BioLAB

PRODUCT CATALOG

SINGLE BEAM SCANNING UV VISIBLE SPECTROPHOTOMETER BSSNU-101

CE ISO9001 CERTIFIED

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SINGLE BEAM UV VISIBLE SPECTROPHOTOMETER BSSNU-101

SPECTROPHOTOMETER

It is an advanced single beam design consisting of 9 models. They differ in bandwidth and wavelength accuracy, but provide excellent performance for measurements.
They are suitable for clinical, pharmaceutical, and bio-chemical lab applications, as well as routine applications such as quantitative analysis, kinetics, Wavelength Scan, Multi-Wavelength, and DNA/Protein analysis. The memory is 32K.
UV-Vis Analyst software Based Microsoft Windows makes these instruments versatile. All instruments provide excellent performance for measurements.
They are divided into two types : PC models and stand-alone models.
In Stand-alone models, all software methods are included as built-in standard; this eliminates the need of software.
Online software update via the internet.
Data can be downloaded.
The PC models come standard with Windows based application software UV-Vis Analyst.

Fixed or variable slits (Bandwidths).
Sealed, solvent-resistant tactile keypad with alpha-numeric entry for file names and units.
Pre-aligned deuterium lamp for easy lamp replacement. The status of the lamps may be monitored.
Powerful built-in program or PC Windows based software UV-Vis Analyst including sophisticated utility programs.
Data Download-to-PC software for stand-alone models (Optional).
Real-time clock for date and time stamping of results.
Data can be saved by a USB memory device directly.
Brief Introduction:
All methods are included as built-in standard; this eliminates the need for soft

SPECIFICATIONS

Model	BSSNU-101
Wavelength Range	190-1100nm
Spectral Bandwidth	4nm
Wavelength Accuracy	±0.5nm
Optical System	Single Beam, Grating 1200 lines/mm
Wavelength Repeatability	0.3 nm
Scan Speed	Hi, MED., LOW., MAX. 3000 nm/min
Photometric Accuracy	±0.5 %T or ±0.004A @1A
Photometric Range	0-200%T, -0.3-3A, 0-9999 Conc
Stray Light	0.05%T @220 nm, 340 nm
Stability	0.0008 A/h @500 nm
Display	5 inches LCD (320x240 dots)
Baseline Flatness	±0.002 A
Standard Cell Holder	Standard 10 mm pathlength cuvette
Light Source	Tungsten lamp
USB Type A Port	USB Type A for USB memory device (Right side)
USB Type B Port	USB Type B for optional computer connectivity (Back)
Output Parallel Port	Parallel port for printer
Power Requirement	AC 110/220 V, 50/60 Hz
Dimensions (LxWxH)	491x365x180 mm
Weight	14 kg
Alt Name	Scanning Spectrophotometer

ACCESSORIES FOR PURCHASE

No	Name
1	Micro Cell Holder (Beam height: 15mm)
2	8-Position Auto Cell Changer
3	4-Cell Holder for 10mm SQU.cuvette
4	4-Cell Holder for 50mm SQU.cuvette
5	4-Cell Holder for 100mm SQU.cuvette
6	Square Cuvettes Glass :10 mm
7	20 mm
8	30 mm
9	50 mm
10	100 mm
11	Square cuvettes Quartz:10 mm
12	20 mm
13	30 mm
14	50 mm
15	100 mm
16	Micro cell, Quartz (Beam height: 15mm) 100UL
17	200UL
18	500UL
19	Sipper System
20	Constant-Temperature System
21	Constant-Temperature Sipper System
22	Test Tube Holder
23	Cylindrical Cell Holder
24	Solid Sample Holder (Single Cell)
25	Water-Jacketed Cell Holder
26	10mm Water-Jacketed 4-Cell Holder
27	Milas Deuterium Lamp
28	Halogen Lamp(Philips)
29	Halogen Lamp(Philips)
30	Halogen Lamp(Osram)
31	Self Masking Cont. Flowthrough G.Cell (Beam height: 15mm) 5mm
32	10mm
33	20mm
34	30mm
35	Self Masking Cont. Flowthrough Q. Cell (Beam height: 15mm) 5mm
36	10mm
37	20mm
38	30mm

39	Thermal Printer

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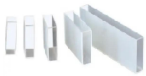
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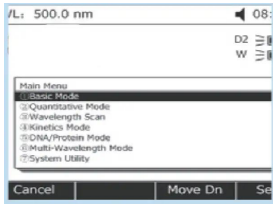
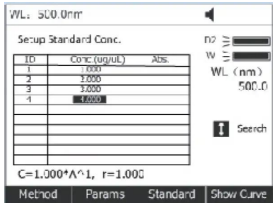
FEATURES

Fixed or variable slits (Bandwidths).
Sealed, solvent-resistant tactile keypad with alpha-numeric entry for file names and units.
Pre-aligned deuterium lamp for easy lamp replacement. The status of the lamps may be monitored.
Powerful built-in program or PC Windows based software UV-Vis Analyst including sophisticated utility programs.
Data Download-to-PC software for stand-alone models (Optional).
Real-time clock for date and time stamping of results.
Data can be saved by a USB memory device directly.

Brief Introduction:
All methods are included as built-in standard; this eliminates the need for software. Online software update via the internet.
The local control software includes functions such as: Photometry, Quantitative, Wavelength Scan, Kinetics, DNA/Protein, Multi-wavelength and System Utilities.

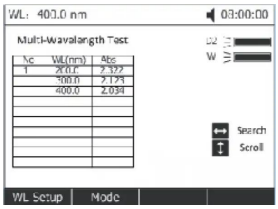


Standard Curve:
Up to 10 standard solutions may be used to establish a calibration equation curve. There is a choice of four methods for fitting a curve through the calibration points: Linear fit, Linear fit through zero, square fit and cubic fit.

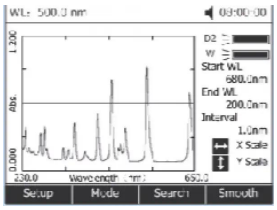


Multi-Wavelength:

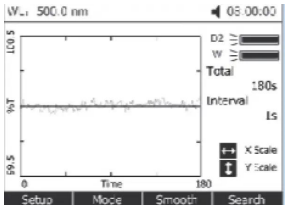
Up to 10 wavelengths may be entered, allowing the measurement of multiple wavelengths on a series of samples.



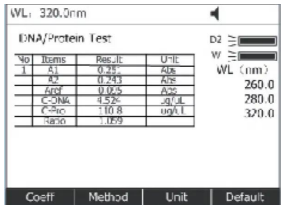
Wavelength Scan:
The Wavelength Scan intervals are 0.1, 0.2, 0.5, 1, 2, 5 nm, and High, Medium and Low scan speeds are available. Scan speeds vary from 100 to 2000 nm/min. Wavelengths are scanned from high to low so that the instrument stands by at high wavelength. This minimizes the degradation of UV-sensitive samples. Precise control of filter and lamp changes means that their effects are not seen on the final scan. Post-run manipulation includes re-scaling axes, curve tracking and peak picking.



Kinetics:
This mode may be used for scanning time courses or reacting rate calculations. Abs. vs. time graphs displayed on the screen in real time.
Wait time and measurement time up to 12 hours may be entered with time intervals of 0.5, 1, 2, 5, 10, 30 seconds and 1 min.
Post-run manipulation includes re-scaling, curve tracking and selection of the part of the curve required for the rate calculation. Rate is calculated using a linear regression algorithm before multiplying by the entered factor.



DNA/Protein Test:
Concentration and DNA purity are calculated by Absorbance ratios 260 nm/280 nm or 260 nm/230 nm with optional subtracted absorbance at 320 nm.
DNA Concentration = 62.9A260 - 36.0A280 or 49.1A260 - 3.48A230
Protein Concentration = 1552A260 - 757.3A280 or 183A220 - 75.8A230
Other wavelengths and factors may be entered.

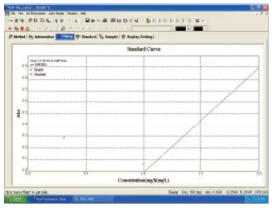


UV Analyst PC-Control Software:

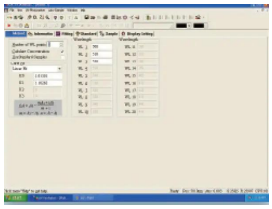
The PC application software offers:
Photometric Mode
Quantitative test (Standard curve)
Wavelength Scan
Kinetics
DNA/Protein
Multi-Wavelength

System Utility
The PC application software UV-Vis Analyst takes the best features of the stand-alone version plus more powerful data processing, expanded data collecting, and storage capability. It comes standard with UV3/6 series PC models and is optional to stand-alone models.

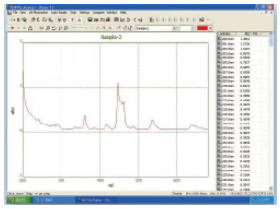
Quantitative Test (Standard curve):
Use up to 20 standards to establish a standard curve. Four methods for fitting a curve:
Linear fit.
Linear through zero.
Square fit.
Cubic fit.



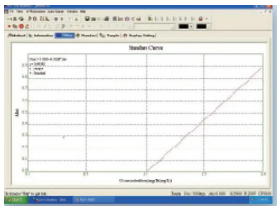
Multi-wavelength:
Up to 20 wavelengths can be selected and multiple samples can be measured. (Auto cell changer is required to run multiple samples automatically)



Wavelength Scan:
Automatically record peaks and valleys. The quantity of channels is unlimited; you can simultaneously store as many as desired.
Post-run manipulation and processing includes:
Re-scaling axes, curve.
1 to 4 derivatives.
Smoothing, combination, zooming, overlap.



Kinetics (Abs. VS Time):
The Kinetics mode may be used for scanning time courses or reacting rate calculations. Abs. VS Time graphs are displayed on the screen in real time. Wait time, measurement time and time intervals may be entered.
Post-run manipulation includes re-scaling, curve tracking and selection of the part of the curve required for the rate calculation. Rate is calculated using a linear regression algorithm before multiplying by the entered factor.



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