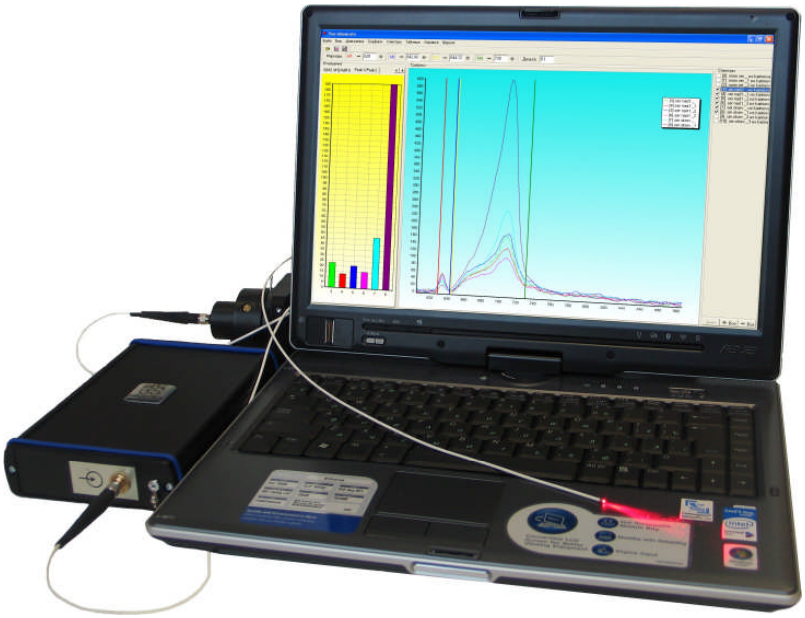
BioSpec

Break in the clouds

LESA-01-BIOSPEC



Key Features

Quantitative Determination of Photosensitizer Concentration in vivo

High Sensitivity to All Popular Photosensitizers

Diagnostics with Autofluorescent Measurements

PDT Control Option

Powerful Software

Light Guide Fiber Optic Probe

LASER ELECTRONIC SPECTRUM ANALYZER FOR FLUORESCENT DIAGNOSTICS AND PHOTODYNAMIC THERAPY MONITORING

Spectroscopy system LESA-01-BIOSPEC allows real-time *in vivo* local determination of photosensitizer accumulating level in any patient's organs and tissues accessible for fiber optic probe. The system is used during photodynamic therapy of intracavity, interstitial and superficial lesions.

The features of the system are optimal for using during photodynamic therapy with Photofrin, Photosan, 5-ALA, Chlorine E6 and phthalocyanines as well as most worldwide used photosensitizers and for measurements of biological tissues autofluorescence.

User-friendly powerful software for Windows™ enables to compare accumulating of photosensitizer in affected and intact tissue. Useful facilities for tissue monitoring and drug accumulation analysis are provided.

LESA-01-BIOSPEC is a PC-based spectroscopy system consists of laser source for photosensitizer fluorescence excitation and miniature spectrometer for registration and analysis of fluorescent signal.

System may be built in embedded PC with touch screen and protected keyboard according to DIN41494 standard for 19" rack mounting.

Specifications

(Typical values at 25°C)

Optical Specifications

Wavelength Measurements Range (nm)	
IR model*	450 - 1100
V model	300 - 800
Diagnostics Laser CW Output Power (mW)	0 - 12
Exposition Time (s)	0.1 - 100
Input Fiber Connector	SMA-905
Fiber Optic Probe Type**	Y-shaped
Minimal fiber optic probe length (m)	1.8
Minimal Determined Photosensitizer Concentration (mg/kg)	0.05

Input Specifications***

Input Voltage Range (V)	220/115
Input Frequency Range (Hz)	50/60
Maximum Power Consumption (W)	100
Minimum Electric Mains Output Capability	0.5 A @ 220 V, 1 A @ 115 V

Package Specifications***

Overall Size (mm)	
Diagnostics Laser (WxDxH)	180x680x90
Spectrometer (WxDxH)	110x180x40
Weight (kg)	
Diagnostics Laser	3.0
Spectrometer	0.5

* - according to customer demand;

** - one branch is for laser light delivery to tissue, another is for fluorescent signal delivery to spectrometer;

*** - without personal computer (included).

Software

User-friendly software for live measurements, analysis and transfer of spectral data to MS Excel™ is included.

Laser Biospectroscopy Lab.
Natural Science Research Center
General Physics Institute RAS
38 Vavilov Street
Moscow, 119991, Russia

Tel.: +7 499 135 1489
Fax: +7 499 503 8759

E-mail: biospec@nsc.gpi.ru
http://www.biospec.ru