

Ref NO: IITK/BSBE/DBT-IYBA/SM03

Technical Specification for Spectrophotometer for quantification of Biomolecules

Compact UV – VIS spectrometer for wide variety of procedures for the most diverse molecular biology, cell biology and biochemical methods.

Optical system	Absorption UV – VIS spectrophotometer with reference beam
Light Source	Xenon flash lamp
Receiver	CMOS photodiode array
Wavelength range	200 nm to 830 nm
Wavelength Selection	Method-dependent, freely selectable
Spectral bandwidth	≤ 4 nm
Wavelength increment	1 nm
Systematic wavelength error	± 1 nm
Random wavelength error	≤ 0.5 nm
Photometric measuring range	0.0 to 3.0 A at 260 nm
Photometric reading accuracy	$\Delta A = 0.001$
Random photometric error	≤ 0.002 at A = 0, ≤ 0.005 (0.5%) at A = 1
Systematic photometric error	± 1 % at A = 1
Cuvette type	Should be Supplied with Cuvette plastic disposable for sample Volume 50 ul or more.
Methods	<ul style="list-style-type: none">• Absorbance with one or more wavelengths, scans• Nucleic acids, Proteins, OD 600, dye labeling• Evaluation via factor, standard and calibration curve• Dual wavelength with subtraction and division evaluation
Method dependent evaluation	<ul style="list-style-type: none">• Absorbance, concentration via factor and standard• Concentration via standard series using• Linear regression, Nonlinear regression with 2nd and 3rd degree polynoms• Spline analysis• Linear interpolation (point to point evaluation)• Absorbance allocation via subtraction and division• Ratio 260/280, 260/230, molar concentration and total yield for nucleic acids• Frequency of incorporation of Cy3, Cy5 dyes and labeling density• Spectral zoom and peak evaluation for scans
Display	5.7" VGA TFT display
Interfaces	USB master for USB stick; USB slave for connection to PC; Serial RS-232 for thermal printer
Memory	> 100 method programs on the instrument > 1000 results with data, evaluation results and used

Parameters.

After Sales Service:

1. For providing after sales service, the vender should have quick service support for IIT Kanpur with adequate service persons, spares & all required accessories.
2. Single point of contact for support: Vender has to provide details of single point of contact viz. Designation, address, and email address, telephone/mobile no. Escalation matrix for support should also be provided with full details.

Kindly send your offer (original, signed in sealed envelope) for the above items mentioning the following:

1. All quotation must reach undersigned by **16th August, 2017, 5 P. M.**
2. Validity of quotation should be at least for 60 days.
3. Cost of the item with technical specification in detail along with warranty and guarantee period.
4. Educational discount applicable, considering end use for research and teaching.
5. Prices should be quoted on the basis of delivery to IIT Kanpur.

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