

UV Detectors L-7400/L-7420

Highest Degree of Detection Sensitivity

The new wavelength-programmable UV and UV-VIS Detectors L-7400 and L-7420 incorporate all the properties necessary for GLP-conform laboratory work. The extraordinarily high sensitivity and baseline stability of the

detectors along with their ease of operation, low space requirement and modern design convinces all users that the L-7400 and L-7420 are indeed leading edge HPLC technology. Both detectors are excellently equipped for routine analysis and method development.



Precise Optics for Highest Sensitivity

The detectors are equipped with a high-quality reference beam system which compensates for fluctuations in the light beam instability and ageing of the lamp. Newly developed deuterium lamps guarantee

longer life and increase the already proven operational reliability of the detectors. The measuring cells are so designed that any refractive index effects brought about by alteration of chromatographic para-

meters are minimised. This results in the highest degree of detection sensitivity throughout the entire measuring range of the detectors.

UV Detectors L-7400/L-7420

Wavelength Programming and Spectral Recording

Detection at the absorption maximum of an analyte improves not only the detection sensitivity but also the linearity and reproducibility of an analysis. The wavelength-programmable detectors are capable of adjusting automatically to the optimal wavelength prior to each peak. This occurs so quickly that each component of a sample is detected at its maximum sensitivity. During wavelength switching, the autozero function can be activated; this prevents baseline steps occurring and increases reliability when integrating peaks. In order to enable a particular sample component to be specifically identified, a complete spectrum can be stored and printed out on a recorder or integrator when the chromatogram has been completed.

High Operational Reliability and Ease of Use

For GLP work, information on lamp energy, lamp light-on time and an automatic test of wavelength accuracy can be recalled. The easy-to-read display and simple operation enables the detectors to be optimally set. Numerous programming possibilities are available for wavelength, baseline parameters and spectral files. A total of nine time programmes can be entered using a dialogue process. Once entered, programmes remain intact even after the instrument has been switched off.

Digital Communication and System Advantages

The new LaChrom detectors have been fitted with an analogue and a digital data output. They can be used either as stand-alone instruments or be incorporated into the LaChrom system. When combined with other LaChrom modules, digital data communication ensures maximum data security and interference-free data processing. The new high-performance data communication network D-Line

also facilitates the intelligent and interference-free transfer of digital information between the LaChrom modules as well as the control and display of all parameters, files and spectra via an integrator or PC. Functions such as the "event logbook", the "reliability report" and the automatically compiled service report facilitate GLP work and simplify both maintenance and checking of the instruments.

Technical Data

Optics	Double beam system
Light source	Deuterium lamp, L-7420: + Tungsten lamp
Wavelength range	190 - 600 nm, L-7420: 190 - 900 nm
Accuracy of wavelength setting \pm 1 nm	
Optical band width	10 nm
Time constants	Selectable, 0.1 s (FAST), 0.5 s (MED), 2.0 s (SLOW)
Noise	$\leq 0.8 \times 10^{-5}$ AU (250 nm)
Drift	$\leq 3 \times 10^{-4}$ AU/h (250 nm)
Detector range	0.001 to 2.5 AUFS
Time-programmable parameters	Wavelength, auto zero, hold for baseline
Working parameters	Time constants, recorder range, offset, L-7420: + polarity
Digital communication	D-Line
Analogue output	Data processor 1 V/AU, recorder 10 mV/AU
Inputs	Marker in, spectrum start in, start in, lamp off in, autozero in
Diagnostic functions	Lamp energy, lamp light-on time, lamp switching, wavelength accuracy
Optional accessories	Semi-micro, micro and preparative flow cell

Ordering Information

Cat. No.	Designation
1.18955.0001	UV Detector L-7400, wavelength-programmable
1.18960.0001	UV-VIS Detector L-7420, wavelength-programmable
1.18956.0001	Semi-micro flow cell, 5 mm, 2 μ l
1.18958.0001	Micro flow cell, 8 mm, 140 nl, 400 bar
1.18957.0001	Preparative flow cell, 0.5 mm, 3.5 μ l
1.18861.0001	D-Line cable, 0.5 m
1.22491.0001	Signal cable to integrator (analogue signal)
1.23993.0001	Long life D2 lamp

Technical data may be altered at any time without prior notice.

LaChrom® is a registered trademark of Merck KGaA, Darmstadt, Germany.

LaChrom 2000: A development of Merck KGaA and Hitachi

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