

UV-Visible Spectrophotometer

Model - CyberUV-1

CyberUV-1 implements high precision/resolution with high precision Sine Driver Monochromator & stable voltage and signal process by adopting Noise Reduction Circuit.

CyberUV-1 can be operated by standalone model or PC control mode. The software included in UV can be used in general quality and quantity analysis.

CyberUV-1 self-splits into even power of gain of Photodiode pre-amplifier into optimal ranges with 1nm bandwidth.

Built-in calculating programs are always updated and timely new to stay as a pioneer.

Auto blank measuring system using 8 cells auto-rotated holder provides more stable data compared with a traditional split beam spectrophotometer.

CyberUV-1 has a user-friendly simple interface that guides you through computations with easy-to-see touch-button.



..... CyberUV-1 UV-Vis Spectrophotometer Features

■ **ABM (Auto Blank Measuring) Method**

Before measuring each sample, automatically measuring blank so error caused by long time measurement reduce to a minimum.

■ **AGC (Automatic Gain Control) electric circuit adoption.**

The intensity of light source is not constant for all measurement wavelength range, so the sensitivity is varied according to the measuring wavelength. To solve this problem, CyberUV-1 automatically divides the gain of Photodiode pre-amplifier into optimal ranges.

■ **LC Mirror Changing system**

Lamp changing mirror is directly connected with LC motor so backlash of belt type is reduced to a minimum. Because of automatic selection of the maximum intensity of radiation every turn on, CyberUV-1 has good intensity of radiation and precision of wavelength.

■ **A large number/quantity sample measurement at a time**

CyberUV-1 basically offers Automatic cell holder (eight position cell, rotary type). 8-cell holder of Rotary type adopted precision light path design and micro stepping control system can measure sample more easily, conveniently, quickly also can measure continuously many samples with a sipper.

■ **Various Application Programs**

CyberUV-1 basically offers Standard curve, Time scan, Survey scan, ABS Ratio (DNA/Protein) as well as ABS/ %T/ Conc for wide application. Also software enlarges the application fields of CyberUV-1 by merging graph, transferring data, applying to specific conversion formula.

■ **Useful Utilities**

CyberUV-1 can check light source condition, correct wavelength and select one of the 13 concentration unit. Software can automatically convert diluted concentration value into original value and save graph/data to Excel or imaging file. Also can print various reporting forms.

■ **Self Correction Mode**

Self correction for wavelength and cell holder position. Measured value for wavelength and cell holder position is compared with input correction data and then saved automatically.

■ **Self Diagnosis**

By checking lamp and wavelength correction condition, get a more reliable data. By testing intensity of radiation at specific wavelength in ultraviolet and visible range, can confirm whether condition is good or not.

■ **Lamp Change Mode**

Setup the wavelength for changing point between deuterium lamp and tungsten-halogen lamp in range 350nm to 470nm for measuring with the optimum intensity of radiation.

■ **ABS/ %T/ CONC**

Absorbance/Transmittance/Concentration Measurement mode. Measuring one to ten samples for multi wavelength at a time. Saving measured method (Max 10). Concentration calculation with a standard curve or factor ($Y=A \cdot X+B$ A; slope, B; intercept)

■ **Survey Scan**

Measure continuously absorbance/transmittance in 190nm~1100nm and confirm the data by Zoom in/out graphs in specific range. Search for Peaks and Valleys values automatically.

■ **Standard Curve**

Can measure by 7 Standard samples at a time and select one of 13 kinds concentration unit, Linear(N), Linear(O), Segmented Standard curve types. Also can make Standard Curve by inputting the maximum 30 of Concentration and Absorbance.

■ **ABS Ratio**

Can measure DNA/Protein by Numerator, Denominator, Reference measurement and factor. 260, 280, 230nm and correction wavelength (320nm) are setup basically to measure more easily.

■ **Simple Kinetics**

Measure continuously absorbance/transmittance variation at one wavelength during a certain period. Measuring interval is over 0.1 second and total measuring time is 99 hours in a maximum.

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HARDWARE SPECIFICATIONS

- Wavelength Range 190nm to 1100nm
- Spectral Band pass width < 1nm
- Wavelength Accuracy < ± 0.5nm
- Monochromator Modified Czerny-turner type with 1200 lines/mm blazed grating
- Stray Light 0.05% T at 220 & 340 nm
- Photometric System Split Beam Optics
- Photometric Range -0.1 to 3.0A, 0 to 125%
- Photometric Accuracy < 1% at 1A
- Photometric Reproducibility ± 0.001A
- Noise Level < 0.001A
- Drift 0.002A/hr at 340 nm
- Stability ± 0.002 A/hr
- Light Source Tungsten Halogen lamp and Deuterium lamp
- Display Mode Backlight, Graphical, Liquid Crystal Display with Contrast Control
- Sample Holder Automatic Rotary type 8-position Multi-Cell Holder
- Interface Ports RS-232C Serial & Centronics pots
- Wavelength Slew Rate 5000 nm/min
- Wavelength Scan Rate Maximum 1000nm/min
- Standard Capability Absorbance / % transmittance, concentration and file manager, Real Time Clock
- Real-Time PC Software Automatic multi-cell & multi-wavelength measure. Advanced multi-survey scan.
High order standard curves. Time based scan (simple kinetics)
Absorbance ratio
User defined function

SOFTWARE SPECIFICATION

ABS/%T/Concentration

Display of all Data -%T, ABS, Concentration Measure Absorbance at up to 10 Wavelengths Multi Selectors 1 to 7 Cell Number Selected Unit

Survey Scan

Scale Mode-Manual, Auto, Cursor, Peaks/Valleys ABS. <—> %T Conversion

Standard Curve

Single-Point Calibration Curve (Zero or Non-Zero) Multipoint Calibration Curve Method (1st or 3rd order Regression Curve or Segmented Standard Curve) Manual Standard Curve: Input concentration and ABS up to 7

Simple Kinetics

Measuring Total Time 2hr,

Internal Time: ≥ 1Sec

Data View Type: Graph, or Activity/min

Bio Mode

DNA, RNA, Protein analysis

- Method - Ratio
- Bradford
- Lowry
- Bicinchonic Acid

Inhibition Mode

Select a wavelength for Inhibition (at 412nm)

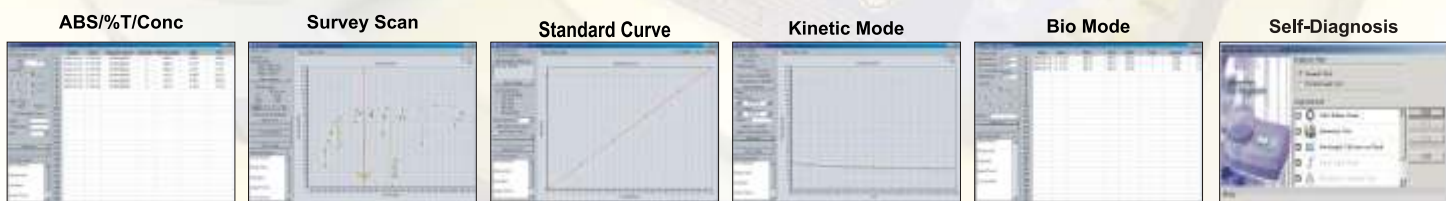
Auto Measuring: Blank/Control Cell

Special Inhibition: Kinetic Inhibition

Self-Test Mode

Auto Check: Halogen Lamp, Deuterium Lamp, Wavelength Calibration

Wavelength User Setup: Correct for Wavelength Calibration



Optional Accessories



Cyberlab Corporation

22, Salo Terrace,
Millbury, MA01527
USA
Tel.: 001 508 2273494
Fax: 001 806 2091960

Cyberlab (Asia-Pacific) Pte. Ltd.

9, Amber Road,
#16-02, Parkway Mansion,
Singapore 439954
Tel.: 0065 63397696
Fax: 0065 63370048

Cyberlab Gulf Ltd.

P. O. Box # 261597,
Jebel Ali FZ, Dubai,
U.A.E.
Tel.: 00971 6 5738582
Fax: 00971 6 5738584

Email : info@cyberlabusa.com
URL : www.cyberlabusa.com