

SPECTROFLUOROMETER FLUORAT[®]-02-PANORAMA



METHOD

Luminescence, phosphorescence, chemiluminescence and photometry

PRINCIPLE OF OPERATION

Is based on determination of luminescence and analysis of optical transmission of samples, determination of time-resolved fluorescence, and determination of time dependence in the processes of chromatographic separation.

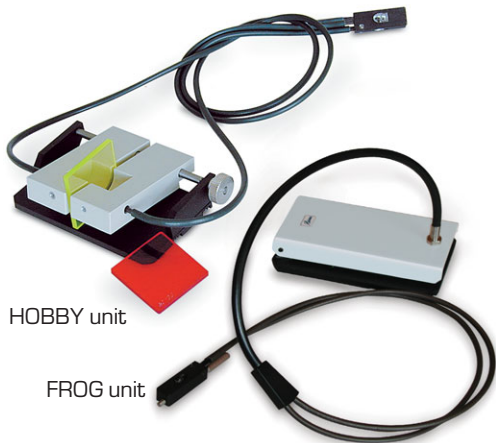
FEATURES AND BENEFITS

- Monochromators both in excitation and emission channels
- Multifunctional operational capabilities
- Wide variety of accessories for measurements outside the cell compartment
- Spectrofluorometric detector for micro- and semi-micro column HPLC
- Synchronous and two-dimensional scanning



APPLICATIONS

- Analysis of fluorescence spectra in liquids and glasses
- Analysis of absorption spectra of solutions, glasses, and surfaces
- Investigation of kinetics of time-resolved fluorescence
- Development of new analytical techniques



HOBBY unit

FROG unit

ADDITIONAL EQUIPMENT

- HOBBY unit (top left) for photometric determinations outside the cell compartment
- FROG unit (top right) for fluorometric measurements outside the cell compartment
- Automatic flatbed MICROSCAN accessory (below) for fluorometric determinations in standard microplates
- CRYO-2 unit



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APPLICATION EXAMPLES

Method		Examples of applications
Fluorometry	Basic unit	The whole range of chromatographic techniques, including determination of polyaromatic hydrocarbons in environment samples.
	Basic unit + FROG	Luminescent labels on securities, parameters of bleaching paper, fabrics, characterization of powders.
	Basic unit + CRYO-2	Samples with luminescence spectral bands measured at T = 77K
	Basic unit + MICROSCAN	Biological samples in standard flatbeds with 96, 24, and 6 cells.
Photometry	Basic unit + HOBBY	Absorption spectra of large samples (up to 35 mm thick and almost without limits in other dimensions).

SPECIFICATIONS

Spectral range in the excitation channel, nm	210–840
Spectral range in the transmission channel, nm	210–840
Spectral range in the luminescence channel, nm	210–690 (840) ⁽¹⁾
Spectral bandwidth of monochromators, nm	< 8 (15) ⁽²⁾
Wavelength accuracy, nm	< 3
Signal-to-noise ratio ⁽³⁾	> 100 (200) ⁽⁴⁾
Volume of the analyzed probe in a standard Q10 cuvette, mL	3
Power requirements	~110/220V, 50/60Hz, 60W
Dimensions, mm	400x355x150
Weight, kg	13

⁽¹⁾ Upon customer's request

⁽²⁾ 8 nm is recommended for spectral applications, and 15 nm is recommended for chromatographic applications.

⁽³⁾ For Raman scattering of water at the excitation wavelength of 350 nm (emission at 400 nm), with the time response of 2 sec.

⁽⁴⁾ Signal-to-noise ratio is more than 100 for the instruments with the bandwidth of 8 nm and 200 for the instruments with the bandwidth of 15 nm.

WARRANTY

All LUMEX equipment is 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 engineer. Personnel training of specific to the customer needs can also be provided. Free replacement of parts under warranty and repair of the instruments are provided within the warranty period.

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