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Turnkey Laboratories Solutions

Analytical®
Technologies Limited

UV/VIS Spectrophotometer

Analytical Technologies Limited
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Products / Application / Software / Accrssories / Consumables / Services

BIO SPECTROPHOTOMETER

Nano 3060UV Bio

3060-UV spectrophotometer, equipped with 6 inches LCD display, is an ideal and advanced analytical instrument for laboratory to realize wevelength scanning, kinetics test, multi wevelengh functions. All function can be opereted on spectrophotometer and can be read directly on the display.

[Features]

6 inches LCD display

3060-UV series has a 6 inches LCD display to show results and curves directly on the screen.

Powerful Functions

Multi functions like spectrum scaning, starndard curve, kinetics, multi wavelength, DNA/Protein testing can be operated directly on the spectro photometer and all corresponding curves and data can be displayed directly.

Perfect calibration system

All baseline, wavelength, dark current can be calibrated automatically to keep good running conditions.

Lead screw structure

The instrument has a lesd screw structure to make the rotation angle of the grating perfectly, so that the instrument wavelength accuracy and wavelength resolution can be greatly improved.

8mm thick optical base

3060 - UV uses a rigid 8mm die-case aluminum base as its optical mount to ensure instrument stability and reliability.

Data output

3060 - UV is equipped with USB port to connect with a PC to display spectrum scanning, kinetics and multi wavelength testing results on the screen. The software is optional.

[Technical specification]

Model	3060 - UV
Wavelength Range	190-1100nm
Bandwidth	1.8nm
Wavelength Accuracy	±0.5nm
Wavelength Repeatability	0.3nm
Photometric Accuracy	± 0.3%T
Photometric Repeatatability	0.2%T
Photometric Range	-0.3-3A,0-200%T,0-9999C
Stability	± 0.002A/H @ 500nm
Baseline Flatness	± 0.002A
Noise	± 0.002A
Stray Ligth	≤ 0.05%T @ 220nm, 360nm
Data Output Port	USB
Printer Port	Parallel Port
Display	320x240 Dots LCD
Lamps	D2 Lamp/W Lamp/Xe Lamp
Detector	Silicon Photodiode
Power Requirements	AC 220V/50Hz or 110V/60Hz
Dimension	460x380x180mm
Weight	20kg

[Standard Accessories]

Item	Descriprtion	Qty	Unit
1	Spectrophotometer	1	Set
2	1cm Glass cuvette	4	Pcs
3	Power cord	1	Pcs
4	User's Manual	1	Pcs
5	1cm quartz cuvette	2	Pcs
6	Dust cover	1	Pcs

SPECTRO™ UV 3000 PMT

Specifications

Model	SPECTOR™ UV 3000 PMT
Wavelength Range	190-900nm
Spectral Bandwidth	0.1 - 5.0nm (Holographic grating)
Wavelength Accuracy	±0.3nm (0.1nm if required)
Wavelength Resolution	0.1nm
Wavelength Reproducibility	0.15nm
Photometric Accuracy	±0.3%T(0.100%T)
	±0.002A(0-0.5A)%, ±0.004A(0.5-1A)%
Photometric Reproducibility	0.15%T
Photometric mode	Absorbance, Transmittance, Reflectance, Energy
Stray Light	≤0.0025%T (Nal, 220nm)
Baseline Flateness	±0.0003Abs
Stability	0.0004A/h (at 500nm, after warming up)
Detector	photomultiplier
Light Source	tungsten halogen lamp and deuterium lamp (Opt: Xenon flash lamp)
Power	AC : 220V/50Hz, 400W
Dimensions	670 x 470 x 210 mm
Weight	45kg
Photometric Range	Abs:-3.8 to +3.8,%T;0 to 300%

Features

Double beam (sealed optics) fully automated scanning system.

PC control, rich analytical software.

Wavelength Scan :

Scanning sample spectra in any range within 190-900nm. Three scanning speed; Fast, Middle and Slow selectable, with min. sampling interval of 0.04nm. Data processing function of derivative spectra and smoothing, peak picking, spectrum expansion and superposition and other arithmetic calculation.

Fixed wavelength measurement : :

10 wavelengths can be set at the same time Arithmetic calculation between wavelengtha can be done.

Quantitation :

Standard factor method, standard contrast method : 2-wavelength method, and 3 - Wavelength method etc.

Kinetic Measuremrnt:

Wavelengths and sampling interval selectable, activity, calculation available.

Wavelength Slew Rate is Variable upto 3000nm/min

Drift: 0.0003 Abs/h

SPECTRO™ UV 2080 / UV 2080+ Double Beam

Spectro UV 2080 Series is an advanced double beam design consisting of six models.

Stand alone model:

UV-2080 with 1 nm fixed bandwidth

UV-2080 + with variable bandwidth: 0.5/1/5nm

Other specifications of the six models are almost the same except bandwidth.

Specifications

Model	Spectro UV 2080	Spectro UV 2080+
Optical system	Double Beam 1200L/mm	
wavelength Range	190~1100nm	
Band Width	1 nm	0.5/1/2.0/4.0nm
Wavelength Accuracy	± 0.1 nm or better	
wavelength Repeatability	+ 0.1 nm	
Photometric Accuracy	±0.002 Abs (0.5Abs);±0.004 Abs (1.0Abs);+0.006 Abs (2.0Abs)	
Photometric Repeatability	Less than +0.001 Abs (0.5Abs)	
Photometric Range	Absorbance:-4 to 4 Abs Transmittance:0% to 400%	
Stability	Less than 0.0003Abs/ at 700nm	
Baseline Flateness	±0.0005A	
Noise	0.00005 Abs RMS value (at 700nm)	
Stray Light	Lass than2.02% Nal at 220nm, NaNO2 at 340nm	
Date Output	USB	
Print	Parallel Port	
Scan Speed	Hi Ned Slow, Max 10000nm/min	
Light Source	Philip halogen, deuterium lamp (2000h) (Opt: Xenon flash lamp)	
Dimension	600(L) x 450(w) x 200(H)mm	
Weight	28kg	30kg
Detector	Photodiodes	

The two detectors measure sample and raference respectively and simultaneously for optimizing measurement accuracy. They provide excellent performance for measurements in range of 190 to 1100 nm. They are suitable for pharmaceutical, bio chemical and clinical lab applications as well as routine applications such as Quantitative analyses, kinetics, wavelength scan, multiple components and DNA/ Protein, PC Windows application software make these instruments versatile, All instruments

- Fixed or variable slits(bandwidths)
- For stand alone models, all software mothods are included as built in standard this eliminates the need of software.
- Online software upgrade via internet helps to keep it updated.
- Date download to PC software expands the data storage to unlimited.
- The stand alone models has 5 inch screen and the PC models has UV/VIS Analyst software. Stand alone models have the same functions as UV series, see next page for details.

SPECTRO™ UV 2092+V / 2092+UV Single Beam

2092 + V & 2092 + UV spectrophotometer is the ideal instrument for Education and QC laboratories. Using your standard sample soutions, you can get a standard curve on the large LCD screen. They are widely used in colleges and enterprises for general quantitative analysis and experiments.

Features

1. Large LCD Screen (128x64 Dots)
2. Can display total 50 groups of data, 3 groups per screen. Can displayStandard curve and curve and the curve equation.
3. System can also save the test results. Total 200 groups of data and 100 standard curves can be saved. It is convenient for check and reload.
4. Date can be restored after a sudden power cut.
5. Auto setting wavelength.
6. Tungsten lamp & Deuterium lamp can be turned on/off individually to extend lifetime.
7. Pre-aligned design makes it convenient to change lamps.
8. Large sample compartment it can accomodate 5 - 100mm path length cuvettes with optional holders, A varienty of optional accessories are available.
8. Large sample compartment it can accomodate 5 - 100mm path length cuvettes with optional holders, A varienty of optional Built-in USB port. You can achieve the folliwing functions
   1. Quantitative 2. Kinetics 3. Wavelength Scan 4. Multi Wavelength 5.DNA/Protein

Specifications

Model	2092+UV	2092+V
Wavelength Range	190-1100nm	325-1000nm
Spectral Bandwidth	1,2,4,5, & 8 nm	
Wavelength Accuracy	±1nm	
Wavelength Repeatability	±0.3nm	
Photometric Accuracy	±0.005ABS(at 1.0ABS) ±0.003ABS(at 0.5ABS) NIST 930 Dfilter	
Photometric Repeatability	±0.005ABS(at 1.0ABS) ±0.003ABS(at 0.5ABS)	
Photometric Range	Absorbance:0.0 to 3.0 Abs/Transmittance:0.0 to 200%	
Detevtor	Silicone Photodiodes	
Light source	Tungsten lamp / Halogen / D2 lamp (Opt: Xenon Flash lamp)	

Power Supply	AC 100 V / 220 V, 50Hz	
Measurement Method	Single Beam Measurement	
Scan Speed	Low, Med, High	
Wavelength Change	Appx, 380nm / minute	
Scan	Appx, 24 to 1400nm / minute	
Stray Ligth	Less than 0.05% (220nm Na, 340nm Na No2 & UV 39)	
Baseline Stability	0.001 Abs/h	
Noise Lavel	0.002 Abs. (peak to Peak : Less than0.0005 Abs.rms.)	
Monochromatic	Incorporates aberration concave blazed holographic grating	
Weight	12Kg	14Kg
Detector	Photodiode	

UV SPECTRA ™ Control Software

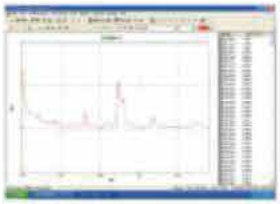
The Analytical windows based PC application software UV/Vis analyst takes the best features of the stand alone version plus more powerful data processing. expanded data collection and storage capability. It comes standard with Analytical PC models and is optional to stand alone models.

The PC application software offers:

1. Photometric Mode
2. Quantitative tast (standard curve)
3. Wavelength Scan
4. Kinetics
5. DNA/Protein
6. Multi-Wavelength
7. System Utility

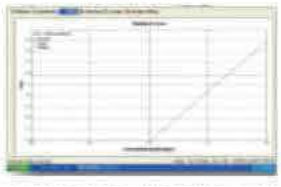
Use up to 20 standards to establish standard curve. Four methods for fitting a curve:
1. Linear fit 2. Linear through zero
3. Square fit 4. Cubic fit

Quantiative tast (standard curve)



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:
1. Re-Scaling axes, curve
2. 1st to 4th derivative
3. Smoothing, combination, zooming, overlap.

wavelength scan



The kinetic mode may be used for time course scanning or reaction rate calculations. Abs vs, Time graphs are displayed on the screen in real time. Waiting time measurament time and 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 enterd factor.

KINETICS (ABS VS. TIME)

Concentration and DNA purity are quickly and easily calculated: absorbance ratios 260nm/280nm with optional subtracted absorbance at 320nm
DNA Concentration = $62.9" A_{260}-36.0"A_{280}$
Protein Concentration = $1552" A_{260}-757.3"A_{280}$
Other wavelengths and factors may be entered.

DNA / PROTEIN

Up to 20 wavelengths can be setected and multiple samples can be measured. (Auto cell changer is required to run multiple samples automatically)

Multi-Wavelength

Optional Accessories

4-Cell Holder For 10mm Swu.Cuvette

4-Cell Holder For 50mm Swu.Cuvette

4-Cell Holder For 100mm Swu.Cuvette

Cylindrical Cell Holder

Water jacketed Cell Holder

Micro Cell Holder

Test Tube Holder

8 - Position Auto Cell Changer

Solid Sample Holder (single Cell)

10mm Water jacketed 4 Cell Holder

Square Cuvettes Glass
10mm, 20mm, 30mm, 50mm, 100mm,
Square Cuvettes Quarts
10mm, 20mm, 30mm, 50mm, 100mm

Micro Cell Quartz 100ul, 200ul, 500ul

Seif Masking Cont, Flow Through G.cell
5mm, 10mm, 20mm, 30mm,
Seif Masking Cont. Flow Through Q.cell
5mm, 10mm, 20mm, 30mm

Halogen Lamp
6V10w
12v20w

12V20W HALOGEN LAMP
6V10W, 12V20W

Constant Temperature Sipper System

Constant Temperature System

Sipper System

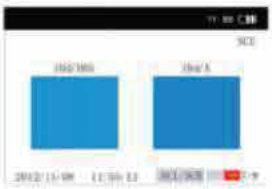
Thermal Printer

Deuterium Lamp

Color Spectro CS 3600

High performance-price ratio among similar international products;

- CS 3600 integrates multiple innovative characteristics, and extends the boundary of on-site quality control during production:



- Allows quick comparison between tow color samples. and shows clear results in numbers or in graphs.

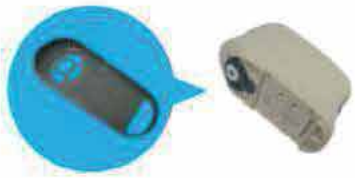
- It can be applied to laboratories. factories and on-site operations, and can achieve the best color management across all application fields' quality control;
- Allows medium and small companies to obtain high performance color management system with relatively low price;
- The software contains all necessary color equations, standard light sources, and a large number of standards for specific industries and applications;
- Operetion system supports both English and Chinese Interfaces, and CHN Spec offers to design the interface in other languages based on the needs of our customers;

Professional design and powerful instrument functions

- Professional horizontal design, and it does not have any moving parts. which avoids the shaking of the instrument during measurement process. This makes the measurement more accurate;

- PC software for easy measurement data management;

- Pre-locating panel design for easy instrument calibration;



- Can measure both SCI and SCE at the same time.

- Large data storage space: can store up to 100 sets of standard samples. with up to 200 measurement records for each standard sample;

Specifications

Model	CS-3600
illumination/observation system	D/8 (diffused light, 8" reception, SCE/SCI)
Sensor	Photoetectric diode array
Integrating sphece dimeter	40mm
Wavelength range	400nm - 700nm
Wavelength interval	10nm
Half bandwidth	<=14nm
Range of reflectance	0-175%, resolution 0.1%
Light source	Composite LEDs
Measuring time	About 1.5 seconds
Measuring caliber	8mm
Repeatability	The standard deviation within ΔE* ab 0.08, the standard deviation within 0.2%
Inter instrument agreement	Within ΔE*ab0.4 / standard color boards.
Languages	English (optional language of your choice)
Standard observer	2' and 10'
Observation light source	A, C, D50, D65, F2, F6, F7, F8, F10, F11, F12 (can select two light sources for display at the same time)
Displayed contents	Spectral data, spectral chart civomatic values chromatic abefration value, pass / fait coor simblation.
color space / standards	L' a' b', L"C"h, ΔE'ab (CIE 1976) ΔEch ΔE' 94(CIE1994) ΔE00/CIE2000), CMC (1.1) CMC (2.1) Yxy, Xyz, WI (ASTM E 313/CIE)
	YI (ASTM E313/ ASTM D1925), ISQ bnghtness (iso 2470), Destiny status A/T, CIE00, WI/Tint
Data storage	100 x 200 (100 sets of standard samples, up to 200 measurement records under each standard sample)
Port	USB
Power source	Detechable lithium-ion battery pack, DC adapter
Operation temperature and humidity range	5 to 40°C, relative humidity 80% or less (at 35°C) with no condensation
Storage temperature and humidity range	0 to 40°C, relative humidity 80% or less (at 35°C) with no condensation
Display	2.8-inch TFT color screen
Accessories	Black and white calibration box, pre-locating panel
Optional accessories	Mini-printer
UV flourenscent	Without UV

Regulatory compliances

Corporate Social Responsibility

Analytical Foundation is a nonprofit organizat (NGO) found for the purpose of:

1.Research & Innovation Scientist's awards / QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personallities for their contributions across various field of Science and Technoligy and awarding them yearly. To participate for award, send us your details of research / testing / publication at Info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXIFY human minds, souls and boby by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Comps etc.

Reach us @

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