



NANO SPECTROPHOTOMETER

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Biolab Nano spectrophotometer is a compact, micro volume UV Visible Spectrophotometer with enhanced sensitivity that can detect samples at 3ng/μl. It gives you fast measurement typically less than 5sec/sample and provides rapid and reproducible results without prior dilution. With robust instrumentation and ease of use, our product is most preferred for quick analysis in labs.

Used in Ideal choice for quantitation of protein, DNA, RNA and photometric measurements in analytical labs and research areas..

BSNA-101 NANO SPECTROPHOTOMETER



Spectrum scanning, Standard curves, Kinetics, Multi wavelength scanning, DNA/Protein test can be operated directly on

SPECIFICATIONS

Model	BSNA-101
Minimum Sample Size	1-2.0 μl
Wavelength Range	260nm, 280nm
Absorbance Range	0.02-80A
Absorbance Accuracy	1% (7.332Abs at 260nm)
Absorbance Precision	0.005Abs
Photometric Repeatability	<1.5%
Path Length	0.5 mm
Light Source	UV LED
Detector	UV-silicon photocell
Detection Range	Nucleic acid up to 10-4000ng/ul (dsDNA)
Measurement Time	< 8s
OD600 nm Measurement	
Wavelength Range	600±8 nm
Absorbance Range	0-4A
Software	USB
Software Compatibility	Android System
Sample Pedestal Materia	Aluminium alloy and Quartz fiber
Dimension (W/D/H)	210x280x181 mm
Weight (Net/Gross)	3.5 kg
Standby Power	5 W
Power	25 W
Power Supply	24V DC

BSNA-102 NANO SPECTROPHOTOMETER



computer

SPECIFICATIONS

Model	BSNA-102
Minimum Sample Size	0.5-2.0 μ l
Wavelength Range	200-800 nm
Wavelength Accuracy	1 nm
Spectral Resolution	\leq 3 nm (FWHM at Hg 546 nm)
Absorbance Range	0.02-90A
Absorbance Accuracy	1% (7.332Abs at 260nm)
Absorbance Precision	0.003 Abs
Path Length	0.2 mm (For high concentration measurement) 1.0 mm (For ordinary)
Light Source	Xenon flash lamp
Life Time of Lamp	None
Detector	3864-linear silicon CCD array
Detection Range	Nucleic acid up to 2~4500 ng/ μ l (dsDNA)
Measurement Time	< 8s
Software Compatibility	WinXP, Win7, Win8
Sample Pedestal Material	Aluminium alloy and Quartz fiber
Dimension (W/D/H)	200x250x166 mm
Weight (Net/Gross)	2.6 kg
Standby Power	5 W
Power	20 W
Power Supply	24V DC

ACCESSORIES

Accessory Code	Name
3001107006	CD driver
3001107007	CD driver

100 NANO SPECTROPHOTOMETER



User-friendly software, easy to use, free software updates are available
 Only require 0.5~2µl sample to accurately determine nucleic acids, proteins
 Fast and easy measurements which turn on and instantly measure without lamp warm up time; Easy measurement within 8 sec
 Xenon flash lamp, 10 flashes, up to 10 years, no dilutions and expensive consumables
 Direct microvolume measurements from 1-2µL of sample. Eliminates the need for expensive accessories
 No computer required and with touch screen
 Equipped with Android system operation (BSNA-101, BSNA-103, BSNA-104)
 It is a basic UV spectrophotometer specifically designed (only two types of wavelength 260nm and 280nm) for nucleic acids and proteins
 To detect the concentration of bacteria and microorganism are more convenient with the OD600 function
 The BSNA-102/103/104 are full range of wavelength (200-800nm) detection ability;
 The BSNA-101
 is a basic UV spectrophotometer specifically designed (only two types of wavelength 260nm and 280nm) for nucleic acids and proteins
 BSNA-104 also can be used to test the Fluorescence, for samples with concentrations below 2 ng/µl, fluorometric mode can be used, and the minimum detection limit can reach 0.5pg/µl

SPECIFICATIONS

Model	BSNA-103	BSNA-104
Minimum Sample Size	0.5-2.0 µl	
Wavelength Range	200-800 nm	
Wavelength Accuracy	1 nm	
Spectral Resolution	≤ 3 nm (FWHM at Hg 546 nm)	
Absorbance Range	0.02-100A	
Absorbance Accuracy	1% (7.332Abs at 260nm)	
Absorbance Precision	0.003 Abs	
Path Length	0.2 mm (High concentration measurement) 1.0 mm (Ordinary concentration)	0.05 mm, 0.2 mm (High concentration measurement); 1.0 mm (Ordinary concentration)
Light Source	Xenon flash lamp	
Detector	2048-linear silicon CCD array	
Detection Range	Nucleic acid up to 3~4500 ng/µl (dsDNA)	-
Measurement Time	< 5s	< 6s
OD600 nm Measurement		
Wavelength Range	600±8 nm	
Absorbance Range	0-4A	
Software	USB	
Software Compatibility	Android System	
Sample Pedestal Material	Aluminium alloy and Quartz fiber	-
Dimension (W/D/H)	210x268x181 mm	210x310x181 mm
Weight (Net/Gross)	2.8 kg	
Fluorescent detection		
Sensitivity	-	dsDNA: 0.5pg/ul

Linear Dynamic Range	-	$R^2 > 0.995$
Repeatability	-	<1.5%
Sample Pedestal Material	-	Aluminium alloy and Quartz fiber
Display	-	HD
Standby Power	-	5 W
Power	-	25 W
Power Supply	-	24V DC



BSNA-103



BSNA-104

200 NANO SPECTROPHOTOMETER



Wavelength range: 200nm-800nm

Wavelength accuracy: ± 1.0 nm

Easy user interface

Reduce sample loss and eliminate the need for dilution by using low volumes of samples in 0.5 μ l to 2.0 μ l for sample measurement. The appropriate path length can be selected automatically or by manual selection.

Rapid measurements. Read-time is typically takes less than 5sec per sample without washing cuvettes or dilutes the samples

Reliability and robust instrumentation. Easy to use interface

Press-to-read feature reduces the amount of time .Optics with no moving parts minimizes the incidence of optical misalignment

Calibration curves, kinetics or ratio measurements are displayed at the touch of a button at connected computer.

Equipped with a built in printer

SPECIFICATIONS

Model	BSNA-201	BSNA-202	BSNA-203
Minimum Sample Size	0.3-2.0 µl		
Wavelength Range	260 nm, 230 nm and 280 nm	200-850 nm	
Wavelength Accuracy	Fixed wavelength point	±1 nm	
Wavelength Reproducibility	<±0.2 nm		
Spectral Bandwidth	≤5 nm		
Spectral Resolution	5 nm	2 nm (FWHM at Hg 546)	
Absorbance Range	0.2-75 (10mm equivalent absorbance)	0.02~75 (150, 300 optional, 10mm equivalent absorbance)	0.002-75 (150, 300 optional, 10mm equivalent absorbance)
Absorbance Accuracy	0.01	1% (0.76 absorbance at 350nm)	1% (0.75 Abs at 350nm)

Absorbance Precision	0.002 Abs		
Path Length	1 mm, 0.2 mm	1mm, 0.2mm, (0.1mm, 0.05mm optional)	
Light Source	Xenon flash lamp		
Life Time of Lamp	10 ⁹ flashes upto 10 years		
Detector	UV Detector	2048-element linear silicon CCD array	
Detection Range	Nucleic acid up to 10-3750 ng/μl (dsDNA) Protein up to 0.5 mg/ml-110 mg/ml (BSA)	Nucleic acid up to 2~3750ng/μL(7500,15000 optional, dsDNA) and Protein up to: 0.1mg/ml~100mg/ml(200,400 optional, BSA)	Nucleic acid up to: 0.4~3750ng/μL(7500,15000 optional, dsDNA) and Protein up to: 0.01mg/ml~100mg/ml(200,400 optional, BSA)
Start-up Time	< 5s		
Measurement Time	< 5s		
Dimension (W/D/H)	240x220x140 mm	210x170x110 mm	240x210x110 mm
Weight (Net/Gross)	2.35 kg	1.35 kg	1.92 kg
Power	12V 4A	30 W	12V 4A 10 W
Power Supply	90-250V 50/60Hz		



BSNA-201



BSNA-202



BSNA-203

BSNA-204 NANO SPECTROPHOTOMETER



Touch Screen, LCD display
 Path length of cuvette: 1mm/2mm/5mm/10mm
 Win7 (64-bit operating system) / Win8
 Heating and Cooling function
 Built-in software, Four USB connections
 Does not need dilution and baseline correction
 Data save automatically
 Can make time-based kinetics measurements

SPECIFICATIONS

Model	BSNA-204
Minimum Sample Size	0.3-2.0 μl
Wavelength Range	190-850 nm
Wavelength Accuracy	±1 nm
Spectral Resolution	2 nm (FWHM at Hg 546)
Temperature Range	4°C-42°C

Absorbance Range	0.002~400 (10mm)
Absorbance Accuracy	1% (0.75 Abs at 350nm)
Absorbance Precision	0.002 Abs
Path Length	1 mm, 0.2 mm, 0.04 mm
Light Source	Pulsed Xenon flash lamp
Detector	2048-element linear silicon CCD array
Detection Range	0.4 ~19000ng/μL (DS-DNA), 0.01~400mg/ml (BSA)
Measurement Time	<5s
Dimension (W/D/H)	350X240x220 mm
Weight (Net/Gross)	5.2 kg

BSNA-301 NANO SPECTROPHOTOMETER



Specialized instrument for bio-chemical research, for micro-volume solution concentration measurement

User-friendly interface, accurate measurement

Whole new technology of optical system design. There is no optical fiber needed

With the vertical slide design, the sample measuring area is more durable and stable

Has great resistance for the interferences of ambient light to get more accurate measurement

SPECIFICATIONS

Model	BSNA-301
Minimum Sample Size	2.0-2000 ng/μl (dsDNA) Measurement Sample Size:2.0 μl
Wavelength Range	OD230nm, OD260nm, OD280nm, OD320nm
Measurement Data output	1. Sample concentration (ng/ μl) 2. OD230nm/OD260nm, OD280nm/OD320nm
Absorbance Range	0.04~40 (10 mm)
Path Length	~0.5 mm
Light Propagation material	Quartz glass and pinhole
Light Source	Xenon flash lamp
Measurement Time	< 5s at conc. >25 ng/μl
Software Compatibility	Android System
Dimension (W/D/H)	260x260x220 mm
System Structure	Embedded system, PC
Maintenance	Auto Diagnosis, Calibration mode, Fixed path-length
Display	Touch Screen, Thermal printer, USB storage, Web server storage
Weight (Net/Gross)	4.2 kg
Internal Storage	32 GB
Touch screen resolution	7" WxH 1024x600 dot matrix
Printer paper width	58 mm / 48 mm
Data Connection interface	OTG USB (connected to PC), Wi-Fi USB dongle, Ethernet (RJ-45), USB port*2
USB port operation voltage	5 VDC, 0.5 A
Thermal Printer power	15~24 W

Standby Power	5W
Power	10 W, 12 VDC, 2.5 A
Power Supply	100-240VAC, 50~60Hz, 1A

OPTIONAL ACCESSORIES

Accessory Code	Name	Description
3001306006	A set of optical plates (made of quartz glass)	The Upper and Bottom quartz glass; re-useable; like the traditional cuvettes
3001306007	Thermal paper	There are three pcs in a roll package

400 NANO SPECTROPHOTOMETER



Small size, easy to carry, very suitable for field testing

It can be quickly upgraded by U disk, which is convenient for the instrument to update the software

The detection concentration range is wide, and commonly used samples can be detected without dilution

Has power-on self-test function, it can quickly and accurately judge whether there are impurities in the detection platform when the machine is started up

The machine does not need to be warmed up, it can be detected after starting up, and the single detection time is about 5 seconds, and the detection is fast

By forming a liquid column, the sample required for one test is as low as 0.5ul

Colony detection can be performed in both cuvette and micro mode

With cuvette measurement function, support kinetic detection. (ND-100C)

SPECIFICATIONS

Model	BSNA-401	BSNA-402
Test sample capacity	0.5~2 μ l	
Detection concentration range	2~15000 ng/ μ l(dsDNA)	-
Measurement Time	About 5 s	
Light absorption accuracy	0.002 Abs (1mm)	
Absorbance accuracy	1% (0.76 Abs at 256 nm)	
Light Source	Xenon lamp	
Detector	2048 linear CCD array	
Optical path	\leq 0.7mm	
Wavelength Range	200~850 nm	
Wavelength accuracy	<1 nm	
Wavelength resolution	\leq 2 nm	
Light absorption range	0.04~300 Abs (10 mm)	
Power	20 W	
Power Adapter	12 V, 5 A	
Dimension (W/D/H)	197x327x181 mm	
Weight (Net/Gross)	3.1 kgs	
Cuvette specifications	-	12.5mm(L)x12.5mm(W)x45mm(H) Stirring speed of cuvette
Cuvette optical path length	-	10, 5, 2, 1mm
Cuvette beam height	-	6mm



BSNA-401



BSNA-402

BSNA-206 NANO SPECTROPHOTOMETER



High-quality flash Xenon lamp, longer service life
 High resolution CCD detector, fast measurement (5s), high repeatability and accuracy
 7 inches LCD color touch screen, stand-alone system, no need PC
 User-friendly operating system, module UI design, simple and clear
 No need to dilute sample, 1uL to 2uL is enough
 Multi-functions: Nucleic acid , Protein, Kinetics, Spectrum scanning, End-point and OD600 measurement
 Available to upgrade software by USB, low maintenance cost
 Storage by USB, simple to retrieve test data
 Two USB ports for data transmission and outer tools like mouse and keyboard
 Smart and compact design, light and easy to move

SPECIFICATIONS

Model	BSNA-206
Wavelength Range	190-1100 nm
Wavelength Accuracy	±1 nm
Spectral Resolution	0.3 nm
Light Source	Xenon Lamp
Detector	CCD (2048 Pixels)
Absorbance Precision	1 %@100 ng/ul
Absorbance Range	0.002-2.0 Abs
Detection Limit	2 ng/μl (dsDNA)
Max. Concentration	15000 ng/μl (dsDNA)
Measurement Time	3 s
Min.Sample Volume	1μl
Path Length	10 mm
Dimension	230*290*220 mm
Weight	3 kg
Operating Voltage	12V DC
Beam Height	8.5 mm
Power Supply	18 W

BSNA-207 NANO SPECTROPHOTOMETER

Fast test for DNA/RNA and protein High-quality flash Xenon lamp, longer service life
No need warming-up, no need calibration
CCD detector, fast test in 2 to 5s
7.0 inches HD touch screen, stand-alone system, user-friendly UI.
Wide measurement range, no need dilution
Less sample consumption, no more than 2uL for each test usually
Developed on Linux, system is much safer, reliable and independent
Large data storage
Suitable for test of ssDNA, dsDNA, fluorochrome, protein and OD600, etc

SPECIFICATIONS

Model	BSNA-207
Sample Volume	1.0-2.0 uL
Wavelength Accuracy	1 nm
Wavelength Repeatability	±0.2 nm
Measurement Time	2- 5 s
Optical Path Length	0.25 mm
Detector	CCD (3648 Pixels)
Absorbance Precision	0.002 Abs (equivalent to 1 mm optical path length)
Min. Detection Limit	2 ng/uL (dsDNA)
Max. Detection Limit	5,000 ng/uL (dsDNA)
Absorbance Range	0.02-100 A (equivalent to 10 mm optical path length)
Operating System	Linux
Display	7 inches HD Touch Screen (1024*600)

BSNA-403 NANO SPECTROPHOTOMETER



By forming a liquid column, the sample required for one test is as low as 0.5 μ l, and the trace amount is detected, saving precious samples

The detection concentration range is wide, and commonly used samples can be detected without dilution

The machine does not need to be warmed up, it can be detected after starting up, and the single detection time is about 5 seconds, and the detection is fast

Built-in software, easy and fast to operate, software running fast and stable, no delay, provide a stable user experience

Small size, easy to carry, very suitable for field testing

Can record all the data that the user tests, and has screenshot function, convenient for users to export precious data or delete data at any time

More than 10,000 data can be stored

It can be quickly upgraded by U disk, which is convenient for the instrument to update the software

With user management system, multi-user independent detection, independent management of data

High-definition 7-inch display screen, using capacitance touch screen, full touch operation, can sense the touch of laboratory gloves, longer life and better experience

Has power-on self-test function, it can quickly and accurately judge whether there are impurities in the detection platform when the machine is started up

The material of the sample detection platform is stainless steel and quartz optical fiber, high strength and anti-corrosion

With cuvette measurement function, the cuvette measurement provides stirring and heating auxiliary functions at the same time, which makes the cuvette detection more powerful and uses more detection scenarios

Support kinetic detection, kinetic detection provides users with an intuitive absorbance change curve, user-defined wavelength points to view the relationship between absorbance changes over time, and 100 kinetic programs can be built-in

Support colonies (OD600) detection, and the detection of colonies can be carried out in both cuvette and micro mode, which meets the different detection needs of users

SPECIFICATIONS

Model	BSNA-403
Test sample capacity	0.5~2 μ l
Light source	Monochrome LED
Detector	2048 linear CCD array
Optical path Length	≤ 0.7 mm
Wavelength range	200 ~ 850 nm
Wavelength accuracy	1 nm
Wavelength resolution	≤ 2 nm
Light absorption range	0.04 ~ 300 Abs (10 mm)
Light absorption accuracy	0.002 Abs (1 mm)
Absorbance accuracy	1 % (0.76 Abs at 256 nm)
Detection concentration range	2 ~ 15000 ng/ μ l (dsDNA)
Sample base material	304 stainless steel and quartz optical fiber
Measure time	About 5 s
Dimensions	W.197 × D.327 × H.181 mm
Net weight	3.1 kgs

Specification of cuvette	L.12.5 x W.12.5 x H.45 mm
Optical path length of cuvette	10, 5, 2, 1 mm
Cuvette beam height	6 mm
Heating range of cuvette	37 ± 0.5 °C
Memory capacity	8 G
Measurement time	About 3 seconds
Mixing speed of cuvette	High and low modes
Cuvette detection concentration range	0.2 ~ 750 ng/μl (dsDNA)
Light absorption range of cuvette	0.004 ~ 25 Abs (10mm)
Operating system	Linux
Sampling range	1 ~ 20 ul
Dynamic range	5 orders of magnitude
Detector type	Photodiode
Excitation channel	Blue light : 430 nm ~ 495 nm
Transmission channel	Green light : 510 nm ~ 580 nm
Number of stored sample results	> 1000, can be exported via USB flash disk
Power	20 W
Power Supply	12 V , 5 A



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