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Spectrophotometers



LABOMED INC.

AAS-4000

Atomic Absorption Spectrophotometer

Fully Automatic Combined Flame and Graphite Furnace System



Atomic Absorption Spectrophotometer AAS-4000 is a superior instrument for the research laboratory, and is an advanced and affordable system with high sensitivity that generates accurate and reproducible measurements. The **AAS-4000 spectrophotometer** is accurate, reliable, and is an exceptional value. With its built-in, computer-controlled Air/Acetylene flame, titanium alloy burner and high-efficiency glass nebulizer design, the system provides optimal and reproducible results for micro and macro samples with high resolution.

Atomic Absorption Spectrophotometer AAS-4000 has a powerful built-in software which permits this instrument to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. **Atomic Absorption Spectrophotometer AAS-4000's** enhanced transmission and full reflection makes this atomic absorptiometer highly effective and reduces noise.

One of its advantages is its accurate wavelength, ease of operation, versatile software applications, and effortless optional accessory installation. This instrument provides for automatic switching between the flame and graphite furnace, and is widely used for analyzing samples for Agricultural, Food, Geological, Clinical, Metal, Petrochemical, Environmental, Mining and Pharmaceutical applications.

It is easy to manipulate, and is fully automated, allowing for automatic adjustment of the lamp current and position, the burner head position, the negative voltage, and the gas flow. Safety is our primary concern, and the **Atomic Absorption Spectrophotometer AAS-4000** allows for constant monitoring of the burner head, the flame, the ignition, air pressure, and drain status, to ensure the optimum functioning of the instrument.

Atomic Absorption Spectrophotometer AAS-4000 has a highly effective nebulizer, the sensitivity of the Cu 2µg/ml is more than 0.28Abs.

Features

- The instrument has a motorized 8 hollow cathode lamp turret which allows the automatic positioning and optimization of each hollow cathode lamp by the software.
- The control of the gas flows for the fuel gas (C₂H₂) of the burner is also carried out directly from the software, thus allowing optimization of the instrument for the best analytical parameters for a selected analysis.
- Two methods of background correction are available. The first utilizes a Deuterium Arc lamp and the second is the proven method of Self Reversal.
- High precision minimal optics ensures maximum light throughput to the computer controlled Czerny-Turner Monochromator.
- The location of the wavelength and peak selection is automatically controlled from the software.
- The spectral bandwidth is automated and is available with a choice of five slit sizes.
- The electronic parameters for the photomultiplier tube detector, the hollow cathode lamp current and the balancing of the absorbance and background energies are controlled from the software.
- The ignition of the flame is computer controlled and the various safety interlocks offer a very safe operating system.

Safety

- The flame conditions are continuously monitored and should the flow rates change, an audible alarm sounds.
- The pressure of the support gas (oxidant) is monitored constantly. If the pressure changes, then the flow of the fuel gas will be stopped and the flame will be safely extinguished.
- A sensor monitors the level of liquid in the drain and will prevent ignition if too slow. The flame will also be extinguished if the level of liquid in the drain changes significantly.
- A flame sensor monitors the flame and safely turns off the gas flow to the burner if the flame suddenly extinguishes.
- The burner is identified by a switch making it impossible to light without the burner being fitted.
- An emergency flame off button is installed in case a problem is observed. The flame can be extinguished safely.



Labomed, Inc. is certified by ISO 9001-2013, has CE Conformity and is FDA Licensed.

LABOMED INC.
Manufacturer of Scientific Instruments



Technical Specifications of AAS-4000

Optic System	
Wavelength Range:	190nm - 900nm
Monochromator:	Czerny-Turner configuration
Spectral Bandwidth:	0.1nm, 0.2nm, 0.4nm, 1.0nm, 2.0nm (5 steps. with automatic changeover)
Wavelength Accuracy:	± 0.25nm
Wavelength Repeatability:	0.15nm
Baseline Stability:	0.005A/30 min
Grating Groove:	1800/mm
Wavelength Resolution:	0.2nm±0.02nm
Background Correction:	Deuterium Arc 1.0Abs Self Reversal 1.0Abs
Flame analysis	
Sensitivity (Cu):	0.03 µg/ml/1%
Burner Head:	Titanium alloy burner
Nebulizer:	High efficiency glass nebulizer, Acid proof available as an option
Atomization Chamber:	Corrosion-resistant material
Position Adjustment:	Automatic changeover of flame and furnace Automatic setting of optimum height for flame burner
Safety:	Automatic ignition and of mixing air-acetylene gas with safety control
Flame Types:	Air/Acetylene
Characteristic Concentration:	Cu<0.04µg/ml/1% (Air/Acetylene)
Detection Limit:	Cu≤0.006µg/ml
Repeatability:	Cu < 1.0% (air - acetylene method). Ba < 1.0% (air - acetylene method).
Graphite furnace analysis	
Character Value (Cd):	0.5Pg
Temperature Range:	Ambient - 2650 °C
Heating and Temperature	Voltage feedback control when drying and ashing;
Control:	Multi-Standard Calibration, Standard Addition, Interpolation
Heating program:	Up to 9 steps with choices of ramp, temperature increase and full-power heating
Detection Limit:	Cd≤0.01ng/ml
Repeatability:	Cu < 3%, Cd < 4%
Heating Methods:	Advanced graphic furnace horizontal heating
Temperature Control Precision:	< 1%
Background correction	
Deuterium Lamp Background Correction:	Deuterium Lamp Background Correction: >40 times (1Abs) and Self-Reversal Background Correction:>60 times (1Abs)
Data processing	
Analytical method:	flame, graphite furnace and hydride
Determination method:	calibration curves using 1 st , 2 nd and 3 rd order of fit, standard addition method
Repetitions:	1-20 with calculations of average, SD and RSD
Result Printout:	output of parameters, data, spectra and calibration curves
Mainframe	
Light Source:	8 hollow cathode lamp turrets with 2 lamps simultaneously lit (one lamp pre-heated)
Power Supply:	220V/50Hz, 3 phase-4 lines with grounding 200W (mainframe) 5000W (graphite furnace)
Dimensions:	mainframe 110 cm x 50cm x 45cm graphite furnace 50cm x 50cm x 45cm



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Accessories that are more economical to purchase locally from local producers

Description	Quantity	Notes
Computer	1	
 Argon gas	1	Purity higher than 99.99%
 Air Regulator	2	
Circulating Cooling System	1	
Water Purification System	1	
Oil Free Air Compressor	1	
Acetylene Gas	1	Purity higher than 99.99%
Air Switch or Equivalent Switch	1	
Vent Fan	1	

Accessories that can be purchased locally or from Labomed, Inc.

Part Number	Description	Notes
Auto G-4000	Graphite Furnace Auto Sampler	Measures 76 samples at one time automatically
H-4000	 Hydride Generator	The argon gas is necessary and purity needs to be better than 99.99%
Auto F-4000	 Flame Auto Sampler	Analysis of 50 or more sample and calibration standards

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AAS-3700

Atomic Absorption Spectrophotometer

Fully Automatic Flame System



Atomic Absorption Spectrophotometer AAS-3700 is a superior instrument for the research laboratory, and is an advanced and affordable system with high sensitivity that generates accurate and reproducible measurements. The **AAS-3700 spectrophotometer** is accurate, reliable, and is an exceptional value. With its built-in, computer-controlled Air/Acetylene flame, titanium alloy burner and high-efficiency glass nebulizer design, the system provides optimal and reproducible results for micro and macro samples with high resolution.

Atomic Absorption Spectrophotometer AAS-3700 has a powerful built-in software which permits this instrument to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. **Atomic Absorption Spectrophotometer AAS-3700's** enhanced transmission and full reflection makes this atomic absorption spectrophotometer highly effective and reduces noise.

One of its advantages is its accurate wavelength, ease of operation, versatile software applications, and effortless optional accessory installation. This instrument is widely used for analyzing samples for Agricultural, Food, Geological, Clinical, Metal, Petrochemical, Environmental, Mining and Pharmaceutical applications.

It is easy to manipulate, and is fully automated, allowing for automatic adjustment of the lamp current and position, the burner head position, the negative voltage, and the gas flow. Safety is our primary concern, and the **Atomic Absorption Spectrophotometer AAS-3700** allows for constant monitoring of the burner head, the flame, the ignition, air pressure, and drain status, to ensure the optimum functioning of the instrument.

Atomic Absorption Spectrophotometer AAS-3700 has a highly effective nebulizer, the sensitivity of the Cu 2µg/ml is more than 0.28Abs.

Features

- The instrument has a motorized 8 hollow cathode lamp turret which allows the automatic positioning and optimization of each hollow cathode lamp by the software.
 - The control of the gas flows for the fuel gas (C₂H₂) of the burner is also carried out directly from the software, thus allowing optimization of the instrument for the best analytical parameters for a selected analysis.
 - Two methods of background correction are available. The first utilizes a Deuterium Arc lamp and the second is the proven method of Self Reversal.
 - High precision minimal optics ensures maximum light throughput to the computer controlled Czerny-Turner Monochromator.
 - The location of the wavelength and peak selection is automatically controlled from the software.
 - The spectral bandwidth is automated and is available with a choice of five slit sizes.
 - The electronic parameters for the photomultiplier tube detector, the hollow cathode lamp current and the balancing of the absorbance and background energies are controlled from the software.
- The ignition of the flame is computer controlled and the various safety interlocks offer a very safe operating system.

Safety

- The flame conditions are continuously monitored and should the flow rates change, an audible alarm sounds.
 - The flame conditions are continuously monitored and should the flow rates change, an audible alarm sounds.
 - The pressure of the support gas (oxidant) is monitored constantly. If the pressure changes, then the flow of the fuel gas will be stopped and the flame will be safely extinguished.
 - A sensor monitors the level of liquid in the drain and will prevent ignition if too slow. The flame will also be extinguished if the level of liquid in the drain changes significantly.
 - A flame sensor monitors the flame and safely turns off the gas flow to the burner if the flame suddenly extinguishes. The burner is identified by a switch making it impossible to light without the burner being fitted.
- An emergency flame off button is installed in case a problem is observed. The flame can be extinguished safely.
- An emergency flame off button is installed in case a problem is observed. The flame can be extinguished safely.



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Technical Specifications of AAS-3700

Wavelength Range:	190nm - 900nm
Monochromator:	Czerny-Turner configuration
Spectral Bandwidth:	0.1nm, 0.2nm, 0.4nm, 1.0nm, 2.0nm (5 steps, with automatic changeover)
Wavelength Accuracy:	± 0.25nm
Wavelength Repeatability:	0.15nm
Baseline Stability:	0.005A/30 min

Flame analysis

Sensitivity (Cu):	0.03 µg/ml 1%
Burner Head:	Titanium alloy burner
Nebulizer:	High efficiency glass nebulizer, Acid proof available as an option
Atomization Chamber:	Corrosion-resistant material
Position Adjustment:	Automatic setting of optimum height for flame burner
Safety:	Automatic ignition and of mixing air-acetylene gas with safety control

Background correction

Deuterium Lamp Background Correction:	Deuterium Lamp Background Correction: >40 times (1Abs) and Self-Reversal Background Correction: >60 times (1Abs)
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Data processing

Analytical method:	flame and hydride
Determination method:	calibration curves using 1 st , 2 nd and 3 rd order of fit, standard addition method
Repetitions:	1-20 with calculations of average, SD and RSD
Result Printout:	output of parameters, data, spectra and calibration curves

Mainframe

Light Source:	8 hollow cathode lamp turrets with 2 lamps simultaneously lit (one lamp pre-heated)
Power Supply:	110V/60Hz or 220V/50Hz 200W (mainframe)
Dimensions:	mainframe 110 cm x 50cm x 45cm

Accessories Items included in the shipping of the AAS-3700

Description	Quantity
AAS-3700	1
HCL Socket (1,2,3,4,5,6,7,8)	8
Liquid Trap	1
Nebulizer	2
Hollow Cathode Lamp (Mn)	1
Hollow Cathode Lamp (Cu)	1
Hollow Cathode Lamp (Hg)	1
Power Cord	1
RS-232C Cable	1
Nebulizer Manual	2
AAWIN Software	1
AAWIN Software Manual	1
Instruction Manual	1
AAS Cookbook	1
Dust cover	1
Path Aiming Block	1
Slot ted head screw M3X10	2
Push-in Fitting (Pus06-00)	1
Push-in Fitting (100400600)	1
O Rings 14x1.8	4
Fuses for power (3.15A)	4
Fuses for power (0.5A)	1
Socket Screw Wrench	1
Cutting Blade	1
Jump Ring	8
Acetylene Tube (Ø8ID, red,10m)	10
Air Tube(Ø8ID, green,10m)	10
Air Tube(Ø6x1, white,1m)	1

Elements That Can Be Tested By AAS-3700
List of Hollow Cathode Lamps
Periodic table of chemical elements

1A	2A	3B	4B	5B	6B	7B	8	1B	2B	3A	4A	5A	6A	7A	0		
H															He		
Li	Be									B	C	N	O	F	Ne		
Na	Mg									Al	Si	P	S	Cl	Ar		
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac															



Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

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UVD-3500

Spectro UV-VIS Double Beam Research Spectrophotometer UV-VIS Double Beam



Spectro UV-VIS Double Beam UVD 3500 Research

Spectrophotometer is a superior instrument for the research laboratory and is an advanced and affordable system that generates accurate and reproducible measurements. UVD-3500 spectrophotometer is accurate, reliable, and an exceptional value. With its narrow beam design, the system provides optimal and reproducible results for micro and macro samples with high resolution for protein, nucleic acid, and DNA/RNA analysis.

Spectro UV-VIS Double Beam UVD 3500 has a powerful built-in software which permits this instrument to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. This spectrophotometer is rugged, reliable, affordable, and maintenance free. Spectro UV-VIS Double Beam UVD 3500's enhanced transmission and full reflection makes this double beam spectrophotometer highly effective and reduces noise.

Spectro UV-VIS Double Beam UVD 3500's advantage is its accurate wavelength, ease of operation, versatile software application, and effortless optional accessory installation. This instrument can be used for analyzing solid samples through use of an optional reflectance accessory and integrating sphere.

This Spectro can be used only linked to a PC and comes with a USB interface to connect to the computer.

The operation manual is available in 18 different languages.

Spectro UV-Vis Double Beam (Model UVD-3500) with variable bandwidth of 0.5 to 5.0 nm is a high-performance, reliable, and exceptional value instrument which is the hallmark of Labomed UV-Vis spectrophotometers.

Features

- **Excellent Performance :** The high-performance blazed holographic grating and the optimized CT-type monochromator reduce stray light, and widen the photometric range.
- **Ideal baseline stability:** Double-beam dynamic feedback ratio recording photometric system, coupled with a reasonably designed electric control system, ensures high stability of the instrument baseline.
- **High resolution:** The unique optic design of full-transmission and full-reflection satisfies both needs of the double beam optic and the enhancement of the light energy of instrument, so as to reduce noise and to guarantee high resolution.
- **Accurate wavelength:** The automatic wavelength driving system and the automatic light source interchanging system ensures wavelength accuracy and ensures the optimum performance of the instrument.
- **Easy accessories replacement:** The detachable structure of the sample chamber facilitates change of a wide range of optional accessories and ensures the wavelength accuracy of the instrument.
- **Easy light replacement:** The open-type design of light source chamber, socket deuterium lamp and socket tungsten halogen lamp facilitates the replacement of the light source, simplifies maintenance and reduces operation error.
- **Versatile Application:** The new UVWin 6.0 application software is compatible with Windows XP, 7 and 8 offers rich operation and data processing facilities, offering a wide range of uses and applications.

Computer System is optional (NOT INCLUDED).

OUR NEW SOFTWARE UV-WIN 6.0 WITH 3D SPECTRA

Now all Labomed, Inc. split and double beam spectrophotometers with our newly developed software called UV-Win 6.0 can be used with Windows XP, Windows 7 and Windows 8. It is capable of testing more applications with its RS-232 and USB connections, and supports the data export of measured results to the PC and then, if required, a USB flash drive, when additional data storage is required. One of the new features is that it provides 3-D graphing of the spectral results.



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Included Accessories

4 Optical Glass Cells 10mm.
 2 Quartz Cells 10mm
 1 Instruction manual available in,
 18 different languages,
 1 Power cable, 1 PC cable,
 1 Software CD for Windows 98/2000/XP/7,
 1 Software Operation Manual available in 18 different languages.

Optional Accessories

Set of 2 performance testing filters
 (1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)
 Peltier constant temperature system (15 - 55°C Specify: Spectro UV-Vis Double PC 8 Auto Cell)
 Sipper flow through system (Peristaltic pump and flow cell. Specify: Spectro UV-Vis Double PC 8 Auto Cell)
 Multi purpose cell holder for long path cells, 20 - 50mm path length
 (Specify: Spectro UV-Vis Double PC 8 Auto Cell)

Technical Specifications

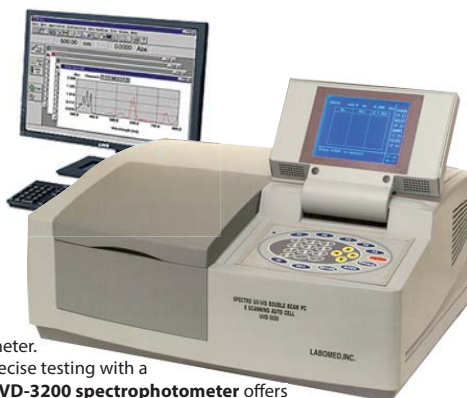
1) Optical System:	Double Beam
- Wavelength range:	190 nm – 900 nm
- Spectral bandwidth:	<0.12%T (220nm NaI, 340nm NaNO ₂)
- Stray Light:	±0.3 nm (with built-in automatic correction)
- Wavelength accuracy:	0.1 nm resolution
- Wavelength Reproducibility:	Double-beam, dynamic feedback direct ratio recording system
2) Photometric System:	The monochromator of Czerny-Turner configuration with high-resolution diffraction holographic grating.
- Optical System:	Transmittance, absorbance, reflectance, energy, concentration.
- Photometric Method:	-4.0 ~ 4.0 Abs
- Photometric Scope:	±0.002 Abs (0-0.5 Abs)
- Photometric Accuracy:	±0.004 Abs (0.5-1.0 Abs)
- Photometric Reproducibility:	±0.3%T (0-100%T)
- Baseline flatness:	±0.001Abs(0-0.5 Abs)
- Resolution:	±0.002Abs(0.5-1.0 Abs)
- Baseline stability:	0.15%T (0-100%T),
- Absorbance Range:	±0.001Abs (scan within 850-200nm, with medium speed, at 2nm spectrum bandwidth)
- Continuously variable spectral bandwidth from:	0.1 nm (UVD-3500)
- Scanning Speed:	0.0004Abs/h (1/2 hr warmup, kinetic scan at 500nm with 2nm spectrum bandwidth)
- Interface Card:	-9.999 to 9.999 ABS
- Detector:	0.1, 0.2, 0.5, 1.0, 2.0 and 5.0 nm.
- Photometric Display:	1000 nm/min
- Photometric Noise:	PC Compatible
- Slew rate of wavelength:	Hi sensitivity R928 multiplier detector.
3) DNA/RNA Measurement:	Unlimited
- Results Printout.	0.0005 Abs/120 seconds (500nm, with 2nm spectrum Bandwidth)
4) Mainframe:	<0.2%T (500nm, with 2nm spectrum Bandwidth)
- Light Source:	2400nm/min
- Sample Chamber:	Compact and standalone spectrophotometer mainframe
- Size:	Socket Deuterium Lamp and Socket Tungsten Halogen Lamp.
- Weight:	With accessories like two-cell sample holder and optional integrating sphere.
	587mm. x 562mm. x 260mm.
	34 Kg.

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UVD-3200

Spectro UV-VIS Double PC 8 Auto Cell Scanning Spectrophotometer V-VIS Double Beam



Spectro Spectro UV-Vis Double PC 8 Auto and

1 Fixed Cell (Model UVD-3200) is a high performance UV-Vis double beam automatic scanning spectrophotometer.

It is an automatic eight (8) cell spectrophotometer for precise testing with a variable bandwidth of 0.5, 1.0, 2.0, and 5.0 nm. **Model UVD-3200 spectrophotometer** offers high performance, ease of use and reliability, which can be used in various applications. Spectrophotometer Model UVD-3200 can be used extensively for qualitative and quantitative analysis in such fields as pharmaceutical inspection, clinical analysis, petrochemistry laboratory, chemistry and biochemistry laboratories, DNA/RNA analysis as well as in quality control departments, i.e. environmental control, water management, food processing, and agriculture.

Spectro UV-Vis Double PC 8 Auto Cell (Model UVD-3200) utilizes a new optical system design and is microcomputer controlled. With its focused-beam design, the system provides optimal and reproducible results for small samples. The sample beam and the reference beam are provided within the same sampling space, facilitating wider and longer scan of data providing a more detailed view of the results in an easy to use environment. This instrument has excellent baseline stability and high resolution and permits scanning, quantitative analysis, kinetic spectrophotometric analysis, protein, nucleic acid, DNA/RNA analysis, micro and macro measurements through PC control. This product is capable of processing data, from analytical and spectrum testing. *The operation manual is available in 18 different languages.*

Spectro UV-Vis Double PC 8 Auto Cell (Model UVD-3200) has a large LCD screen which displays the menu screen and makes the device easier to use. Additionally, this instrument permits the apparatus to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor, using the new UVWin 6.0 UV-VIS application software, offering a wide range of uses and applications.

Features

- Baseline Stability: The Double Beam monitoring ratio system enhances baseline stability.
- Excellent Resolution: The big-caliber light path enhances the instrument's energy, reduces its noise and raises its resolution performance
- Automatic successive measurement: The automatic eight-cell sample holder offers the automatic measurement of eight samples in succession. So it can bring about one-touch measurement of the solution of six samples and a blank.
- User-friendly light source: The light source performs an automatic interchange, selectable within the working range of the light source. The socket deuterium lamps and tungsten lamps facilitate light source replacement, simplify maintenance and reduce operation error.
- Convenient Display: The large backlit LCD screen displays both photometric values and spectral curves.
- Full use of Computer Technology: Being computer controlled with compatible with Windows XP, & 8, using the new • UVWin 6.0 UV-VIS application software, presents to the fullest of the fascination of modern computer technology.
- The key components are all adopted from the world famous manufacturer, such as deuterium lamp, silicon photodiode and holographic grating, which ensures the stabilization and credibility of the Instrument for extended life.

Computer System is optional (NOT INCLUDED).

Software Specifications

OUR NEW SOFTWARE UV-WIN 6.0 WITH 3D SPECTRA

Now all Labomed, Inc. split and double beam spectrophotometers with our newly developed software called UV-Win 6.0 can be used with Windows XP, Windows 7 and Windows 8. It is capable of testing more applications with its RS-232 and USB connections, and supports the data export of measured results to the PC and then flash drive, when additional data storage is required. One of the new features is that it provides 3-D graphing of the spectral results.



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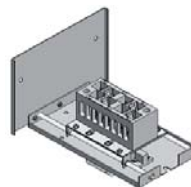
LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

8 Auto Cell Holder, 8 Optical Glass Cells 10mm
 2 Quartz Cells 10mm, 1 Dust cover
 1 Instruction manual available in 18 different languages.
 1 Power cable, 1 Software Operation Manual available in 18 different languages.
 1 PC cable, 1 Software CD for Windows 98/2000/XP/7
 1 Spare Tungsten Halogen Lamp, 1 Block Light Cell
 DVD of installation and how to use the Spectro

Optional: Peltier Kinetic Test System

Optional: Sipper Flow Through System



(Automatic Cell Holder)

Optional Accessories

Set of 2 performance testing filters

(1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)

Peltier constant temperature system (15 - 55°C Specify: Spectro UV-Vis Double PC 8 Auto Cell)

Sipper flow through system (Peristaltic pump and flow cell. Specify: Spectro UV-Vis Double PC 8 Auto Cell)

Multi purpose cell holder for long path cells, 20 - 50mm path length

(Specify: Spectro UV-Vis Double PC 8 Auto Cell)

Technical Specifications

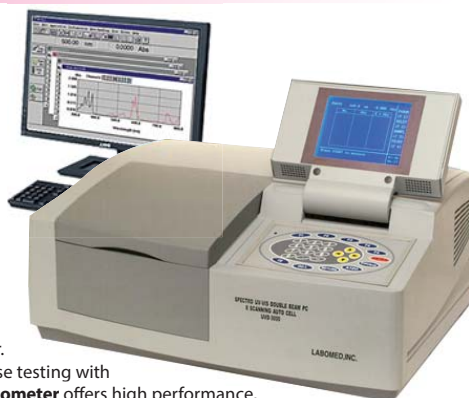
1) Wavelength Range:	190 nm - 1100 nm
- Spectral Bandwidth:	0.5, 1.0, 2.0 and 5.0 nm. (4 steps)
- Resolution:	0.1nm.
- Stray Light:	<0.12%T (220nm NAL, 340nm NaNO ₂)
- Wavelength Accuracy:	±0.3nm (with automatic wavelength correction)
- Wavelength Display:	0.1 nm resolution
- Wavelength Reproducibility:	±0.2 nm
2) Photometric System:	Double beam optical system
- Photometric Method:	Transmittance, absorbance, energy and concentration
- Photometric Range:	-0.3~3.0 Abs ±0.002Abs (0~0.5A) ±0.004Abs (0.5~1.0A)
- Photometric Accuracy:	±0.3%T (0~100%T) ±0.001Abs (0~0.5A) ±0.002Abs (0.5~1.0A)
- Photometric Reproducibility:	±0.15%T (0~100%T) -9999 ---- 9999
- Photometric Display:	±0.001Abs / 120 seconds (at 500nm, 1nm Spectral Bandwidth 0 Abs)
- Photometric Noise:	1400nm/min
- Scanning Speed:	±0.0015 Abs (200-1100nm)
- Baseline Flatness:	0.5nm (UVD-3200)
- Resolution:	0.0008Abs/h (1/2 hour warming up, 1nm Bandwidth, 500nm)
- Baseline Stability:	3600nm/min
- Slew Rate of Wavelength:	
3) DNA/RNA Measurement:	
- Results Printout:	Printing of measured data by using any Printer with Parallel Port connection available.
4) Mainframe:	Compact and standalone spectrophotometer mainframe
- Light Source:	Socket Deuterium Lamp and Socket Tungsten Halogen Lamp.
- Detector:	Double Beam
- Sample Chamber:	Automatic eight-cell sample holder.
- Display:	Liquid Crystal Display (LCD 320 x 240 dot matrix)
- Keypad:	Touch soft keys.
- PC Interface:	RS-232, USB
- Size:	22"x16"x10"
- Weight:	55 Lb

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UVD-3000

Spectro UV-VIS Double PC 8 Auto Cell Scanning Spectrophotometer V-VIS Double Beam



Spectro Spectro UV-Vis Double PC 8 Auto and

1 Fixed Cell (Model UVD-3000) is a high performance UV-Vis double beam automatic scanning spectrophotometer.

It is an automatic eight (8) cell spectrophotometer for precise testing with a fixed bandwidth of 2.0 nm. **Model UVD-3000 spectrophotometer** offers high performance, ease of use and reliability, which can be used in various applications. Spectrophotometer Model UVD-3000 can be used extensively for qualitative and quantitative analysis in such fields as pharmaceutical inspection, clinical analysis, petrochemistry laboratories, chemistry and biochemistry laboratories, DNA/RNA analysis as well as in quality control departments, i.e. environmental control, water management, food processing, and agriculture.

Spectro UV-Vis Double PC 8 Auto Cell (Model UVD-3000) utilizes a new optical system design and is microcomputer controlled. With its focused-beam design, the system provides optimal and reproducible results for small samples.

The sample beam and the reference beam are provided within the same sampling space, facilitating wider and longer scan of data providing a more detailed view of the results in an easy to use environment. This instrument has excellent baseline stability and high resolution and permits scanning, quantitative analysis, kinetic spectrophotometric analysis, protein, nucleic acid, DNA/RNA analysis, micro and macro measurements through PC control. This product is capable of processing data, from analytical and spectrum testing.

Spectro UV-Vis Double PC 8 Auto Cell (Model UVD-3000) has a large LCD screen which displays the menu screen and of course makes the device easier to use. Additionally, this instrument permits the apparatus to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor, using the new UVWin 6.0 UV-VIS application software, presents to the fullest of the fascination of modern computer technology.

Spectro UV-Vis Double PC 8 Auto Cell (Model UVD-3000)

with fixed bandwidth of 2.0 nm is a high-performance, reliable, and exceptional value instrument which is the hallmark of Labomed UV-Vis spectrophotometers.

Features

- **Baseline Stability:** The Double Beam monitoring ratio system enhances baseline stability.
- **Excellent Resolution:** The big-caliber light path enhances the instrument's energy, reduces its noise and raises its resolution performance
- **Automatic successive measurement:** The automatic eight-cell sample holder offers the automatic measurement of eight samples in succession. So it can bring about one-touch measurement of the solution of six samples and a blank.
- **User-friendly light source:** The light source performs an automatic interchange, selectable within the working range of the light source. The socket deuterium lamps and tungsten lamps facilitate light source replacement, simplify maintenance and reduce operation error.
- **Convenient Display:** The large backlit LCD screen displays both photometric values and spectral curves.
- **Full use of Computer Technology:** Being computer controlled with compatible with Windows XP, & and 8, using the new • UVWin 6.0 UV-VIS application software, presents to the fullest of the fascination of modern computer technology.
- The key components are all adopted from the world famous manufacturer, such as deuterium lamp, silicon photodiode and holographic grating, which ensures the stabilization and credibility of the Instrument for extended life.

Computer System is optional (NOT INCLUDED).

Software Specifications: OUR NEW SOFTWARE UV-WIN 6.0 WITH 3D SPECTRA

Now all Labomed, Inc. split and double beam spectrophotometers with our newly developed software called UV-Win 6.0 can be used with Windows XP, Windows 7 and Windows 8. It is capable of testing more applications with its RS-232 and USB connections, and supports the data export of measured results to the PC and then flash drive, when additional data storage is required. One of the new features is that it provides 3-D graphing of the spectral results.



Labomed, Inc. is certified by ISO 9001-2013, has CE Conformity and is FDA Licensed.

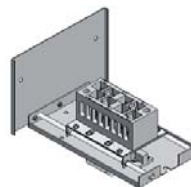
LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

8 Auto Cell Holder, 8 Optical Glass Cells 10mm
 2 Quartz Cells 10mm, 1 Dust cover
 1 Instruction manual available in 18 different languages.
 1 Power cable, 1 Software Operation Manual available in 18 different languages.
 1 PC cable, 1 Software CD for Windows 98/2000/XP/7
 1 Spare Tungsten Halogen Lamp, 1 Block Light Cell
 DVD of installation and how to use the Spectro

Optional: Peltier Kinetic Test System

Optional: Sipper Flow Through System



(Automatic Cell Holder)

Optional Accessories

Set of 2 performance testing filters

(1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)

Peltier constant temperature system (15 - 55°C Specify: Spectro UV-Vis Double PC 8 Auto Cell)

Sipper flow through system (Peristaltic pump and flow cell. Specify: Spectro UV-Vis Double PC 8 Auto Cell)

Multi purpose cell holder for long path cells, 20 - 50mm path length

(Specify: Spectro UV-Vis Double PC 8 Auto Cell)

Technical Specifications

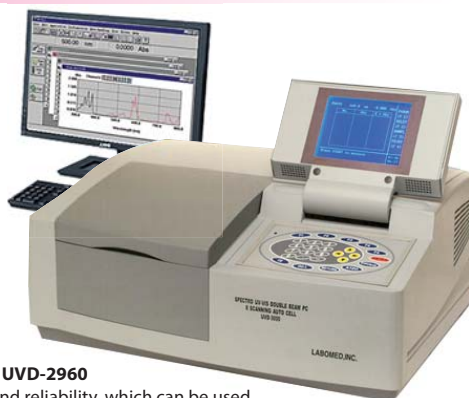
1) Wavelength Range:	190 nm - 1100 nm
- Spectral Bandwidth:	2.0 nm (Model UVD-3000)
- Resolution:	2nm. (UVD-3000)
- Stray Light:	>2.10Abs (200nm)
- Wavelength Accuracy:	±0.3nm (with automatic wavelength correction)
- Wavelength Display:	0.1 nm resolution
- Wavelength Reproducibility:	0.2 nm
2) Photometric System:	Double beam optical system
- Photometric Method:	Transmittance, absorbance, energy and concentration
- Photometric Range:	-0.3~3.0 Abs ±0.002Abs (0~0.5A) ±0.004Abs (0.5~1.0A)
- Photometric Accuracy:	±0.3%T (0~100%T) ±0.001Abs (0~0.5A) ±0.002Abs (0.5~1.0A)
- Photometric Reproducibility:	±0.15%T (0~100%T) -9999 ---- 9999
- Photometric Display:	±0.001Abs / 120 seconds (at 500nm, 1nm Spectral Bandwidth 0 Abs)
- Photometric Noise:	1400nm/min
- Scanning Speed:	±0.0015 Abs (200-1100nm)
- Baseline Flatness:	0.5nm (UVD-3200)
- Resolution:	0.0008Abs/h (1/2 hour warming up, 1nm Bandwidth, 500nm)
- Baseline Stability:	3600nm/min
- Slew Rate of Wavelength:	
3) DNA/RNA Measurement:	
- Results Printout:	Printing of measured data by using any Printer with Parallel Port connection available.
4) Mainframe:	Compact and standalone spectrophotometer mainframe
- Light Source:	Socket Deuterium Lamp and Socket Tungsten Halogen Lamp.
- Detector:	Double Beam
- Sample Chamber:	Automatic eight-cell sample holder.
- Display:	Liquid Crystal Display (LCD 320 x 240 dot matrix)
- Keypad:	Touch soft keys.
- PC Interface:	RS-232, USB
- Size:	22"x16"x10"
- Weight:	55 Lb

Labomed, Inc. is certified by ISO 9001-2013, has CE Conformity and is FDA Licensed.



UVD-2960

Spectro UV-VIS Double PC 8 Auto Cell Scanning Spectrophotometer V-VIS Double Beam



Spectro UV-Vis Double PC (Model UVD-2960) is a high performance UV-Vis double beam automatic scanning spectrophotometer. It is a two (2) cell spectrophotometer with a variable bandwidth of 0.5, 1.0, 2.0 and 5.0nm. **Model UVD-2960**

spectrophotometer offers high performance, ease of use and reliability, which can be used in various applications. **Spectrophotometer Model UVD-2960** can be used extensively for qualitative and quantitative analysis in such fields as pharmaceutical inspection, clinical analysis, petrochemistry laboratories, chemistry and biochemistry laboratories, DNA/RNA analysis as well as in quality control departments, i.e. environmental control, water management, food processing, and agriculture.

Spectro UV-Vis Double PC (Model UVD-2960) utilizes a new optical system design and is microcomputer controlled. With its focused-beam design, the system provides optimal and reproducible results for small samples. The sample beam and the reference beam are provided within the same sampling space, facilitating wider and longer scan of data providing a more detailed view of the results in an easy to use environment. This instrument has excellent baseline stability and high resolution and permits scanning, quantitative analysis, kinetic spectrophotometric analysis, protein, nucleic acid, DNA/RNA analysis, micro and macro measurements through PC control. This product is capable of processing data, from analytical and spectrum testing.

Spectro UV-Vis Double PC (Model UVD-2960) has a large LCD screen which displays the menu screen and of course makes the device user friendly. Additionally, this instrument permits the apparatus to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. This connection is controlled by the RS232 AND USB interface, compatible with Windows XP, & and 8, using the new UVWin 6.0 UV-VIS application software. *The operation manual is available in 18 different languages.*

This Spectro can be used by itself or linked to a PC and comes with a USB interface to connect to the computer.

Features

- Baseline Stability: The Double beam monitoring ratio system enhances baseline stability.
- Excellent Resolution: The big-caliber light path enhances the instrument's energy, reduces its noise and raises its resolution performance
- 2 Cell Holder: Spectro UVD-2960 has 2 cell holder for reference (standard) and sample.
- User-friendly light source: The light source performs an automatic interchange, selectable within the working range of the light source. The socket deuterium lamps and tungsten lamps facilitate light source replacement, simplify maintenance and reduce operation error.
- Convenient Display: The large backlit LCD screen displays both photometric values and spectral curves.
- Full use of Computer Technology: Being computer controlled with compatible with Windows XP, & and 8, using the new UVWin 6.0 UV-VIS application software, offering a wide range of uses and applications.
- The key components are all adopted from the world famous manufacturer, such as deuterium lamp, silicon photodiode and holographic grating, which ensures the stabilization and credibility of the Instrument for extended life.

Computer System is optional (NOT INCLUDED).

Software Specifications

OUR NEW SOFTWARE UV-WIN 6.0 WITH 3D SPECTRA

Now all Labomed, Inc. split and double beam spectrophotometers with our newly developed software called UV-Win 6.0 can be used with Windows XP, Windows 7 and Windows 8. It is capable of testing more applications with its RS-232 and USB connections, and supports the data export of measured results to the PC and then flash drive, when additional data storage is required. One of the new features is that it provides 3-D graphing of the spectral results.



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LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

2 Cell Holder, 8 Optical Glass Cells 10mm.
 2 Quartz Cells 10mm, 1 Dust cover
 1 Power cable, 1 PC cable,
 1 Software CD for Windows 98/2000/XP/7
 1 Software Operation Manual available in 18 different languages
 1 Spare Tungsten Halogen Lamp, 1 Block Light Cell, 1 Extra fuse
 DVD of installation and how to use the Spectro

Optional: Peltier Kinetic Test System

Optional: Sipper Flow Through System

Optional Accessories

Set of 2 performance testing filters

(1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)

Peltier constant temperature system (15 - 55 °C Specify: Spectro UV-Vis Double)

Sipper flow through system (peristaltic pump and flow cell (Specify: Spectro UV-Vis Double)

Multi-purpose cell holder 20-30-40-50 Path Length

Technical Specifications

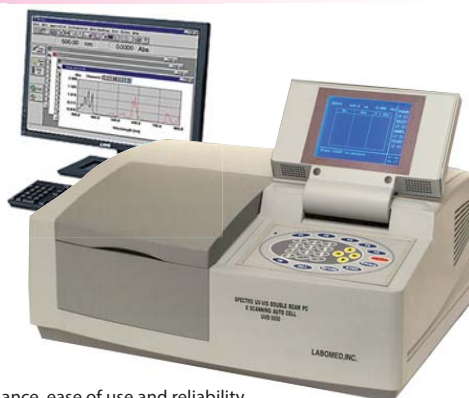
1) Wavelength Range:	190 nm - 1100 nm
- Spectral Bandwidth:	0.5, 1.0, 2.0 and 5.0 nm. (4 steps)
- Resolution:	0.5nm.
- Stray Light:	>2.10Abs (200nm)
- Wavelength Accuracy:	±0.3nm (with automatic wavelength correction)
- Wavelength Reproducibility:	±0.2 nm
2) Photometric System:	Double beam optical system
- Photometric Method:	Transmittance, absorbance, energy and concentration
- Photometric Range:	-0.3~3.0 Abs
	±0.002Abs (0~0.5A)
- Photometric Accuracy:	±0.004Abs (0.5~1.0A)
	±0.3%T (0~100%T)
	±0.001Abs (0~0.5A)
- Photometric Reproducibility:	±0.002Abs (0.5~1.0A)
	±0.15%T (0~100%T)
- Photometric Display:	-9999 ---- 9999
- Photometric Noise:	±0.001Abs / 120 seconds (at 500nm, 1nm Spectral Bandwidth 0 Abs)
- Scanning Speed:	1400nm/min
- Baseline Flatness:	±0.0015 Abs (200-1100nm)
- Resolution:	0.5nm (UVD-3200)
- Baseline Stability:	0.0008Abs/h (1/2 hour warming up, 1nm Bandwidth, 500nm)
- Slew Rate of Wavelength:	3600nm/min
3) DNA/RNA Measurement:	
- Results Printout:	Printing of measured data by using any Printer with Parallel Port connection available.
4) Mainframe:	Compact and standalone spectrophotometer mainframe
- Light Source:	Socket Deuterium Lamp and Socket Tungsten Halogen Lamp.
- Detector:	Double Beam
- Sample Chamber:	2 cell holder
- Display:	Liquid Crystal Display (LCD 320 x 240 dot matrix)
- Keypad:	Touch soft keys.
- PC Interface:	PC Interface: RS-232
- Size:	22"x16"x10"
- Weight:	55 Lb

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UVD-2950

Spectro UV-VIS Double PC 8 Auto Cell Scanning Spectrophotometer V-VIS Double Beam



Spectro UV-Vis Double PC (Model UVD-2950) is a high performance UV-Vis double beam automatic scanning spectrophotometer. It is a two (2) cell spectrophotometer, **now with a new and improved bandwidth of 1nm!**

Model UVD-2950 spectrophotometer offers high performance, ease of use and reliability, which can be used in various applications. **Spectrophotometer Model UVD-2950** can be used extensively for qualitative and quantitative analysis in such fields as pharmaceutical inspection, clinical analysis, petro-chemistry laboratories, chemistry and biochemistry laboratories, DNA/RNA analysis as well as in quality control departments, i.e. environmental control, water management, food processing, and agriculture.

Spectro UV-Vis Double PC (Model UVD-2950) utilizes a new optical system design and is microcomputer controlled. With its focused-beam design, the system provides optimal and reproducible results for small samples. The sample beam and the reference beam are provided within the same sampling space, facilitating a wider and longer scan of data, providing a more detailed view of the results in an easy to use environment. This instrument has excellent baseline stability and high resolution and permits scanning, quantitative analysis, kinetic spectrophotometric analysis and DNA/RNA analysis through PC control. This product is capable of processing data, from analytical and spectrum testing.

Spectro UV-Vis Double PC (Model UVD-2950) has a large LCD screen which displays the menu screen and of course makes the device user friendly. Additionally, this instrument permits the apparatus to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. This connection is controlled by the RS232 AND USB interface, compatible with Windows XP, & and 8, using the new UVWin 6.0 UV-VIS application software. *The operation manual is available in 18 different languages.*

This Spectro can be used by itself or linked to a PC and comes with a USB interface to connect to the computer.

Features

- Baseline Stability: The Double beam monitoring ratio system enhances baseline stability.
 - **1nm fixed bandwidth New!** : The Double beam monitoring ratio system enhances baseline stability.
 - Excellent Resolution: The big-caliber light path enhances the instrument's energy, reduces its noise and raises its resolution performance
 - 2 Cell Holder: Spectro UVD-2960 has 2 cell holder for reference (standard) and sample.
 - User-friendly light source: The light source performs an automatic interchange, selectable within the working range of the light source. The socket deuterium lamps and tungsten lamps facilitate light source replacement, simplify maintenance and reduce operation error.
 - Convenient Display: The large backlit LCD screen displays both photometric values and spectral curves.
 - Full use of Computer Technology: Being computer controlled with compatible with Windows XP, & and 8, using the new UVWin 6.0 UV-VIS application software, offering a wide range of uses and applications.
 - The key components are all adopted from the world famous manufacturer, such as deuterium lamp, silicon photodiode and holographic grating, which ensures the stabilization and credibility of the Instrument for extended life.
- Computer System is optional (NOT INCLUDED).*

Software Specifications

OUR NEW SOFTWARE UV-WIN 6.0 WITH 3D SPECTRA

Now all Labomed, Inc. split and double beam spectrophotometers with our newly developed software called UV-Win 6.0 can be used with Windows XP, Windows 7 and Windows 8. It is capable of testing more applications with its RS-232 and USB connections, and supports the data export of measured results to the PC and then flash drive, when additional data storage is required. One of the new features is that it provides 3-D graphing of the spectral results.



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LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

2 Auto Cell Holder, 8 Optical Glass Cells 10mm
 2 Quartz Cells 10mm, 1 Dust cover
 1 Power cable, 1 PC cable, 1 Instruction manual available in 18 different languages
 1 Software CD for Windows 98/2000/XP/7
 1 Software Operation Manual available in 18 different languages
 1 Spare Tungsten Halogen Lamp, 1 Block Light Cell, 1 Extra fuse
 DVD of installation and how to use the Spectro

Optional: Peltier Kinetic Test System

Optional: Sipper Flow Through System

Optional Accessories

Set of 2 performance testing filters

(1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)

Peltier constant temperature system (15 - 55 °C Specify: Spectro UV-Vis Double)

Sipper flow through system (peristaltic pump and flow cell (Specify: Spectro UV-Vis Double)

Multi-purpose cell holder 20-30-40-50 Path Length

Technical Specifications

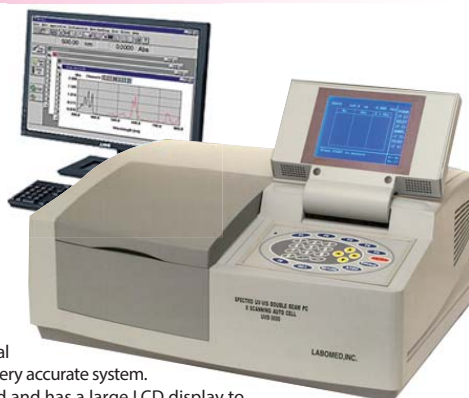
1) Wavelength Range:	190 nm - 1100 nm
- Spectral Bandwidth:	1.0 nm. New and Improved!
- Resolution:	1nm.
- Stray Light:	>2.10Abs (200nm)
- Wavelength Accuracy:	±0.3nm (with automatic wavelength correction)
- Wavelength Reproducibility:	±0.2 nm
2) Photometric System:	Double beam optical system
- Photometric Method:	Transmittance, absorbance, energy and concentration
- Photometric Range:	-0.3~3.0 Abs
	±0.002Abs (0~0.5A)
- Photometric Accuracy:	±0.004Abs (0.5~1.0A)
	±0.3%T (0~100%T)
	±0.001Abs (0~0.5A)
- Photometric Reproducibility:	±0.002Abs (0.5~1.0A)
	±0.15%T (0~100%T)
- Photometric Display:	-9999 ---- 9999
- Photometric Noise:	±0.001Abs / 120 seconds (at 500nm, 1nm Spectral Bandwidth 0 Abs)
- Scanning Speed:	1400nm/min
- Baseline Flatness:	±0.0015 Abs (200-1100nm)
- Resolution:	0.5nm (UVD-3200)
- Baseline Stability:	0.0008Abs/h (1/2 hour warming up, 1nm Bandwidth, 500nm)
- Slew Rate of Wavelength:	3600nm/min
3) DNA/RNA Measurement:	
- Results Printout:	Printing of measured data by using any Printer with Parallel Port connection available.
4) Mainframe:	Compact and standalone spectrophotometer mainframe
- Light Source:	Socket Deuterium Lamp and Socket Tungsten Halogen Lamp.
- Detector:	Double Beam
- Sample Chamber:	2 cell holder
- Display:	Liquid Crystal Display (LCD 320 x 240 dot matrix)
- Keypad:	Touch soft keys.
- PC Interface:	PC Interface: RS-232
- Size:	22"x16"x10"
- Weight:	55 Lb

Labomed, Inc. is certified by ISO 9001-2013, has CE Conformity and is FDA Licensed.



UVS-2800

Spectro UV-VIS Double PC 8 Auto Cell Scanning Spectrophotometer UV-VIS Split Beam 8 Auto Cell



Spectro UV-Vis Split Beam PC is a precise scanning Spectrophotometer with a new design of 8 microprocessor automatic 2 row cell holder that moves noiseless with a special membrane. This Split Beam Spectro has a dual detector and a very accurate system.

Spectro UV-Vis Split Beam PC is microcomputer-controlled and has a large LCD display to work independently. It can also be linked to a computer and a printer to show Photometric and Spectral data in the PC monitor. This connection is controlled by the RS232 AND USB interface, compatible with Windows XP, & and 8, using the new UVWin 6.0 UV-VIS application software.

Spectro UV-Vis Split Beam PC is also capable of performing kinetic test by an optional Peltier constant temperature system, and can test flow through liquid by the optional Sipper Flow Through System.

Spectro UV-Vis Split Beam PC can be used as an accurate system for qualitative and quantitative analysis of analytical test, Biochemistry, Chemistry, Clinical Analysis, Pharmaceutical and Agriculture Labs, Quality control, Industry and research.

Spectro UV-Vis Split Beam PC can perform protein, nucleic acid, DNA/RNA micro and macro measurements, that can also be printed using an external HP 600/800 series printer or a PC printer.

There are 2 models of **Spectro UV-Vis Split Beam PC** available:

1) **Spectro UV-Vis Split Beam PC** with fixed bandwidth of 1 nm (UVS-2700).

2) **Spectro UV-Vis Split Beam PC** with variable bandwidth of 0.5, 1.0, 2.0 and 5.0 nm. (UVS-2800) is also available.

The operation manual is available in 18 different languages.

This Spectro can be used by itself or linked to a PC and comes with a USB interface to connect to the computer.

Features

- **Baseline Stability:** The Split-beam monitoring ratio system enhances baseline stability.
- **Excellent Resolution:** The big-caliber light path enhances the instrument's energy, reduces its noise and raises its resolution performance.
- **Automatic successive measurement:** The automatic eight-cell sample holder offers the automatic measurement of eight samples in succession. So it can bring about one-touch measurement of the solution of seven samples and a blank.
- **User-friendly light source:** The light source performs an automatic interchange, selectable within the working range of the light source. The socket deuterium lamps and tungsten lamps facilitate light source replacement, simplify maintenance and reduce operation error.
- **Convenient Display:** The large backlit LCD screen displays both photometric values and spectral curves.
- **Full use of Computer Technology:** Being computer controlled with compatible with Windows XP, & and 8, using the new UVWin 6.0 UV-VIS application software, offering a wide range of uses and applications.
- The key components are all adopted from the world famous manufacturer, such as deuterium lamp, silicon photodiode and holographic grating, which ensures the stabilization and credibility of the Instrument for extended life.

Computer System is optional (NOT INCLUDED).

Software Specifications

OUR NEW SOFTWARE UV-WIN 6.0 WITH 3D SPECTRA

Now all Labomed, Inc. split and double beam spectrophotometers with our newly developed software called UV-Win 6.0 can be used with Windows XP, Windows 7 and Windows 8. It is capable of testing more applications with its RS-232 and USB connections, and supports the data export of measured results to the PC and then flash drive, when additional data storage is required. One of the new features is that it provides 3-D graphing of the spectral results.



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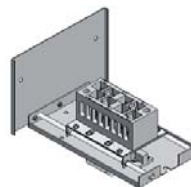
LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

8 Auto Cell Holder, 8 Optical Glass Cells 10mm
 2 Quartz Cells 10mm, 1 Dust cover
 1 Power cable, 1 PC cable, 1 Instruction manual available in 18 different languages
 1 Software CD for Windows 98/2000/XP/7
 1 Software Operation Manual available in 18 different languages
 1 Spare Tungsten Halogen Lamp, 1 Block Light Cell, 1 Extra fuse
 DVD of installation and how to use the Spectro

Optional: Peltier Kinetic Test System

Optional: Sipper Flow Through System



(Automatic Cell Holder)

Optional Accessories

Set of 2 performance testing filters

(1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)

Peltier constant temperature system (15 - 55 °C Specify: Spectro UV-Vis Double)

Sipper flow through system (peristaltic pump and flow cell (Specify: Spectro UV-Vis Double)

Multi-purpose cell holder 20-30-40-50 Path Length

Technical Specifications

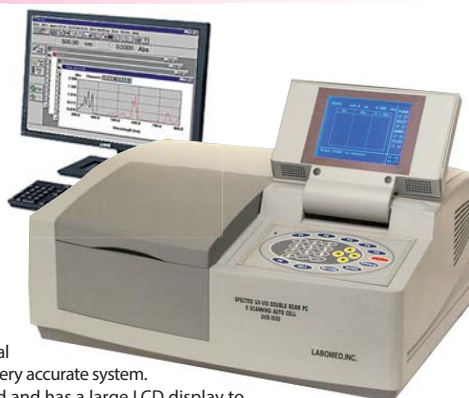
- 1) Optical System:** Dual Beam (UVD-2700) and Split Beam (UVD-2800)
- Wavelength Range:** 190 nm - 1100 nm
- Spectral Bandwidth:** 1.0 nm (UVS-2700) and 0.5, 1.0, 2.0 and 5.0 nm (4 steps) (UVS-2800)
- Resolution:** 0.1 nm resolution
- Stray Light:** $\leq 0.12\%T$ (220nm NaI, 340nm NaNO₂)
- Wavelength Accuracy:** $\pm 0.3nm$ (with automatic wavelength correction)
- Wavelength Reproducibility:** $\pm 0.2 nm$
- 2) Photometric System:** Double beam optical system
- Photometric Method:** Transmittance, absorbance, energy and concentration
- Photometric Range:** -0.3~3.0 Abs
 $\pm 0.002Abs$ (0~0.5A)
 $\pm 0.004Abs$ (0.5~1.0A)
 $\pm 0.3\%T$ (0~100%T)
 $\pm 0.001Abs$ (0~0.5A)
 $\pm 0.002Abs$ (0.5~1.0A)
 $\pm 0.15\%T$ (0~100%T)
- Photometric Accuracy:** -9999 ---- 9999
- Photometric Reproducibility:** $\pm 0.001Abs$ / 120 seconds (at 500nm, 1nm Spectral Bandwidth 0 Abs)
- Photometric Display:** 1400nm/min or Selectable
- Photometric Noise:** RS-232
- Scanning Speed:** Dual Silicon photodiodes
- Interface Card:** 0.0008Abs/h (1/2 hour warming up, 1nm Bandwidth, 500nm)
- Detector:** 3600nm/min
- Baseline Stability:** Photometric, Quantitative, Spectrum and DNA measurements
- Slew Rate of Wavelength:**
- Standard Functionality**
- 3) DNA/RNA Measurement:**
- Results Printout:** Printing of measured data by using any Printer with Parallel Port connection available.
- 4) Mainframe:** Compact and standalone spectrophotometer mainframe
- Light Source:** Socket Deuterium Lamp and Socket Tungsten Halogen Lamp.
- Detector:** Double Beam
- Sample Chamber:** Automatic eight-cell sample holder/changer
- Display:** Digital LCD Display
- Keypad:** Touch soft keys.
- Software Support:** UVWin 6.0
- Size:** 22"x16"x10"

Labomed, Inc. is certified by ISO 9001-2013, has CE Conformity and is FDA Licensed.



UVS-2700

Spectro UV-VIS Double PC 8 Auto Cell Scanning Spectrophotometer UV-VIS Split Beam8 Auto Cell



Spectro UV-Vis Split Beam PC is a precise scanning Spectrophotometer with a new design of 8 microprocessor automatic 2 row cell holder that moves noiseless with a special membrane. This Split Beam Spectro has a dual detector and a very accurate system.

Spectro UV-Vis Split Beam PC is microcomputer-controlled and has a large LCD display to work independently. It can also be linked to a computer and a printer to show Photometric and Spectral data in the PC monitor. This connection is controlled by the RS232 AND USB interface, compatible with Windows XP, & and 8, using the new UVWin 6.0 UV-VIS application software.

Spectro UV-Vis Split Beam PC is also capable of performing kinetic test by an optional Peltier constant temperature system, and can test flow through liquid by the optional Sipper Flow Through System.

Spectro UV-Vis Split Beam PC can be used as an accurate system for qualitative and quantitative analysis of analytical test, Biochemistry, Chemistry, Clinical Analysis, Pharmaceutical and Agriculture Labs, Quality control, Industry and research.

Spectro UV-Vis Split Beam PC can perform protein, nucleic acid, DNA/RNA micro and macro measurements, that can also be printed using an external HP 600/800 series printer or a PC printer.

There are 2 models of **Spectro UV-Vis Split Beam PC** available:

1) **Spectro UV-Vis Split Beam PC** with fixed bandwidth of 1 nm (UVS-2700).

2) **Spectro UV-Vis Split Beam PC** with variable bandwidth of 0.5, 1.0, 2.0 and 5.0 nm. (UVS-2800) is also available.

The operation manual is available in 18 different languages.

This Spectro can be used by itself or linked to a PC and comes with a USB interface to connect to the computer.

Features

- **Baseline Stability:** The Split-beam monitoring ratio system enhances baseline stability.
- **Excellent Resolution:** The big-caliber light path enhances the instrument's energy, reduces its noise and raises its resolution performance.
- **Automatic successive measurement:** The automatic eight-cell sample holder offers the automatic measurement of eight samples in succession. So it can bring about one-touch measurement of the solution of seven samples and a blank.
- **User-friendly light source:** The light source performs an automatic interchange, selectable within the working range of the light source. The socket deuterium lamps and tungsten lamps facilitate light source replacement, simplify maintenance and reduce operation error.
- **Convenient Display:** The large backlit LCD screen displays both photometric values and spectral curves.
- **Full use of Computer Technology:** Being computer controlled with compatible with Windows XP, & and 8, using the new UVWin 6.0 UV-VIS application software, offering a wide range of uses and applications.
- **The key components are all adopted from the world famous manufacturer, such as deuterium lamp, silicon photodiode and holographic grating, which ensures the stabilization and credibility of the Instrument for extended life.**

Computer System is optional (NOT INCLUDED).

Software Specifications

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Now all Labomed, Inc. split and double beam spectrophotometers with our newly developed software called UV-Win 6.0 can be used with Windows XP, Windows 7 and Windows 8. It is capable of testing more applications with its RS-232 and USB connections, and supports the data export of measured results to the PC and then flash drive, when additional data storage is required. One of the new features is that it provides 3-D graphing of the spectral results.



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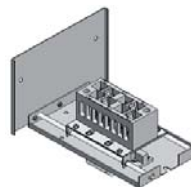
LABOMED INC.
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Included Accessories

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 DVD of installation and how to use the Spectro

Optional: Peltier Kinetic Test System

Optional: Sipper Flow Through System



(Automatic Cell Holder)

Optional Accessories

Set of 2 performance testing filters

(1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)

Peltier constant temperature system (15 - 55 °C Specify: Spectro UV-Vis Double)

Sipper flow through system (peristaltic pump and flow cell (Specify: Spectro UV-Vis Double)

Multi-purpose cell holder 20-30-40-50 Path Length

Technical Specifications

- | | |
|---------------------------------------|---|
| 1) Optical System: | Dual Beam (UVD-2700) and Split Beam (UVD-2800) |
| - Wavelength Range: | 190 nm - 1100 nm |
| - Spectral Bandwidth: | 1.0 nm (UVS-2700) and 0.5, 1.0, 2.0 and 5.0 nm (4 steps) (UVS-2800) |
| - Resolution: | 0.1 nm resolution |
| - Stray Light: | ≤0.12%T (220nm NaI, 340nm NaNO ₂) |
| - Wavelength Accuracy: | ±0.3nm (with automatic wavelength correction) |
| - Wavelength Reproducibility: | ±0.2 nm |
| 2) Photometric System: | Double beam optical system |
| - Photometric Method: | Transmittance, absorbance, energy and concentration |
| - Photometric Range: | -0.3~3.0 Abs
±0.002Abs (0~0.5A)
±0.004Abs (0.5~1.0A) |
| - Photometric Accuracy: | ±0.3%T (0~100%T)
±0.001Abs (0~0.5A)
±0.002Abs (0.5~1.0A) |
| - Photometric Reproducibility: | ±0.15%T (0~100%T)
-9999 ---- 9999 |
| - Photometric Display: | ±0.001Abs / 120 seconds (at 500nm, 1nm Spectral Bandwidth 0 Abs) |
| - Photometric Noise: | 1400nm/min or Selectable |
| - Scanning Speed: | 1400nm/min or Selectable |
| - Interface Card: | RS-232 |
| - Detector: | Dual Silicon photodiodes |
| - Baseline Stability: | 0.0008Abs/h (1/2 hour warming up, 1nm Bandwidth, 500nm) |
| - Slew Rate of Wavelength: | 3600nm/min |
| - Standard Functionality | Photometric, Quantitative, Spectrum and DNA measurements |
| 3) DNA/RNA Measurement: | |
| - Results Printout: | Printing of measured data by using any Printer with Parallel Port connection available. |
| 4) Mainframe: | Compact and standalone spectrophotometer mainframe |
| - Light Source: | Socket Deuterium Lamp and Socket Tungsten Halogen Lamp. |
| - Detector: | Double Beam |
| - Sample Chamber: | Automatic eight-cell sample holder/changer |
| - Display: | Digital LCD Display |
| - Keypad: | Touch soft keys. |
| - Software Support: | UVWin 6.0 |
| - Size: | 22"x16"x10" |

Labomed, Inc. is certified by ISO 9001-2013, has CE Conformity and is FDA Licensed.



UV-2650

Spectro UV-VIS Scanning Spectrophotometer

UV-VIS With 4 Cell Holder



Spectro UV-2650 is an all-purpose UV-VIS scanning spectrophotometer with scan function. It is widely used in medicine, environmental monitoring, commodity inspection, food inspection, agricultural chemistry, teaching in colleges and universities, metallurgy, geology, machine manufacturing, and petrochemical industries, and is a helpful tool for analysts to carry out qualitative and quantitative analysis of materials. *The operation manual is available in 18 different languages.*

This Spectro can be used by itself or linked to a PC and comes with a USB interface to connect to the computer.

Features

- The light source performs an automatic interchange, selectable within the working range of the light source. Fully automated operations: automatic change-over between W lamp and D2 lamp; automatic filter changing; automatic wavelength calibration; W lamp and D2 lamp On/Off auto-control; automatic zero and 100%T adjustment.
- Automatic peak-picking; easy operations for replacing W lamp and D2 lamp.
- Friendly interface; abundant operation prompts; convenient and fast operations.
- Blue LCD display module with 320x240 large screen.
- Economical embedded single-chip micro-processor control system.
- Rich and powerful functions:
 - Five basic measurement modes: WL Scan (A, T, E), Photometric measurement (Fixed WL measurement, A, T), Quantitation (Concentration Measurement, A, C), Time Scan (Kinetics Measurement, A, T), Real Time Measurement (A, T, C, E);
 - Powerful spectrum processing functions: Spectrum Save, Spectrum Load, Peak-Valley Pick, Derivative Spectrum, Data Printing at Intervals, Activity Calculation, Cursor locating, Spectrum Zooming, A-T Conversion, Spectrum Printing;
 - Data Processing functions: data save, data looking up, data deleting and data printing, etc.
- Cell error can be corrected;
- Parameters can be saved for a long time after turning off the instrument;
- Spectrum and data can be stored when sudden power failure occurs;
- Spectrum and data can be sent to computer via RS-232 interface or USB interface.

Software Specifications

Such operations as photometry measurement, spectrum measurement, quantitation measurement and kinetic measurement are offered in UV-Win Windows applications.

Multi-wavelengths photometric measurement at up to 10 wavelengths with the arithmetic calculation according to the user-entered formula.

Up to 10 spectra and time-course curves can be measured and recalled in memory with data-handling of arithmetic calculation, logarithmic calculation, reciprocal calculation, smooth, derivate (1st ~ 4th), Abs to/from %T conversion and peak pick.

Up to 24 standards can be entered and measured for the fit of calibration curve with order to 1st ~ 4th. Offered are the quantitation methods of single wavelength, two-wavelength, coefficient two-wavelength, three wavelength and 1st ~ 4th derivatives.

Kinetic measurement can monitor the changes of absorbance and transmittance against time course at 10 different wavelengths. This module allows flexibility in manipulation and data display.

With the Windows clipboard, the measured data and graphics can be copied to other applications software for reports. Also offered are filing functions, display functions, and others (such as auto file and repeat measure/scan etc.).



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LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

4 square optical cells 10mm.
 2 square quartz cells 10 mm with lid
 Dust cover
 1 Software
 1 Software Manual
 1 Instruction Manual
 1 Power cable
 1 PC cable
 1 USB cable

Technical Specifications

- **Wavelength Range:** 190-1100nm
- **Spectral Bandwidth:** 2nm
- **Wavelength Accuracy:** ± 0.5 nm
- **Wavelength Reproducibility:** 0.2nm
- **Photometric Accuracy:** $\pm 0.5\%$ T (0~100%T)
- **Photometric Range:** ± 0.002 A (0~0.5A)
 ± 0.004 A (0.5A ~1A)
- **Photometric Reproducibility:** 0.2%T
- **Range of Transmittance:** (0%T~220%T)
- **Range of Absorbance:** -0.301A~3.000A
- **Working Mode:** T,A,(-0.3-3A),C,E
- **Stray Light:** $\leq 0.1\%$ T(NaI,220nm;NaNO₂,340nm)
- **Baseline Flatness:** ± 0.005 A
- **Stability:** ≤ 0.002 A/h (at 500nm, after warming up)
- **Minimum Sampling Interval:** 0.1nm
- **Energy Range:** ± 0.002 Abs (0.5~1.0A)0.000V ~ 9.999V
- **Noise:** ± 0.001 A (at 500nm, after warming up)
- **Scanning Speed:** 1000 nm/min
- **Port:** USB
- **Detector:** Silicon Photo-diode
- **Display:** 6 inches high light blue LCD
- **Display:** AC:220V/50Hz, 110V/60Hz,140W (Automatic)
- **Dimensions:** 530x410x210mm
- **Net Weight:** 18Kg.



Cosmos Supply Co.,Ltd.
 cosmos_supply@hotmail.com
 cosmos_supply@yahoo.co.th



QTS Agro Co.,Ltd.
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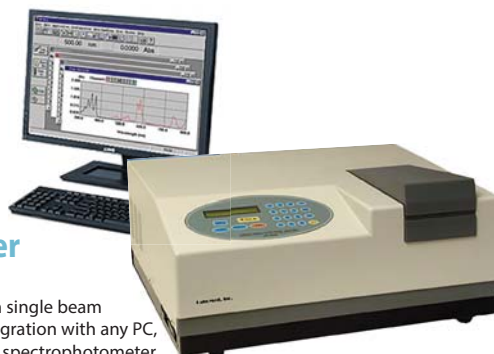
UV-2602

Spectro UV-VIS

Auto Scanning

Spectrophotometer

UV-VIS With 8 Auto Cell Holder



Spectro UV-Vis Auto UV-2602 is Labomed's latest in single beam scanning UV-VIS Spectroscopy; with its seamless integration with any PC, which makes managing data exceptionally easy. This spectrophotometer delivers enhanced ease-of-use, precision and accuracy resulting in time and cost savings, as well as unprecedented confidence in test results. **Model UV-2602** works in the ultraviolet and visible range of 190-1100 nm and has a fixed bandwidth of 1.8 nm. **Model UV-2602 spectrophotometer** offers high performance and reliability, which can be used in various applications. Spectrophotometer Model UV-2602 can be used extensively for qualitative and quantitative analysis in such fields as clinical analysis, medical laboratories, DNA/RNA testing, petrochemistry laboratories, chemistry and biochemistry laboratories, educational labs, research laboratories, analytical laboratories, as well as in quality control departments, i.e. environmental control, water management, food processing, and agriculture. **Spectro UV-Vis Auto UV-2602** is also capable of performing kinetic tests through the use of an optional Peltier Constant Temperature System. Model UV-2602 has excellent baseline stability and high resolution. This spectrophotometer has eight (8) automatic cell holders to test eight (8) samples simultaneously. **Spectro UV-Vis Auto UV-2602** has a powerful built-in software which permits the instrument to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. The RS-232C interface, the port, and the included UV-VIS software link the spectrophotometer and the PC, which are compatible with Windows Platforms (Windows 98, 2000, and XP). The advanced 2-way communication system allows the user to provide instructions right from the computer and gives the user the ability to print and record results in an easy to use interface. In addition to saving data, the Spectro's software can save parameters, set wavelengths and allow automatic processing of concentration. *This Spectro can be used by itself or linked to a PC.* *The operation manual is available in 18 available different languages.*

Features

- Automatic 8 Cell holder by microprocessor. • Auto A/T/C. • Auto Zero. • Auto Wavelength.
- Auto Scanning by PC. • Auto Switching Deuterium and Tungsten lamps.
- 2 way computer communication. • RS 232 computer interface.
- 2 nm bandwidth. • Wide continuous wavelength. • Easy to change lamp.
- USA/FDA licensed. • Computer System is optional (NOT INCLUDED).

Software Specifications

The windows software

- Such operations as photometry measurement, spectrum measurement, quantitation measurement and kinetic measurement are offered in UV-Win Windows applications.
- Multi-wavelengths photometric measurement at up to 10 wavelengths with the arithmetic calculation according to the user-entered formula.
- Up to 10 spectra and time-course curves can be measured and recalled in memory with data-handling of arithmetic calculation, logarithmic calculation, reciprocal calculation, smooth, derivate (1st ~ 4th), Abs to/from %T conversion and peak pick.
- Up to 24 standards can be entered and measured for the fit of calibration curve with order to 1st ~ 4th. Offered are the quantitation methods of single wavelength, two-wavelength, coefficient two-wavelength, three wavelength and 1st ~ 4th derivatives.
- Kinetic measurement can monitor the changes of absorbance and transmittance against time course at 10 different wavelengths. This module allows flexibility in manipulation and data display.
- With the Windows clipboard, the measured data and graphics can be copied to other applications software for reports. Also offered are filing functions, display functions, and others (such as auto file and repeat measure/scan etc.).



Labomed, Inc. is certified by ISO 9001-2013, has CE Conformity and is FDA Licensed.

LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

8 square optical cells 10mm.
 2 square quartz cells 10 mm with lid.
 Dust cover.
 Spectro Software Win98/2000/XP/7 Compatible
 Instruction manual available in 18 different languages
 Software Operation Manual available in 18 different languages
 Power cable
 PC cable

Optional Accessories

Peltier constant temperature control system (37 - 57°C)

Technical Specifications

- Wavelength range:	190 to 1100 nm.
- Photometric range:	-3 to 3 Ab
- Photometric accuracy:	0.05
- Photometric reproducibility:	0.02
- Wavelength Repeatability:	≤0.2nm
- Spectral Bandwidth:	1.8 nm
- Straylight:	0.3% T. (220nm, 340nm, NaI)
- Transmittance Range:	0.0~200.0%T.
- Absorbance Range:	-0.301~4.000A.
- Concentration Range:	0~9999C.
- Transmittance accuracy:	±0.5% T.
- Transmittance repeatability:	≤0.2% T
- Baseline Flatness:	±0.005A
- Noise:	100%noise 0.5%T 0% noise 0.2%T
- Resolution:	1 nm
- Stability:	±0.004A (at 500nm)
- Light Source:	2000hr. Tungsten, Halogen and Deuterium Lamp.
- Detector:	Optical Cells Photodiode
- Scanning speed:	Fast, medium and slow.
- Power:	AC220V/110V.±10%, 50/60Hz±1Hz
- Software:	Labomed Inc. Software (Included). for Windows: 98, 2000 and XP.
- Computer Interface:	RS 232
- Cell holder:	Automatic 8 cell holder.
- Display:	LCD.
- Keypad:	Soft key.
- Printer:	External (Optional).

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UV-2550

Spectro UV-VIS Auto Scanning Spectrophotometer

UV-VIS Multiple Cell Holders



Spectro UV-2550 is a traditional analytical device used in conventional laboratories. This spectrophotometer delivers enhanced user-friendliness, precision and accuracy resulting in time and cost savings, as well as unprecedented confidence in test results. **Spectro UV-2550** works in the ultraviolet and visible range of 190-1100 nm and has a fixed bandwidth of 2 nm. Spectro UV-2550 offers high performance and reliability, which can be used in various applications.

Spectro UV-2550 can be used extensively for qualitative and quantitative analysis in such fields as clinical analysis, petrochemistry laboratories, chemistry and biochemistry laboratories, as well as in quality control departments, i.e. environmental control, water management, food processing, and agriculture.

Spectro UV-2550 is equipped with the USB interface and port. **Spectro UV-2550** can be linked to a computer, which is compatible with Windows Platforms, and a printer to display the photometric and spectral data on the PC monitor. UV-VIS Spectro UV-2550 utilizes a new optical system design and is microcomputer controlled. This instrument has soft keys for ease of use. **Spectro UV-2550** has excellent baseline stability and high resolution.

Spectro UV-2550 consists of a light source (Tungsten Halogen and Deuterium lamp) which switches modes automatically, monochromator, Silicon photodiode, logarithmic amplifier, digital volt meter, D.C. stabilizer, and microprocessor. This new generation instrument is equipped with a microprocessor to automatically adjust 100 % T and Zero ABS, Factor, and Concentration. Spectro UV-VIS RS operates with a single beam system and 1200 line grating mirror. **Spectro UV-2550** has a four digit display for automatic calculation and direct readout of (T)ransmittance, (A)bsorption, and (C)oncentration.

One of the most important features of the new Spectro UV-2550 is that the light will change automatically from Visible to UV as needed.

Features

- This instrument is the realization of a long history of specialized research, design, and manufacture. It is simple in construction and high in performance. The multiple cell holder is one of the unique features of the Spectro UV-2550. It is able to test, record and print four sample results immediately by the built in USB interface. The Spectro may save the reagents and samples by using the optional semi-micro cuvette of 1.5 ml or less to reduce waste. This unit was constructed with high reliability, durability, ease of operation, and maintenance in mind.
- Microprocessor control, 16x2 LCD display.
- Auto zero and auto 100% T adjustment provided
- Calibration curve can be set up by either measuring or entering up to 10 standards or entering K and B factors directly via the keyboard.
- Data can be printed on an optional desktop printer and can be downloaded to a PC through the USB connection.
- Up to 10 calibration curves can be stored and edited for user's convenience.
- Auto-wavelength control (optional).
- PC Control provided for more accurate and flexible measurement requirements (optional).
- Power source automatic for both 110V. and 220V., 50/60Hz.

Software Specifications

Monoprocessor Built-in Application:

Photometric Measurement: Measuring transmittance or absorbance at the current wavelength together with K factor calculations.

Quantitative Determination: Regression of standard curves and direct determination concentration of samples.

PC Windows Application Software (USB Interface) to link Spectro to computer and printer:

Photometric Measurement: Measuring the photometric values at 1-10 wavelengths together with mathematical calculations according to entered quotations.

Quantitative Determination: Determination of unknown concentration with methods of 1-3 wavelength quantitation, together with fitting of calibration curve of 1st ~ 4th order.

Output: With the Windows clipboard, the measured data and graphics can be copied to other applications software for reports.



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LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

4 square optical cells 10mm.
 2 square quartz cells 10 mm.
 1 multiple cell holder.
 1 Software
 1 Software Manual
 1 Operation Manual
 1 Power cable
 1 Software Cable
 2 Fuses (2A)
 1 Didymium Filter
 1 USB Cable Connecting Main Unit to the PC

Technical Specifications

- Optical System :	Single beam Plane grating as the dispersing element, 1200 L/mm-3 to 3 190-1100nm
- Wavelength Range	190-1100nm (D2 lamp: 190nm-350nm, tungsten lamp: 350nm-1100nm)
- Spectral Bandwidth:	2nm.
- Stray Light:	Less than 0.1%T (NaI 220nm, NaNO ₂ 340nm)≤0.2nm
- Wavelength Accuracy:	±2.0
- Photometric Reproducibility:	≤ 1nm
- Wavelength Reproducibility:	≤ 1nm.
- Photometric Accuracy:	±0.5%T
- Photometric Repeatability:	≤0.3%T
- Photometric Method:.	A, T, C
- Photometric Range:	-0.3 to 3 A 100%T:0.5 %T/3min.
- Stability:	±0.005A 0%T: 0.3% T/3min.
- Interface Port:	USB
- Detector:	Silicon Photo-diode
- Light Source:	Tungsten halogen lamp and D2 lamp
- DNA/RNA Measurement	YES
- Results Printout :	YES
- Software Support:	16 * 2 LCD
- LCD Display:	190mm x 125mm x 128mm
- Sample Chamber:	Labomed Inc. Software (Included).
- Power Requirement :	220/110 V + 10% 50/60 HZ (Automatic)
- Power Consumption:	120W
- Dimensions:	527×435×215 mm
- Net Weight:	17 Kg.

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2510TS

Spectro UV-VIS Touch Screen Single Beam Scanning Spectrophotometer



Spectro UV-2510S is a large color touch screen single beam scanning UV-VIS Spectrophotometer with automatic wavelength settings; with its seamless integration with a regular PC, which makes managing data exceptionally easy. This spectrophotometer delivers enhanced ease-of-use, precision and accuracy resulting in time and cost savings, as well as unprecedented confidence in test results. **UV-2510S** works in the ultraviolet and visible range of 200-1000 nm and has a fixed bandwidth of 2.0 nm. **Spectro UV-2510S spectrophotometer** offers high performance and reliability, which can be used in various applications.

Spectro UV-2510S can be used extensively for qualitative and quantitative analysis in such fields as clinical analysis, medical laboratories, petro-chemistry laboratories, chemistry and biochemistry laboratories, educational labs, research laboratories, analytical laboratories, industrial testing, environmental control, water management, food processing, agriculture and water testing.

Spectro UV-2510S has excellent baseline stability and high resolution. This spectrophotometer has 4 cell holders with a length from 5-100mm to test 4 samples.

Spectro UV-Vis 2510S permits the instrument to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. The RS-232C interface, the port, and the included UV-VIS software link the spectrophotometer and the PC, which are compatible with Windows Platforms. The advanced 2-way communication system allows the user to provide instructions right from the computer and gives the user the ability to print and record results in an easy to use interface. In addition to saving data, the Spectro's software can save parameters, set wavelengths and allow automatic processing of concentration.

This Spectro can be used by itself or linked to a PC.

This Spectro works with Windows 7.

Features

- Automatic wavelength settings
- 5.6 inch Color touch-screen LCD
- 5-100mm cell holder
- USB port
- Internal printer optional
- Software optional
- Lamp lifetime protection
- Power shut-down test data protection



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LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

4 square optical cells 10mm.
 2 square quartz cells 10 mm with lid
 Instruction manual
 Spectro Software
 Software Operation Manual
 Power cable
 PC cable

Technical Specifications

- Optical System :	Single Beam Spectrophotometer Scanning System
- Monochromator:	1200 lines/mm holographic grating C-T monochromator
- Wavelength:	200 nm - 1000 nm
- Wavelength Accuracy:	± 1 nm
- Wavelength Repeatability:	≤0.5nm
- Spectral Bandwidth:	2nm
- Transmittance Accuracy:	± 0.5% (T) (NBS930D)
- Stray Light:	0.1% (T) (220nm, NaI; 360nm, NaNO ₂)
- Transmittance Repeatability:	≤0.2% (T)
- Transmittance Measuring Range:	0.0%-200.0% (T)
- Absorbance Measuring Range:	-0.391~4.000 (A) 0.000~9999 (C), ± 0.003Abs (210-990nm, S model only)
- Noise:	100%T≤0.2%(T) 0%T≤0.1%(T)
- Drifting:	≤0.002%(A)/0.5h (at 250nm and 500nm, warm up 2h)
- Weight	20 kg

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UV-2505

Spectro UV-VIS Spectrophotometer



Spectro UV-2505 is a low priced traditional analytical device used in conventional laboratories. This spectrophotometer delivers enhanced user-friendliness, precision and accuracy resulting in time and cost savings, as well as unprecedented confidence in test results.

Model UV-2505 works in the ultraviolet and visible range of 195-1050 nm and has a 4nm. Bandwidth!. **Model UV-2505** spectrophotometer offers high performance and reliability, which can be used in various applications. Spectrophotometer **Model UV-2505** can be used extensively for pharmaceutical manufacturing, health, clinical laboratory, biochemistry, petrochemistry, environmental protection, quality control, water management, food processing, agriculture, and for a wide range of businesses and industries.

Spectro UV-2505 can use a multiple cell holder to test cells from 10-100mm (optional)

Spectro UV-Vis RS (Model UV-2505) is equipped with the RS-232C interface and port which link the spectrophotometer and the PC using the UV-VIS optional software. Model UV-2505 can be linked to a computer, which is compatible with Windows Platforms, and a printer to display the photometric and spectral data on the PC monitor.

Spectro UV-Vis RS (Model UV-2505) utilizes a new optical system design and is microcomputer controlled. This instrument has soft keys for ease of use and may utilize 13 mm test tube. **Model UV-2505** has excellent baseline stability and high resolution.

Spectro UV-Vis RS (Model UV-2505) consists of a light source (Tungsten Halogen and Deuterium lamp), monochromator, Silicon photodiode, logarithmic amplifier, digital volt meter, D.C. stabilizer, and microprocessor. This new generation instrument is equipped with a microprocessor to automatically adjust 100 % T and Zero ABS, Factor, and Concentration. Spectro UV-VIS 2505 operates with a single beam system and 1200 line grating mirror. Model UV-2505 has a four digit display for automatic calculation and direct readout of (T)ransmittance, (A)bsorption, and (C)oncentration.

This Spectro can be used by itself or linked to a PC.

This Spectro works with Windows 7.

Features

- This instrument is the realization of a long history of specialized research, design, and manufacture. It is simple in construction and high in performance. The multiple cell holder is one of the unique features of the Spectro UV-VIS 2505. It is able to test, record and print four sample results immediately by built in interface RS 232C. The Spectro may save the reagents and samples by using the optional semi-micro cuvette of 1.5 ml or less to reduce waste. This unit was constructed with high reliability, durability, ease of operation, and maintenance in mind.
- Easy to change light source.
- Very competitive price.
- Has FDA license.
- RS 232 computer interface.
- 4 nm bandwidth. NEW AND IMPROVED!
- Wide continuous wavelength.
- At Labomed, we believe greatly in the accuracy of our spectrophotometers. We are so sure of the quality that we can include 2 testing filters (optional) for testing calibration.
- Computer System is optional (NOT INCLUDED).
- Can use a multiple cell holder to test cells from 10-100mm (optional)
- There is a switch on the bottom of the Spectro to choose 110V or 220V before starting.



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LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

4 square glass cells 10mm.
 2 square quartz cells 10 mm.
 1 multiple 4 cell holder.
 1 Power Cable
 1 Instruction manual CD
 1 Dust cover.

Optional Accessories

Multi-purpose cell holder for long path (10-100mm) rectangular cells
 Set of 2 performance testing filters (1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)
 RS232 interface cable (optional)
 Optional Software for Windows 7 Includes RS232C cable, operator's manual.
 (Specify: Spectro UV-Vis 2505)
 External printer (Attaches directly to the Spectro UV-2505)

Technical Specifications

- Optical System :	Single Beam Spectrophotometer Scanning System
- Bandwidth:	4nm. NEW AND IMPROVED!
- Wavelength range:	195-1050 nm.
- Photometric Range:	0-100%T, 0-1.999A
- Light source:	Tungsten Halogen (12V/20W) and Deuterium lamp (DD2.5).
- Detector:	Silicon photodiode.
- The largest allowable error of the wavelength (nm) :	2
- Wavelength accuracy:	±2 nm.
- Wavelength reproducibility:	1 nm.
- Spectral band pass:	4nm.
- Stray light:	< 0.3 % T (at 220 nm. 360nm)
- Transmittance range:	0-100% T.
- Multi cell holder:	4 cuvettes.
- Absorption range:	0-1.999 A.
- Concentration range:	0-1999.
- Direct-read Range :	0-1999.
- The largest allowable error of the transmittance (nm) :	0.5%
- Photometric accuracy:	±0.5% T.
- Monochromator:	1200 lines/grating mirror.
- Noise:	100% Noise <0.3% T/3min, 0% Noise <0.2%
- Resolution:	1 nm
- Stability:	bright current <0.5%T/3 min., dark current <0.2%/3 min.
- Transmittance reproducibility:	0.2 % T.
- Power:	220 V /110 V +-10% 50/60Hz. (You can change the voltage by a switch on the bottom of the Spectro from 110V or 220V.)
- Dimensions:	22"(W)x14"(D)x11.5"(H) inches. 450mm x 390mm x 210mm.
- Net weight:	13 kgs.

Labomed, Inc. is certified by ISO 9001-2013, has CE Conformity and is FDA Licensed.



UV-2502

Spectro UV-VIS RS

Spectrophotometer

UV-VIS Multiple Cell Holders



Spectro UV-2502 is an advanced generation improved Spectro UV-2500 with a newer bandwidth of 2nm. **Spectro UV-2502** is a traditional analytical device used in conventional laboratories. This spectrophotometer delivers enhanced user-friendliness, precision and accuracy

resulting in time and cost savings, as well as unprecedented confidence in test results. **Model UV-2502** works in the ultraviolet and visible range of 190-1100 nm and has a New and Improved 2nm. Bandwidth!

Model UV-2502 spectrophotometer offers high performance and reliability, which can be used in various applications. Spectrophotometer **Model UV-2502** can be used extensively for qualitative and quantitative analysis in such fields as clinical analysis, petrochemistry laboratories, chemistry and biochemistry laboratories, as well as in quality control departments, i.e. environmental control, water management, food processing, and agriculture. **Spectro UV-Vis RS (Model UV-2502)** is equipped with the RS-232C interface and port which link the spectrophotometer and the PC using the UV-VIS software.

Model UV-2502 can be linked to a computer, which is compatible with Windows Platforms, and a printer to display the photometric and spectral data on the PC monitor. **Spectro UV-Vis RS (Model UV-2502)** utilizes a new optical system design and is microcomputer controlled. This instrument has soft keys for ease of use and may utilize 13 mm test tube. **Model UV-2502** has excellent baseline stability and high resolution. **Spectro UV-Vis RS (Model UV-2502)** consists of a light source (Tungsten Halogen and Deuterium lamp), monochromator, Silicon photodiode, logarithmic amplifier, digital volt meter, D.C. stabilizer, and microprocessor. This new generation instrument is equipped with a microprocessor to automatically adjust 100 % T and Zero ABS, Factor, and Concentration. **Spectro UV-VIS 2502** operates with a single beam system and 1200 line grating mirror. **Model UV-2502** has a four digit display for automatic calculation and direct readout of (T)ransmittance, (A)bsorption, and (C)oncentration.

This Spectro can be used by itself or linked to a PC.

Features

- This instrument is the realization of a long history of specialized research, design, and manufacture. It is simple in construction and high in performance. The multiple cell holder is one of the unique features of the Spectro UV-VIS 2502. It is able to test, record and print four sample results immediately by built in interface RS 232C. The Spectro may save the reagents and samples by using the optional semi-micro cuvette of 1.5 ml or less to reduce waste. This unit was constructed with high reliability, durability, ease of operation, and maintenance in mind.

- Easy to change light source.
- Very competitive price.
- Has FDA license.
- RS 232 computer interface.
- 2 nm bandwidth. **NEW AND IMPROVED!**
- At Labomed, we believe greatly in the accuracy of our spectrophotometers.
- We are so sure of the quality that we can include 2 testing filters (optional) for testing calibration.
- Can use 13mm. test tube.
- Wide continuous wavelength.
- Easy to change lamp.
- Computer System is optional (NOT INCLUDED).



Labomed, Inc. is certified by ISO 9001-2013, has CE Conformity and is FDA Licensed.

LABOMED INC.
Manufacturer of Scientific Instruments

Included Accessories

4 square optical cells 10mm.
 2 square quartz cells 10 mm.
 1 multiple cell holder.
 Dust cover.
 Instruction manual.
 1 power cable.

Optional Accessories

- Constant temperature system for kinetic testing: three water jacketed square cell holders and front panel. (Specify: Spectro UV-Vis RS)
- Flow through system (peristaltic pump and flowcell)
- Multi-purpose cell holder for long path (20 - 50mm) rectangular cells
- Holder for test tube cuvettes, 13mm diameter
- Set of 2 performance testing filters (1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)
- RS232 interface cable
- Software for Windows 95/98/XP/7 Includes RS232C cable, operator's manual. (Specify: Spectro UV-Vis 2502)
- External printer (Attaches directly to the Spectro UV-2502)

Technical Specifications

- Optical System :	Single beam spectrophotometer.
- Bandwidth:	2nm. NEW AND IMPROVED!
- Wavelength range:	195-1100 nm.
- Light source:	Tungsten Halogen and Deuterium lamp.
- Detector:	Silicon photodiode.
- Wavelength accuracy:	±2 nm.
- Wavelength reproducibility:	1 nm.
- Spectral band pass:	2nm.
- Stray light:	< 0.5 % T (at 220 nm, 340nm)
- Transmittance range:	0-100% T.
- Stability:	100% T: 0.5%T/3 min.
- Multi cell holder:	4 cuvettes.
- Absorption range:	0-1.999 A.
- Concentration range:	0-1999.
- Photometric accuracy:	±0.5% T.
- Photometric reproducibility:	< 0.3% T.
- Photometric range:	0-200 %T, -0.300-3.000A
- Monochromator:	1200 lines/grating mirror.
- Noise:	0.5% T/3min.
- Transmittance reproducibility:	0.2 % T.
- Power:	220 V 50Hz/110 V +-10% 50/60Hz., 120W
- Dimensions:	22"(W)x14"(D)x11.5"(H) inches., 559 cm (W) x356 cm (D)x 292 cm (H)
- Net weight:	18 kgs.

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BAS-100 TS

Semi-Automatic Clinical Chemistry Analyzer



Comes with keyboard
and mouse

Clinical Chemistry Analyzer BAS-100 TS is a new concept designed clinical chemistry analyzing system for biochemical research and clinical diagnostics: Powerful data process function makes it easy to perform data management and statistics: the report may be in a single test or with completed patient data, which will be convenient for clinical diagnostics. **BAS-100 TS** includes a suction pump system. This semi automatic biochemistry analyzer can measure all blood elements and print on built in printer as indicated in the features section. **BAS-100 TS** has a built in printer and flow through system to use up to 32uL and incubating system for 37° for kinetic test. **The BAS-100 TS** is open to being used with all brands of biochemistry reagents. Single chip machine, it uses the Windows CE operating system, it does not require Windows XP or Windows 7.

**THIS BIOCHEMISTRY ANALYZER CAN TEST SAMPLES IN TWO WAYS,
BY SUCTION PUMP AND BY DISPOSABLE CUVETTE**

Features

- BAS-100TS uses both a suction pump system and a cuvette system for analytical testing.
- Photometric scanning of Spectrum, Analysis in multiple longitude of wave and kinetics, endpoint, fixed time, kinetic. Blank of water or blank of reagent method can be linear or nonlinear, according to the type of reagent you are using.
- Diagnosis of Operation
- Automatic Calibration
- System of aspiration of sample (Pale of flow, Aspiration System, Fasl of Residuals, Tubes, Connectors, Etc)
- Power Cable Included
- Works with WindowsCE operating system. Single chip machine, does not require Windows XP or Windows 7.
- Enzyme Kinetic GPT GOT tests.

Included Accessories

- 1 Power Cable
- 1 Power Adapter
- 1 Pump Cassette
- 1 Waste Tube
- 1 Aspiration Tube
- 1 Printer Paper Roll
- 1 Lamp House
- 5 Clotting Cuvettes
- 1 Spare Tubing
- 1 Instruction Manual CD
- 1 Keyboard Extra
- 1 Mouse

Optional Accessories

- 2 Reserve halogen Lamp
- 4 Rolls of Printer Paper



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Technical Specifications

- Assay method:	Absorbance, concentration, factor, 1 point end point, 2 point end (Sample blank), fixed time, kinetic, and dichromatic, immunoturbidimetric. Coagulation (optional).
- Wave Length:	7 filters, 340, 405, 450, 505, 546, 578, 630 as standard configuration. (5 years warranty for each filter)
- Light source:	6V 10W Long-life Tungsten halogen lamp. Service life 2000 hours. Light has auto shutdown function that will extend usage period. Auto-Sleep function.
- Display:	7.0 inch TFT Color touch screen, 260000 Pixel, 800x480 resolution; real time to show response curve
- Built-in Thermal Printer:	Built-in Thermal Printer, 57mm printer paper Paper alarm, transparent cover; easy installation
- Incubation temperature:	37C and room temperature are standby; temperature accuracy $\pm 0.1^{\circ}\text{C}$, by means of Peltier elements
- Flow cell capacity and optical path:	32ul, 10mm
- Resolution:	0.0001 Abs
- Photometric Range:	0 – 3.5 Abs
- Absorbance range:	0.0000-2.5000 (10mm flowcell) 0.0000-3.5000 (6mm flowcell)
- Spectral Band:	< 8 nm
- Vacuum system programmable:	< 0.5 % T (at 220 nm. 340nm)
- Carry over:	<1%;
- Stability:	<0.005Abs/hour
- Absorbance Precision:	0.0001Abs;
- Absorbance drift:	<0.005Abs/hour
- Absorbance repeatability:	CV \leq 1%
- QC analysis:	L-J QC chart, Westguard Multi-regulation analysis.
- Software:	Window CE 6.0 operation system, high-capacity storage; edit 200 assay program; 200000 results Unlimited storage by connecting to computer. Single chip machine, does not require Windows XP or Windows 7.
- Operation Manual:	Available in 4 different languages
- CPU:	ARM Cortex-A8, 720MHz
- Memory:	DDR2 SDRAM: 1G bit Flash: 256 MB Over 200 programs, 200,000 results can be stored.
- USB Port:	USB Mouse; USB keypad; USB Printer; 4 USB ports for Keyboard, Mouse, Printer, U Disk, Bar Code Reader. 1 USB Slave for PC connections (supports PC software control function). 1 Ethernet port. Supports all HP series inkjet printers; Computer control software, LIS system available. External scanner is available. Support remote diagnostics
- Operational Environment:	Temperature: 10C~37C. Humidity: $\leq 85\%$.
- Power supply:	Wide power supply: 100-240V 50Hz or 60Hz
- Dimensions:	400mm (L) x 300mm (W) 160mm (H)
- Weight:	17 lbs.

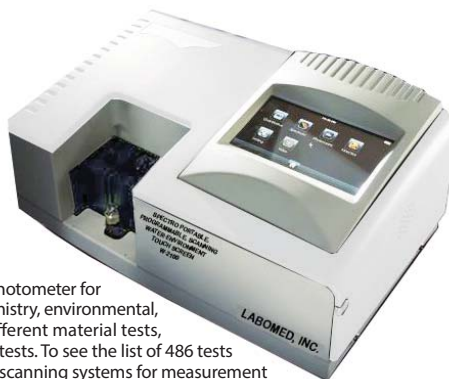
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W-2100

Water Testing Spectrophotometer

Programmable, Portable,



Spectro W-2100 is the newest, high technology spectrophotometer for testing water, waste water, agricultural, food, industry, chemistry, environmental, and related industries, with easy programming of 486 different material tests, measuring spectro-quantitation, kinetic and photometric tests. To see the list of 486 tests for different elements, click here. **Spectro W-2100** offers a scanning systems for measurement of various products and environments. This special **Spectro W-2100** also can be used for all analytical tests that require wavelengths between 380 to 800 nm. **Spectro W-2100** is portable and has a rechargeable battery, while possessing all the features of bench top spectrophotometers, with CCD detection technology and touch screen TFT interface. It is very user-friendly and easy to use. **Spectro W-2100** can be connected to the PC by the USB port. **Spectro W-2100** is supplied with a carrying case and various accessories for easy usage. As Merck Chemicals test kits are available in all countries of the world, this **Spectro W-2100** employs the Merck Chemicals test kit for convenience. **Spectro W-2100** has all of the 486 Tests are pre-programmed in the software. **Spectro W-2100** has some parameters in the pre-programmed tests which can be changed by the User, and if the User needs, they can press the RESET button to return to the default setting. **Spectro W-2100** has the Quantitative mode which allows the User to make his or her own programs for new tests. **Spectro W-2100** could link with the Micro-printer. The User can purchase the Micro-printer locally. The Fiber-optic Dip probe is optional accessory. **Spectro W-2100** with built-in battery and package has a total gross weight of 3kg. Wavelength: 380-800nm. **This Spectro can be used by itself or linked to a PC.**

The operation manual is available in 18 available different languages.

Features

- Operating System with touch screen TFT Interface.
- The Spectrum workspace allows for high speed spectral scanning, with zoom and peak identification tools. Spectral Scans can be performed in the field, stored to instrument memory and later transferred to the W-2100 Data Viewer Software for further inspection and reporting.
- The Quantitative workspace is used to construct calibration curves, and measure concentration of unknown samples. Curves can be constructed in 1st – 4th order, while both methods and measurement data can be saved to the instrument memory.
- The Photometric workspace is used to quickly and easily perform fixed wavelength measurements in either Absorbance or Transmission. It can be set to a K factor where multiplications are required to determine sample concentration. Once the measurement is complete, store to instrument memory for future recall.
- The Kinetic workspace enables the measurement of Absorbance or Transmission as a function of time. Use the zoom and peak pick features to obtain a better view of the Kinetic curve. Measurement data can be saved and recalled at any time.
- User and admin rights are easily controlled from the GLP feature in the settings menu. Create user groups and specify their privilege level, then add new users to a specified group.
- Use the universal cell holder to measure various pathlength rectangular cells and rounded test tubes, accommodating all of your sampling requirements.
- The instrument can be configured from the settings menu.
- Use the fiber dip probe for in-situ sample measurements.
- Once all of the required field analysis has been performed and measurement data stored to instrument memory, the W-2100 Spectrophotometer can be connected to the W-2100 Data Viewer Software inside the PC via USB for transfer of analysis data from all of the instrument workspaces.
- Use the Data Viewer Software to further interpret analysis results, export data into a wide variety of formats and produce analysis reports for storage or printing.
- Spectroquant® test kits, offered by Merck Chemicals, can offer an analytical solution for the following parameters by means of 130 different test kits: Drinking water, Surface water, Process water, Municipal or industrial wastewater, Beverages, Disinfectant control. It offers 356 tests for other elements.



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Included Accessories

1 Rectangular Cell Holder
 1 Cylindrical Test Tube Holder
 1 Fiber Dip Probe with 10mm and 20mm pathlength tip
 Dust cover.
 Win98/2000/XP Compatible
 Instruction manual available in 18 different languages
 Software Manual available in 18 different languages
 Power cable
 PC cable

Technical Specifications

- Wavelength range:	380 to 800 nm.
- Photometric accuracy:	±1.0%
- Photometric repeatability:	≤0.3%
- Wavelength Accuracy:	±1.0 nm
- Wavelength Repeatability:	±0.1 nm
- Wavelength Resolution:	0.4 nm
- Spectral Bandwidth:	4 ±0.8nm
- Straylight:	≤0.5%
- Baseline Flatness:	±0.005Abs
- Noise:	≤0.5%
- Drift:	≤1.0%
- Measurement Workspaces:	Spectrum, Quantitative, Kinetics, Photometric
- Light Source:	Convergent tungsten lamp with 7000 hr lifespan
- Detector:	CCD Sony ILX51 2048 Pixels
- Optical System:	Polychromatic, with concave holographic grating
- Power:	Built-in Rechargeable Battery with 5 hr usage
- Software:	Data Viewer Software
- Operating System:	Windows Embedded CE 6.0 with 2 GB Flash Memory
- Computer Interface:	USB
- Sampling Accessories:	Fiber Dip Probe with 10mm and 20mm pathlength tip Rectangular Cell Holder Cylindrical Test Tube Holder
- Input/Display:	320 x 240 True Color TFT Touch Screen
- Dimensions:	280 x 170 x 110mm
- Environmental Temperature:	Operating 5 to 30°C, Storage -20 to 55°C
- Printer:	Micro printer (Optional).

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2050S

Visible Touch Screen Single Beam Spectrophotometer



Spectro 2050S is a large color touch screen single beam scanning Visible Spectrophotometer with automatic wavelength settings; with its seamless integration with a regular PC, which makes managing data exceptionally easy. This spectrophotometer delivers enhanced ease-of-use, precision and accuracy resulting in time and cost savings, as well as unprecedented confidence in test results. **Spectro 2050S** works in the visible range of 325-1000 nm and has a fixed bandwidth of 4.0 nm. **Spectro 2050S** spectrophotometer offers high performance and reliability, which can be used in various applications.

Spectro 2050S can be used for qualitative and quantitative analysis in such fields as clinical analysis, medical laboratories, petro-chemistry laboratories, chemistry and biochemistry laboratories, educational labs, research laboratories, analytical laboratories, industrial testing, environmental control, food processing, agriculture and water testing.

Spectro 2050S has excellent baseline stability and high resolution. This spectrophotometer has 4 cell holders with a length from 5-100mm to test 4 samples.

Spectro 2050S permits the instrument to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. The RS-232C interface, the port, and the included software link the spectrophotometer and the PC, which are compatible with Windows Platforms. The advanced 2-way communication system allows the user to provide instructions right from the computer and gives the user the ability to print and record results in an easy to use interface. In addition to saving data, the Spectro's software can save parameters, set wavelengths and allow automatic processing of concentration.

This Spectro can be used by itself or linked to a PC.

Features

- Scanning System
- Automatic wavelength settings
- 5.6 inch Color touch-screen LCD
- 5-100mm cell holder
- USB port
- Internal printer optional
- Software optional
- Lamp lifetime protection
- Power shut-down test data protection

Included Accessories

4 square optical cells 10mm.
2 square quartz cells 10 mm with lid
Instruction manual
Spectro Software
Software Operation Manual
Power cable
PC cable



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Technical Specifications

- Optical System :	Visible Single Beam Spectrophotometer Scanning System
- Monochromator:	1200 lines/mm holographic grating C-T monochromator
- Wavelength:	325 nm - 1000 nm
- Wavelength Accuracy:	± 1 nm
- Wavelength Repeatability:	≤0.5nm
- Spectral Bandwidth:	4nm
- Transmittance Accuracy:	± 0.5% (T) (NBS930D)
- Stray Light:	0.1% (T) (220nm, NaI; 360nm, NaNO ₂)
- Transmittance Repeatability:	≤0.2% (T)
- Transmittance Measuring Range:	0.0%-200.0% (T)
- Absorbance Measuring Range:	-0.391~4.000 (A) 0.000~9999 (C) ± 0.003Abs (335-990nm, S model)
- Noise:	100%T≤0.2%(T) 0%T≤0.1%(T)
- Drifting:	≤0.002%(A)/0.5h (at 500nm, warm up 2h)
- Weight	17 kg

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2000RS

Visible Spectrophotometer

With 4 automatic cell holder



Spectro 2000 RS is a superior instrument for laboratories and is an advanced and affordable system that generates accurate and reproducible measurements. This spectrophotometer is ideal for chemical laboratories, biochemical laboratories, analytical and medical laboratories, environmental protection, and agricultural industry.

Spectro 2000 RS is accurate, dependable, and an exceptional value. Further, it has excellent baseline stability, high resolution and continuous wavelength ranging from 325 nm to 1100 nm.

Spectro 2000 RS is equipped with the RS-232C interface and port which link the spectrophotometer and the PC with the included UV-VIS software. With the RS-232C, the instrument can be linked to a computer and a printer to display the photometric and spectral data on the PC monitor.

Spectro 2000 RS is an automatic instrument which utilizes a microprocessor with most advanced technology. Absorption, transmission, concentration, and wavelength are automatic and computerized. This instrument's superior technology allows this spectrophotometer to examine samples with excellent resolution.

Spectro 2000 RS is rugged, reliable, affordable, and maintenance free.

Spectro 2000 RS's advantage is its 4 large automatic cell holder movement by microprocessor and use of the soft key pad. This spectrophotometer is excellent for water and water waste testing. Spectro 2000 RS is both reliable and user-friendly.

This Spectro can be used by itself or linked to a PC.

Features

- Automatic self adjustment
- 4 Automatic cell holder
- Auto select wavelength
- Auto Zero ABS and 100%T.
- Auto A/T/C and Factor.
- Auto Escape and back-up.
- Interface RS232C port for use with computer & printer.
- Built-in printer.
- Switch for 110V 60Hz. and 220V 50Hz.
- F.D.A. Licensed.
- High photometric accuracy for smooth spectral band pass.
- Reliable stability for reliable testing
- Wide continuous wavelength range for test flexibility
- Easy to change Tungsten Halogen lamp
- COMPETITIVE PRICE.
- Computer System is optional (NOT INCLUDED).



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Included Accessories

4 square glass cells 10mm
 1 mounted multiple 4 cell holder
 Dust cover
 Cable
 Instruction book
 Optional: Large cell holder 20-30-40 and 50mm

Optional Accessories

- Multi-purpose cell holder for long path cells (Specify Spectro 2000 RS or Spectro 2000 RSP)
- Peltier constant temperature control system (single cell, 15-55°C)
- Square cuvette (optical glass), 10mm path length
- Micro and semi-micro cells, set of 2 with covers, useable for wavelengths from 325 - 1100nm. (Specify sample volume: 0.5, 0.75, 1.00 or 1.25ml)
- Rectangular long path cell (optical glass. Specify 20, 30, 40 or 50mm path length)
- Software for Windows 95/98/XP/7 Includes RS232C cable, operator's manual. (Specify: Spectro 23 RS)
- Constant temperature system for kinetic testing: three square cell holders and front panel. (Specify: Spectro 23 or Spectro 23 RS)
- Flow through system (peristaltic pump and flowcell)
- Multi-purpose cell holder for long path (20 - 50mm) rectangular cells
- Holder for test tube cuvettes, 10 - 25mm diameter

Technical Specifications

- Optical System:	Single Beam
- Wavelength Range:	325-1100nm.
- Light Source:	Tungsten-Halogen Lamp
- Detector:	Silicon Photodiode
- Wavelength Distance:	1nm.
- Wavelength Accuracy:	+ 1 nm.
- Wavelength Reproducibility:	0.5 nm.
- Photometric Range:	0.0%-150.0%T -0.175A-2.000A 0-6000C
- Spectral Band Pass:	6 nm.
- Transmittance Reproducibility:	0.3% (T)
- Transmittance Range:	0-125% (T)
- Absorption Range:	0-1999% (A)
- Concentration Range:	0-2000
- Photometric Accuracy:	+0.5 (T) +0.004 A.
- Monochromator Grating Mirror:	1200 lines/mm.
- Readout:	LCD 2 line
- Power Supply Switching:	110V./60 Hz. and 220V./50Hz.
- Dimensions:	16" x 14" x 8" (Inches).
- Net Weight:	20 lb. (9 kg.)
- Operating System:	Windows 95/98/XP/7

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2000RSP

Visible Spectrophotometer

With 4 automatic cell holder



Spectro 2000 RSP is a superior instrument as with Spectro 2000RS with the added benefit of a built in printer. This spectrophotometer is excellent for laboratories and is an advanced and affordable system that generates accurate and reproducible measurements. This spectrophotometer is ideal for chemical laboratories, bio chemical laboratories, analytical and medical laboratories, environmental protection, and agricultural industry.

Spectro 2000 RSP is accurate, dependable, and an exceptional value. Further, it has excellent baseline stability, high resolution and continuous wavelength ranging from 325 nm to 1100 nm.

Spectro 2000 RSP is equipped with the RS-232C interface and port which link the spectrophotometer and the PC with the included UV-VIS software. With the RS-232C the instrument can be linked to a computer and a printer to display the photometric and spectral data on the PC monitor.

Spectro 2000 RSP is an automatic instrument which utilizes a microprocessor with most advanced technology. Absorption, transmission, concentration, and wavelength are automatic and computerized. This instrument's superior technology allows this spectrophotometer to examine samples with excellent resolution. This spectrophotometer is rugged, reliable, affordable, and maintenance free.

Spectro 2000 RSP's advantage is its 4 automatic cell holder movement by microprocessor and use of the soft key pad. This machine is both reliable and user-friendly.

Features

- Automatic self adjustment
- 4 Automatic cell holder
- Auto select wavelength
- Auto Zero ABS and 100%T.
- Auto A/T/C and Factor.
- Auto Escape and back-up.
- Interface RS232C port for use with computer & printer.
- Built-in printer.
- Switch for 110V 60Hz. and 220V 50Hz.
- F.D.A. Licensed.
- High photometric accuracy for smooth spectral band pass.
- Reliable stability for reliable testing
- Wide continuous wavelength range for test flexibility
- Easy to change Tungsten Halogen lamp
- COMPETITIVE PRICE.
- Computer System is optional (NOT INCLUDED).



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Included Accessories

4 square glass cells 10mm
 1 mounted multiple 4 cell holder
 Dust cover
 Cable
 Instruction book

Optional Accessories

- Multi-purpose cell holder for long path cells (Specify Spectro 2000 RS or Spectro 2000 RSP)
- Peltier constant temperature control system (single cell, 15-55°C)
- Square cuvette (optical glass), 10mm path length
- Micro and semi-micro cells, set of 2 with covers, useable for wavelengths from 325 - 1100nm. (Specify sample volume: 0.5, 0.75, 1.00 or 1.25ml)
- Rectangular long path cell (optical glass. Specify 20, 30, 40 or 50mm path length)
- Software for Windows 95/98/XP/7 Includes RS232C cable, operator's manual. (Specify: Spectro 23 RS)

Technical Specifications

- Optical System:	Single Beam
- Wavelength Range:	325-1100nm.
- Light Source:	Tungsten-Halogen Lamp
- Detector:	Silicon Photodiode
- Wavelength Distance:	1nm.
- Wavelength Accuracy:	+ 1 nm.
- Wavelength Reproducibility:	0.5 nm.
- Photometric Range:	0.0%-150.0%T -0.175A-2.000A 0-6000C
- Spectral Band Pass:	6 nm.
- Transmittance Reproducibility:	0.3% (T)
- Transmittance Range:	0-125% (T)
- Absorption Range:	0-1999% (A)
- Concentration Range:	0-2000
- Photometric Accuracy:	+0.5 (T) +0.004 A.
- Monochromator Grating Mirror:	1200 lines/mm.
- Readout:	LCD 2 line
- Printer:	Included
- Power Supply Switching:	110V/60 Hz. and 220V/50Hz.
- Dimensions:	16" x 14" x 8" (Inches).
- Net Weight:	20 lb. (9 kg.)
- Operating System:	Windows 95/98/XP/7

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24RS Visible Spectrophotometer with Multiple Cell Holders



Spectro 24RS is a visible spectrophotometer enables quantitative and qualitative analysis of samples within the visible spectrum. It can be widely used in pharmaceutical manufacturing, health, clinical tests, biochemistry, petrochemical industry, environmental protection and quality control fields. It is one of the common instruments in physical and chemical labs. It is an analytical instruments with a built-in interface RS-232C. The interface enables this spectrophotometer to communicate with any IBM compatible computer and printer. The superior machinery of **Spectro 24RS** analyzes, stores, records, and prints test results swiftly and consistently. This spectrophotometer can work in the Visible Range.

Spectro 24RS can use a multiple cell holder to test cells from 10-100mm (optional)

This spectrophotometer provides enhanced ease-of-use, precision and accuracy resulting in time and cost savings. This new generation instrument is equipped with a microprocessor to automatically adjust 100 % T and Zero ABS, Factor and Concentration. This economical four cell visible spectrophotometer is ideal for small laboratories, biochemical labs, clinical labs, and educational institutions. This spectrophotometer uses a soft key pad, and it has a continuous wavelength ranging from 320 nm to 1100 nm. Spectro 24RS is able to analyze and record four sample results immediately.

Spectro 24RS is rugged, reliable, low cost, and maintenance free. This instrument simplifies analysis and increases measurement capabilities for routine applications in various fields such as chemistry, biochemistry, agricultural, petrochemistry, environmental protection, science classes, educational laboratories and general analytical industry. This Spectro can use 13x100mm test tubes.

Features

- A very durable instrument.
- Large cell optional.
- Wide, continuous wavelength ranges for test flexibility.
- Automatic absorption, transmission and concentration by microprocessor
- High photometric and wavelength accuracy for the best results by having a 5 nm bandwidth.
- Low stray radiant energy and noise for unequivocal readings, even at high absorbencies.
- Excellent stability characteristics for reliable test results.
- Carefully designed. Easy operation and maintenance.
- Labomed, Inc. is F.D.A. Licensed.
- Very competitive price.
- At Labomed, we believe greatly in the accuracy of our spectrophotometers. We are so sure of the quality that we can include 2 testing filters (optional) for testing calibration.
- Small printer is available for date printout as an option, which does not require a computer hookup or software.
- Computer System is optional (NOT INCLUDED).
- Can use a multiple cell holder to test cells from 10-100mm (optional)
- There is a switch on the bottom of the Spectro to choose 110V or 220V before starting



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Included Accessories

4 square glass cells 10mm
 1 mounted multiple 4 cell holder
 1 Dust cover
 1 power cable
 1 instruction manual CD

Optional Accessories

- Multi-purpose cell holder for long path (10-100mm) rectangular cells
 - Holder for test tube cuvettes, 13mm diameter
 - Software for Windows 7 Includes RS232C cable, operator's manual.
 (Specify: Spectro 23 RS)

Technical Specifications

- Optical System:	Single Beam Spectrophotometer
- Operation and Display:	LCD
- Wavelength Range:	320-1100nm.
- Light Source :	Tungsten-Halogen Lamp
- Detector:	Silicon Photodiode
- Wavelength Accuracy:	2nm.
- Wavelength Reproducibility:	1nm.
- Photometric Range:	- 0-100%T - 0-1.999A
- Spectral Band Pass:	4nm.
- Stray Light :	≤0.5%T. at 360nm.
- Transmittance Measuring Range:	0-200% (T)
- Transmittance MPE:	±0.5% (T)
- Absorption Range:	0-1999 (A)
- Absorbance Measuring Range:	-0.300A - 3.000A
- Concentration Range:	0-2000
- Photometric Accuracy:	+0.5% (T) +0.004A
- Transmittance Reproducibility:	0-100%T. 0.5% (T)
- Transmittance Repeatability:	≤0.2% (T)
- Monochromator:	Grating Mirror 1200 Lines/nm
- Multi Cell Holder:	4 Cuvettes
- Power Supply :	220V. 50Hz/110V 60Hz (You can change the voltage by a switch on the bottom of the Spectro from 110V or 220V.)
- Dimensions:	560mm (L) x 480mm (W) 490mm. (H)
- Net Weight :	14.5 Kg. (32 lbs.)

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23RS Visible Spectrophotometer with Multiple Cell Holders



Spectro 23 RS is a traditional analytical instrument used in conventional laboratories with advanced technology of built-in interface RS-232C. The interface enables this spectrophotometer to communicate with any IBM compatible computer and printer. With the RS-232C port and the UV-VIS software, it enables this instrument to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. The superior machinery of Spectro 23 RS analyzes, stores, records, and prints test results swiftly and consistently. This spectrophotometer can work in the Visible, Near-Ultraviolet, and Near Infrared Spectral Range and it is perfectly suited for quantitative and qualitative analysis. This spectrophotometer delivers enhanced ease-of-use, precision and accuracy resulting in time and cost savings, as well as unprecedented confidence in test results. This new generation instrument is equipped with a microprocessor to automatically adjust 100 % T and Zero ABS, Factor and Concentration.

Spectro 23 RS is an economical four cell visible spectrophotometer which is ideal for small laboratories, biochemical labs, clinical labs, and educational institutions. This spectrophotometer uses a soft key pad and delivers enhanced ease-of-use, precision and accuracy resulting in time and cost savings, as well as unprecedented confidence in test results. **Spectro 23 RS** is easy to use, affordable, compact and light weight. It has a continuous wavelength ranging from 320 nm to 1100 nm. Spectro 23 RS is able to analyze and record four sample results immediately. Furthermore, Spectro 23 RS may save the reagents and samples by using the optional semi-micro cuvette of 1.5 ml or less to help reduce waste.

Spectro 23 RS is rugged, reliable, low cost, and maintenance free. This instrument simplifies analysis and increases measurement capabilities for routine applications in various fields such as chemistry, biochemistry, agricultural, petrochemistry, environmental protection, science classes, educational laboratories and general analytical industry.

Features

- A very durable instrument.
- Test tube holder and large cell optional.
- Wide, continuous wavelength ranges for test flexibility.
- Automatic absorption, transmission, factor and concentration by microprocessor
- High photometric and wavelength accuracy for the best results by having a 6 nm bandwidth.
- Low stray radiant energy and noise for unequivocal readings, even at high absorbencies.
- Excellent stability characteristics for reliable test results
- Carefully designed. Easy operation and maintenance.
- High absolute reading accuracy, outstanding stability and reproducibility with distinct digital display.
- F.D.A. Licensed.
- Very competitive price.
- Can be applied for constant temperature & kinetic test by optional parts.
- At Labomed, we believe greatly in the accuracy of our spectrophotometers.
We are so sure of the quality that we can include 2 testing filters (optional) for testing calibration.
- Computer System is optional (NOT INCLUDED).
- Auto zero/Auto calibration.
- Optional flow cuvette - Temperature.



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Included Accessories

4 square glass cells 10mm
 1 mounted multiple 4 cell holder
 1 Dust cover
 1 power cable
 1 instruction book

Optional Accessories

- Constant temperature system for kinetic testing: three square cell holders and front panel. (Specify: Spectro 23 or Spectro 23 RS)
- Flow through system (peristaltic pump and flowcell)
- Multi-purpose cell holder for long path (20 - 50mm) rectangular cells
- Holder for test tube cuvettes, 13mm diameter
- Set of 2 performance testing filters (1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)
- Software for Windows 95/98/XP/7 Includes RS232C cable, operator's manual. (Specify: Spectro 23 RS)

Technical Specifications

- Optical System:	Single Beam Spectrophotometer
- Wavelength Range:	320-1100nm.
- Light Source :	Tungsten-Halogen Lamp
- Detector:	Silicon Photodiode
- Wavelength Accuracy:	2nm.
- Wavelength Reproducibility:	0.5nm.
- Spectral Band Pass:	6nm.
- Stray Light :	≤0.5%T. at 360nm.
- Transmittance Range:	0-100% (T)
- Absorption Range:	0-1999 (A)
- Absorbance Measuring Range:	-0.300A - 3.000A
- Concentration Range:	0-2000
- Photometric Accuracy:	+0.5% (T) +0.004A
- Transmittance Reproducibility:	0-100%T. 0.5% (T)
- Monochromator:	Grating Mirror 1200 Lines/nm
- Multi Cell Holder:	4 Cuvettes
- Power Supply :	230V. 50Hz/110V 60Hz
- Dimensions:	22"(W) x 14"(D) x 11 ½ (H) Inches
- Net Weight :	35 Lbs.

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Spectro 20D Visible Spectrophotometer



Spectro 20D Plus RS-232C is a traditional analytical device used in small and educational laboratories. This spectrophotometer delivers enhanced ease-of-use, precision and accuracy resulting in time and cost savings, as well as unprecedented confidence in test results. **Spectro 20D Plus RS-232C** has spectral bandwidth of 6.0 nm. This instrument has a single cell holder for test tubes and two adapters for 10 x 10 mm cells. **Spectro 20D Plus RS-232C** is lightweight and compact with a continuous wavelength from 320 to 1000nm. Equipped with a microprocessor, this instrument is ideal for small laboratories and educational institutions.

Spectro 20D Plus RS-232C offers ease of use and reliability which can be used in various applications. **Spectro 20D Plus RS-232C** can be used extensively for qualitative and quantitative analysis.

Spectro 20D Plus RS-232C is a versatile digital spectrophotometer with a built-in RS-232C port permits the instrument to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor. This interface provides easy communication between the spectrophotometer and the Window based PC.

Spectro 20D Plus RS-232C utilizes soft keys for user-friendliness; with buttons to access settings such as absorption, transmission, concentration and factor, adjusting 0A and 100%T.

Spectro 20D Plus RS-232C is able to send data to the computer or print directly from the Spectro to an external printer.

This Spectro can be used by itself or linked to a PC.

Features

- Microprocessor controlled.
- Large Digital LCD Display.
- Auto transmission, absorption, concentration and factor.
- Silicon Photodiode detector
- It can use square or round cells.
- Interface RS232 to link to a computer.
- Wide continuous wavelength range.
- Built in stray light filter.
- 1200 /mm. grating mirror.
- Computer System is optional (NOT INCLUDED).
- Can use 13mm. test tube.



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Included Accessories

2 adapters for 10x10 mm. square cells
 2 optical glass cells 10x10 mm.
 1 Instruction Manual.
 1 Zero absorption cell.

Optional Accessories

- Set of 2 performance testing filters (1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)
 - External printer
 - RS232 interface cable
 - Software for Windows 95/98/XP/7. Includes RS232C cable and operator's manual (Specify: Spectro SC)

Technical Specifications

- Wavelength Range:	320-1000nm.
- Spectral bandwidth:	6nm.
- Data Processing:	Microprocessor
- Wavelength Accuracy:	+/- 1nm.
- Wavelength Repeatability:	+/- 1nm.
- Optical System:	Grating, 1200 lines/mm.
- Stray Light:	<-0.5%T at 340 nm & 400nm.
- Display:	3.5 LCD
- Photometric Range:	0-100%T 0-2.5A 0-1999C
- Zero & Blank set:	Automatic
- Photometric Accuracy:	+/- 1%T
- Drift:	-<0.003 A/hour after warming up
- Detector:	Silicon Photodiode
- Light Source:	Tungsten Halogen lamp, 6V 10W
- Sample Volume:	0.4ml (minimum)
- Sample Container:	Round and Square cuvette
- Data Output:	Analog output, RS 232C interface, Printer (SEIKO dpu-414)
- Power Requirements:	110-240V. AC, 50/60Hz., Selected automatically
- Dimensions:	330 (W) x 130 (H) x 270 (D) mm.
- Net Weight:	5.2 kg.

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Spectro SC

Visible Spectrophotometer

With RS



Spectro SC is an economical single cell visible spectrophotometer which is ideal for small laboratories and educational institutions. This spectrophotometer delivers enhanced ease-of-use, precision and accuracy resulting in time and cost savings, as well as unprecedented confidence in test results.

Spectro SC is easy to use, affordable, compact and light weight.

It has a continuous wavelength ranging from 330 nm to 1000 nm and the ability to hold both square cells (10 mmx10 mm) and round test tubes.

Spectro SC is rugged, reliable, low cost, and maintenance free. This instrument simplifies analysis and increases measurement capabilities for routine applications in various fields such as chemistry, biochemistry, agricultural, petrochemistry, environmental protection, science classes, educational laboratories and general analytical industry.

This Spectro can be used by itself or linked to a PC.

The operation manual is available in 18 available different languages.

Features

- Microprocessor controlled.
- Large Digital LCD Display.
- Auto transmission, absorption, concentration and factor.
- Silicon Photodiode detector
- It can use square or round cells.
- Interface RS232 to link to a computer.
- Wide continuous wavelength range.
- Built in stray light filter.
- 1200 /mm. grating mirror.
- Computer System is optional (NOT INCLUDED).



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Included Accessories

2 square cells 10 mm x 10 mm.
1 instruction book.
2 square cell holder.

Optional Accessories

- Set of 2 performance testing filters (1 "E filter" for photometric accuracy test and 1 didymium filter for wavelength accuracy test)
- External printer
- RS232 interface cable
- Software for Windows 95/98/XP/7. Includes RS232C cable and operator's manual (Specify: Spectro SC). The operation manual is available in 18 different languages.

Technical Specifications

- Wavelength Range:	320-1000nm.
- Spectral bandwidth:	6nm.
- Data Processing:	Microprocessor
- Wavelength Accuracy:	+/- 1nm.
- Wavelength Repeatability:	+/- 1nm.
- Optical System:	Grating, 1200 lines/mm.
- Stray Light:	<-0.5%T at 340 nm & 400nm.
- Display:	3.5 LCD
- Transmittance Range:	0-100%T
- Concentration Range:	0-1999C
- Zero & Blank set:	Automatic
- Photometric Accuracy:	+/- 1%T
- Drift:	-<0.003 A/hour after warming up
- Detector:	Silicon Photodiode
- Light Source:	Tungsten Halogen lamp, 6V 10W
- Sample Volume:	0.4ml (minimum)
- Sample Container:	Round and Square cuvette
- Data Output:	Analog output, RS 232C interface, Printer (SEIKO dpu-414)
- Power Requirements:	110-240V. AC, 50/60Hz., Selected automatically
- Dimensions:	330 (W) x 130 (H) x 270 (D) mm.
- Net Weight:	5.2 kg.

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Flow Through System Pump



The **Flow Through System Pump** is a fixed-speed, self priming peristaltic pump. The peristaltic pump roller pressure squeezes fluid through the tubing. The flow is proportional to the speed of the rollers (rpm) and the inside diameter of the tubing).

The pump can be used to pump fluid or gas without contaminating the pump; the pumped material contacts the tube only.

Technical Specifications

TUBING SIZE SELECTION			Flow Rate (mL/min)***			
Catalog No.		RPM** 60Hz	Tube Size (ID x 3/32 in. Wall)			
			1/16"	1/8	3/16	1/4
Labomed	900-1600	49	11	44	100	150

* Requires shim

** At 50 Hz, flow rate will be 16% lower

*** Flow rate accuracy: +8%

CHEMICAL COMPATIBILITY

Selection of tubing material depends on the chemical being pumped.

Ask for our Tubing Guide to select the appropriate type of tubing links for the liquid in use.



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Thermoelectric Controller - Peltier System



Based on Peltier effect, the thermoelectric controller is used to analyze and measure samples under the constant temperature. It is applicable for Spectro UV-VIS-2700 and UVS-2800, Spectro UVD-2950, UVD-3000, UVD-3200, UVD-3400 and UVD-3500.

Basic configuration: a temperature controller and a constant-temperature cell holder.

Types of accessories: (1) single-stage constant-temperature device.
(2) multi-stage constant-temperature device.

Technical Specifications

-Temperature range:	15°C-55°C
-Temperature accuracy:	0.1°C
-Temperature resolution:	0.0625°C
-Display mode:	LCD digital display
-Adjustment mode:	continuous adjustment
-Power supply:	85VAC-265VAC, 50-60Hz
-Ambient temperature:	0-40°C
-Relative humidity:	<80%

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Reflection Accessory



Reflection Accessory ACC_RF-2950/2960
for Spectro 2950/2960



Reflection Accessory ACC RF3500 for
Spectro 2700/2800/3500

The Reflection Accessory is used as a special accessory for UVS-2700, UVS-2800 and UVD-3500 Spectrophotometers.

It is applied to the examination of the reflectance and reflective spectrum of reflecting components and materials, such as mirrors, crystals and so on.

Optical principle

"Specular reflection" means that the optical mirrors reflect instead of diffuse transmission according to Newton Law. That is to say, the incidence angle is equal to the reflection angle.

According to Fresnel Law, the light will have polarization while reflection. The 5° incidence angle minimizes the influence of polarized light. The measuring results can be approximately regarded as the reflectance of projectivity.

Technical Specifications

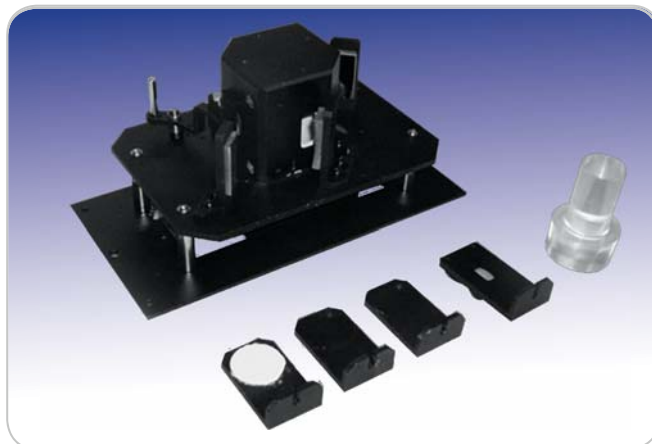
-Incidence angle:	5°
-Measured Sample Area:	11x9mm to 60x40mm
-Wavelength Range:	190~1100nm
-4 Reflecting Mirror sets:	Reflecting Mirror set 1 Reflecting Mirror set 2 Reflecting Mirror set 3 Reflecting Mirror set 4



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Integrating Sphere IN-3500



Integrating sphere is used to measure the diffuse reflectance of solid sample and powder, as well as measure the transmittance of the glass and membrane. Integrating sphere can analyze the chrominance, color difference, and whiteness.

Optics principle

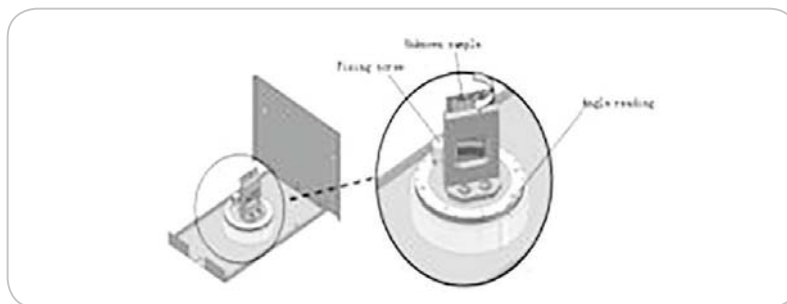
The light emitted by the sample accesses to the integrating sphere at angle 0° , and the reference accesses to the integrating sphere at angle 8° . Then, we can measure the diffuse reflectance of the sample at 0° and diffuse reflectance and transmittance of the reference at 8° .

Technical Specifications

- Wavelength Range:	230nm - 850nm
- Spectral Bandwidth:	5nm
- Detector:	Photomultiplier
- Integrating Sphere Diameter:	58mm.
- Integrating Sphere Internal Wall:	Bas04coating
- Sample Incident light:	0°
- Reference Incident light:	8°
- Rectangle Incident hole:	10mm (wide) 20mm (high)
- Exit hole diameter:	10mm.
- Maximum Dimension of samples:	75mm (width), 80mm (height), 15mm (thickness)
- Total reflection measurements:	Standard conditions: 200mm. (width), 80mm (height), 20mm (thickness)
- Scattered reflection measurements:	100mm. (width), 80mm (height), 15mm (thickness)

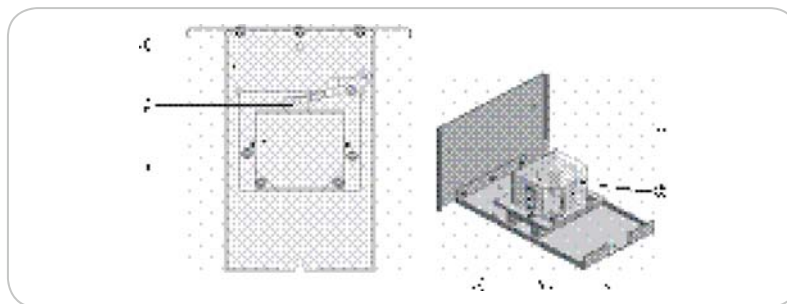
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AS-300 ADJUSTABLE ANGLE SOLID SAMPLE HOLDER

AS-300 Adjustable Angle Solid Sample Holder
for Spectro UVS-2700/2800 and UVD3500
to analyze solid samples, including photometric
measurements, spectrum scanning, etc.



SR-300 SPECULAR REFLECTION ACCESSORY

SR-300 Specular Reflection Accessory
for Spectro UVS-2700/2800 and UVD3500
to analyze solid samples, including photometric mea-
surements, spectrum scanning, etc.



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