



Analytical Balance & Scientific Instruments



LMSP-UV1900 SERIES



Microprocessor Double Beam

UV Visible Spectrophotometer

SALIENT FEATURES

UV Visible Double Beam Spectrophotometer

The innovative optical layout and state of art mono- chromator with high grade blazed holographic grating ensure accuracy. Its integrated design assures long term stability and durability.

The precisely aligned detector and quality deuterium and halogen lamps enhance the precision across the UV / Vis spectrum starting from 190 nm and into the near-infrared 1100nm.

The two detectors are used to measure sample and reference respectively and simultaneously for optimizing measurement accuracy

Lamp Selection enables conserving the life of D2 & Tungsten lamps. Real time clock for date & time stamping of results.

Big LCD display. (320 x 240 Dots Matrix)

Basic Mode, Quantitative, Kinetics, Multi-Wavelength, Wavelength Scan, DNA / Protein Test & Utility

FUNCTIONS OF SOFTWARE

BASIC MODE

To measure the Absorbance and Transmittance

QUANTITATIVE

1. Coefficient Method
2. Standard Method curve.

Up to 10 standard samples may be used to establish a curve. Four methods to fitting a curve through the calibration points: Linear fit through zero, square fit & cubic fit.

WAVELENGTH SCAN

1. The wavelength scan intervals are 0.1, 0.2, 0.5, 1, 2 & 5 nm
2. Fast, Medium & Slow Scan speeds are available. They vary from 100 to 1800 nm/min.
3. Wavelength are scanned from high to low so that the instrument waits at high Wavelength and minimizes the degradation of UV sensitive samples.

MULTI-WAVELENGTH

Up to 32 wavelengths can be selected and multiple samples can be measured.

KINETICS

This mode may be used for time course scanning or reaction rate calculations. Abs. vs. time graphs is displayed on the screen in real time.

Wait time and measurement time up to 12 hours may be entered with time intervals of 0.5, 1, 2, 5, 10, 30 seconds & 1min.

Post- run manipulation includes re-scaling, curve tracking and selection of the part of the curve required for the rate calculation. Rate is calculated using a linear regression algorithm before multiplying by the entered factor.

DNA/PROTEIN TEST

Concentration and DNA purity are quickly and easily calculated: Absorbance ratio s 260nm/280nm with optional subtracted absorbance at 320nm.

DNA concentration= $62.9 \times A_{260} - 36.0 \times A_{280}$

Protein concentration= $1552 \times A_{260} - 757.3 \times A_{280}$

UTILITY:

Has following functions.

WL Reset, Printer, Lamp, Clock, Dark Current, Accu.

Validity, WL Validity Connect to PC, Beeper On/Off & System Base Line



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SPECIFICATIONS

Model	LMSP-UV1900	LMSP-UV1900A	LMSP-UV1900S	LMSP-UV1900AS
Make	LABMAN			
Cell Holder	10mm single cuvette holder	10mm 8 cell Programable Holder	10mm single cuvette holder	10mm 8 cell Programable Holder
Bandwidth	1nm		0.5 /1.0/2.0/4.0 nm Variable	
Optical System	Double Beam, Grating 1200 lines / mm			
Wavelength Range	190 - 1100nm			
Wavelength Accuracy	± 0.3nm			
Wavelength Repeatability	± 0.2nm			
Scanning Speed	Fast, Medium & Low			
Photometric Accuracy	±0.3%T			
Photometric Repeatability	± 0.2%T			
Photometric Range	-0.3-3A,0-200%T,0-9999C			
Stability	± 0.001A/h @ 500nm			
Baseline Flatness & Noise	±0.001A			
Stray Light	≤0.05%T @ 220nm,360nm			
Data Output Port	USB			
Printer Port	Parallel Port			
Display	320 x 240 Graphic LCD			
Lamps	Deuterium Lamp & Tungsten Halogen Lamp			
Detector	Silicon Photodiode			
Power Supply	AC 220V/50Hz			
Dimension	625 x 430 x 206 mm			
Weight	30 kg			

INSTRUMENT INCLUDES: 4 Nos 10mm Glass cuvettes, one pair of quartz cuvette, Manual & Dust Covers.