of applied buffers, increased efficiency in separation
Powerful software package "Elforun [®] "	<ul style="list-style-type: none"> Increased flexibility in performing analyses of various complexity Any kind of complex runs are possible including those with pre-programming of changes in analysis conditions Customized report, data export to other programs
Extended instrumental options	<ul style="list-style-type: none"> Spectra scanning facilitates peak identification Broad range of controlled pressure injection permits analysis of viscous samples Ability to apply vacuum for sample injection results in ultra short analysis time (less than 1 min) and permits sample stacking to decrease limit of detection
Substantially modified capillary cassette	<ul style="list-style-type: none"> Easy capillary change just in a few minutes 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

APPLICATIONS

Environmental analysis	· Drinking, natural and waste water (Br ⁻ , I ⁻ and other inorganic and organic ions)
Quality control of foodstuffs and beverages	· Mineral and bottled water (inorganic cations and anions) · Beverages and juices (inorganic cations and anions, sweeteners, antioxidants, vitamins, organic acids) · Wines, cognacs, brandies and vodkas (inorganic cations and anions, aromatic aldehydes, organic acids, phenolcarbonyc acids, amino acids) · Beer (inorganic cations and anions, hop and beer bitter acids (humulones and isohumulones), amino acids, organic acids, vitamins) · Tea, coffee (theanine, caffeine, polyphenols) · Foodstuff (amino acids, synthetic dyes, organic acids, amines, proteins, melamine)
Pharmacology	· Technological monitoring and patent medicines analysis · Enantiomers separation
Biochemistry	· Determination of inorganic cations and anions, amino acids and proteins in biological fluids · Quality control of therapeutic recombinant proteins · Pharmacokinetics studies · Protein separation
Forensic studies	· Analysis of explosives and trace detection · Drugs analysis · Analysis of writing paper components
Chemical industry	· Technological monitoring · Composition determination of raw material and intermediate products

EQUIPMENT AND OPTIONS

- Capillary electrophoresis system CAPEL[®]-105M
- Spare capillary cassette
- Elforun[®] software package
- Kits for analysis [by request]; most of CE-kits of other manufacturers are compatible with CAPEL[®]-105M

SPECIFICATIONS

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, pressure 1 – 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 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	200 W
Dimensions/Weight	500x500x500 mm, 25kg
Control	Elforun 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's 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.

The information and specifications in this publication are subject to change without notice.

Lumex Ltd., Headquarters, Russia

70, bldg. 2, Obukhovskoy
Oborony pr., St. Petersburg
192029, Russia
Tel.: +7 (812) 718-5390,
+7 (812) 718-5391
Fax: +7 (812) 718-5399
E-mail: sales@lumex.ru
www.lumex.biz
Post address: BOX 1234,
St. Petersburg, 190000, Russia

Lumex Analytics GmbH, Germany

Wilstedter Str. 1a,
24558 Wakendorf II
Tel: +49 (4535) 29-77-56
Tel: +49 (4535) 29-77-58
Fax: +49 (4535) 29-77-83
E-mail: info@lumexanalytics.de
www.lumexanalytics.de

Lumex-marketing Ltd. Beijing Representative Office, People's Republic of China

Room 707, No1, Zhujiangdijing 23#
Xidawang Road,
Chaoyang District, 100025 Beijing,
PR China
Tel: +86 (10) 5863-1490
Fax: +86 (10) 5863-1470
E-mail: lumex@lumex.com.cn
www.lumexcn.com



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