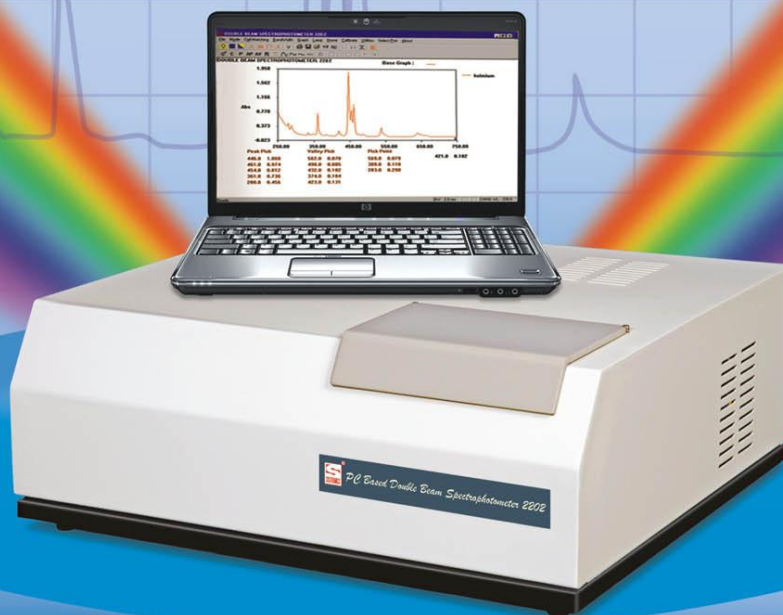




PC - Based Double Beam Spectrophotometer - 2202



Versatile instrument for Research and Industrial Laboratories. The instrument is designed with precision and technique for accurate qualitative and quantitative Spectrophotometric analysis in Agricultural, Chemical, Pharmaceutical, Medical, Bio-technological, Forensic etc. fields. The PC based operation is user friendly for beginners and gives enough scope for data handling to experienced scientists.

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SPECIFICATIONS

OPTICS

Modified Czerny-Turner Monochromator geometry for better aberration correction. Holographic diffraction grating with 1200 lines/mm blazed at 250 nm & Advanced Split Beam Technology with PC controlled settings.

WAVELENGTH

Range : 200 to 1100 nm
Accuracy : ± 0.5 nm
Repeatability : ± 0.2 nm
Resolution : 0.1 nm (200 to 1100 nm)
Bandwidth : 2.0 nm

PHOTOMETRIC

Range : -2.5 to 2.5 Abs (± 4.0 Abs)
Accuracy : ± 0.005 Abs at 1.0 Abs
Repeatability : ± 0.002 Abs at 1.0 Abs

STRAY LIGHT

Less than 0.05%T at 220 nm and 370 nm

BASELINE CORRECTION

Automatic Baseline correction using Advanced Digital Signal Processing (DSP) techniques

BASELINE FLATNESS

Within ± 0.003 Abs from 200 to 1100 nm (excluding noises) after baseline calibration

SCAN SPEED

Slow, Medium and Fast

DATA INTERVAL

Depends on wavelength scan range and scan speed

SAMPLE HOLDER

Five position automatic positioning 10 mm cuvette for Samples and one fixed position for Reference cuvette

SOURCE

Tungsten-Halogen lamp (320 to 1100 nm)
Deuterium lamp (200 to 340 nm)

DETECTOR

Two Si-Photodiodes

ORDER CUT-OFF FILTER

Four glass filters, automatically positioned to eliminate grating spectral order interferences

MINIMUM VOLUME

- (i) Without Cell riser 500 μ l in 1 ml cuvette, 2 ml in 4 ml cuvette
- (ii) With Cell riser 250 μ l in 1 ml cuvette, 1 ml in 4 ml cuvette

OPERATING MODES

- (i) Single Wavelength
- (ii) Multi Wavelength (Max. 15 wavelengths)
- (iii) Scan (With multi-scan facility)
- (iv) Time / Kinetic* Scan (With Derivative facility)

MEASURING MODES

- (i) Absorbance
- (ii) % Transmittance
- (iii) Concentration (K factor, multi standard)
- (iv) Multi-Component Analysis (Max. 10 components)

AUTOMATIC CALIBRATIONS / OPTIMISATIONS (GLP/GMP)

- (i) Base line calibration
- (ii) Source optimisation
- (iii) Cell optimisation
- (iv) Wavelength calibration
- (v) Electronics calibration
- (vi) Self-diagnosis

DATA PROCESSING

- (i) Peak Pick / Point Pick / Valley pick
- (ii) Expansion / Compression of Spectra
- (iii) 1st, 2nd, 3rd and 4th Derivative
- (iv) Averaging of Scans
- (v) Subtraction of first two scans
- (vi) Three levels of smoothening of Spectra
- (vii) Ratio, Corrected ratio, 2 point and 3 point net Abs
(The facilities can be used for DNA & Protein Analysis)
- (viii) Comparison of concentration

DATA PRESENTATION

Display of graphic and tabular data on Computer Monitor, permanent data storage on hard disk, hard copy of graphic and tabular data on printer

COMPUTER SYSTEM

PENTIUM-IV or higher version with Colour Monitor, RS-232 port or USB port with WIN-XP Operating System or above

RS 232 PORT

PC control (RS-232 or USB to serial)

POWER

230V, $\pm 10\%$, 50Hz

DIMENSION

520(W) X 500(D) X 190(H) mm

WEIGHT

23 kg (Approx)

ACCESSORIES

2 matched 10 mm Quartz cuvettes

OPTIONAL ACCESSORIES

- Holder for 50 mm or 100 mm cylindrical and rectangular cuvettes
- Personal Computer / Laptop / Windows compatible printer
- * For Kinetic Scan, use External Control Dry Bath / Incubator

*Technical Specifications, Appearance & model number are subject to change without prior notice in keeping up with the state of art.