

## DOUBLE BEAM UV-VIS SPECTROPHOTOMETER









7" High Resolution Touch Screen LCD Color Graphical Display with Built in PC .

Supports USB-Pen Drive to Store/Retrieve Mass Spectral Data.

Smallest form factor Double Beam Spectrophotometer.

#### **SALIENT FEATURES**

- Automatic wavelength calibration and programmable wavelength for lamp change over.
- Lamp selection enables conserving the life of the lamps.
- Built in Windows<sup>®</sup> Based PC Control.
- Stand alone unit offers an advanced technology with data processing features for Scanning, Discrete Wavelength, Concentration determination by standards and ε-factor method, Time scan with minimum time interval of 1.0 sec, Auto-zero facility, Self check and Self diagnostic modes.
- Data in the form of graph and table can be printed directly on to a printer.
- Built in advanced Data Processing capabilities like 4<sup>th</sup> order Derivate Spectra, Overlay of maximum ten Spectra, Peak Picking Facilities, % Concentration mode, Auto Zero Facility, Spectra Zooming, Smoothing, Data Saving, Retrieval and Printing.
- Supports USB printing with PCL 5e class printers.
- Networking Connectivity through TCP/IP Interface.

#### **SOFTWARE FEATURES**

Software is 21 CFR Part 11 compliant with password method protection, Instrument logbook etc. cGLP compliance addressed.



#### **APPLICATIONS**

- For any Spectrophotometric or Colorimetric measurement where applications require very high-resolution bandwidth and cGLP compliance is mandatory.
- Enzyme Kinetics.
- > Organic compounds in Biological matter.
- Glucose, Fructose, Carbohydrates, Proteins etc., in Foods.
- Edible Dyes, Alcohols etc., in Beverages.
- > Purity of constituents in Pharmaceuticals.
- Toxic elements like Cadmium, Lead, Arsenic and Mercury etc., in Effluents.
- Constituents in compositions used in Metallurgy, Fertilizer, Pesticide, Chemical, Petrochemical, Steel, Cement, Glass & Other Industries.
- Micronutrients like N, P, K, S, Ca, Mg, Zn, Cu, B, Mo, etc., in Agricultural soil, Plants etc.
- Life Science Applications.



## SPECIFICATIONS

| SPECTRAL   |                                       | PHOTOMETRIC             |                                |  | MONOCHROMATOR   |  |  |  |
|--|---------------------------------------|-------------------------|--------------------------------|--|---|--|--|--|
| Range  | 190 to 1100 nm                        | System                  | Double                         | beam optics  | Concave holographic grating with 1200 lines/mm  |  |  |  |
| Bandwidth  | 1.8 nm                                | Range                   | ± 3 Abs                        |  |   |  |  |  |
| Readability  | 0.1 nm                                | Accuracy ± 0.005        |                                | Abs at 1.0 Abs   | CONTROL   |  |  |  |
| Accuracy   | ± 0.5 nm                              |                         | ± 0.010                        | Abs at 1.5 Abs   | Built-in Windows Based<br>PC Control  |  |  |  |
| Repeatability  | ± 0.2 nm                              | Repeatability           | ± 0.002                        | Abs at 1.0 Abs   |   |  |  |  |
|  |                                       | Stability<br>(Baseline) |                                | Abs/hr. after<br>warm up   | PORTS   |  |  |  |
| Deuterium Lamp (D <sub>2</sub> ) &<br>Tungsten (W) Halogen Lamp<br>DETECTOR Silicon Photo Diode  |                                       | Stray Light             | <0.05% <sup>-</sup><br>with Na | T at 220 nm<br>I 10g/L   | 3 USB Ports - Can be used for<br>Printer, Keyboard, Pen Drive and Mouse   |  |  |  |
|  |                                       | Readability             | Readability %T 0.01            |  | TCP/IP Port - Network Connectivity  |  |  |  |
|  |                                       |                         | Abs                            | 0.0001   | PC Port - PC Connectivity   |  |  |  |
| DATA PRESENTATION  |                                       |                         |                                | SAMPLE A   | TACHMENT  |  |  |  |
| Display  | 7" ( 800 x 480) H<br>graphical displa |                         |                                | Standard   | xed 10mm path length Holders for efference and Sample.  |  |  |  |
| Hard Copy  | On printer ( USE                      | 3 interface)            |                                | Optional   | Fixed multi path cuvette holders for  |  |  |  |
| Soft Copy  | Mass Data Stor<br>USB Pen Drive       | age through             |                                |  | eference and Sample<br>ccommodating 10mm to 100 mm<br>uvettes.  |  |  |  |
| DATA PROCI   | ESSING                                |                         |                                | ixed cuvette holder for Reference<br>nd 6 Position motorized 10 mm |   |  |  |  |
|  | ncentration, Concer                   |                         | tor,                           | -  | ath cell holder for Sample.   |  |  |  |
| Enzyme Kinetics, Overlay, Time Scan, Discrete<br>Wavelength, Ratiometric, Peak Picking, Spectra<br>Zooming, Smoothing, Data Saving & Retrieval, Auto |                                       |                         |                                |  | Fixed cuvette holder to accommodate micro cuvettes.   |  |  |  |
| Zero facility a  |                                       |                         | ACCESSORIES SUPPLIED           |  |   |  |  |  |
| PHYSICAL DIMENSIONS  |                                       |                         |                                | With<br>Instrument   | 10 mm Path length Cuvettes, Built<br>in UV VIS <b>Spectratreats</b> ®   |  |  |  |
| Size (WxDxH)   |                                       | ′5 x 230                |                                |  | Software  |  |  |  |
| Weight (in kg) Approx. 15  |                                       |                         |                                | At extra<br>Cost   | Multi Path length Cuvette holder,<br>10 mm, 20 mm, 40 mm, 50 mm and<br>100 mm Path length Cuvettes,<br>Micro Cuvettes, USB Pen Drive and<br>Printer |  |  |  |
| POWER REQUIREMENT  |                                       |                         |                                |  |   |  |  |  |
| 90-260 V AC, 50-60 Hz, 1¢, 170 VA Max.   |                                       |                         |                                |  |   |  |  |  |







Multi path length holder (optional)

6 cuvettes holder (optional)



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Specifications are subject to change as a process of continual development.



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