

Ref. 2194 - Date - 14.11.24 - SDC

Date - 13-11-24

सेवा में,

प्राचार्य
उदय प्रताप कालेज
वाराणसी।

महोदय,

विभाग के M.Sc. के छात्रों के प्रैक्टिकल कराने एवं शोध कार्य हेतु निम्नलिखित समानों को कय करना है। इस हेतु कोटेशन मगाने हेतु कालेज के वेबसाइट पर लगाने की कृपा करे। जिसका Specification संलग्न है।

S.No.	Name of The Instruments	Quantity.	Approximate Cost
1	PC Based Double Beam UV-VIS Spectrophotometer (200-1000 nm) BW 2nm including operating Software	01	Rs.3,15,000.00
2	Soil Moisture Meter	02	Rs. 15,000.00
3	PC with Printer for the Operation of UV-VIS Spectrophotometer	01	Rs.50,000.00

प्रो० संजय कुमार शाही
विभागाध्यक्ष
कृषि रसायन एवं मृदा विज्ञान विभाग
उदय प्रताप कालेज, वाराणसी

SDC

S.No.	Name of The Instruments
1	<p>PC Based double Beam UV-VIS Spectrophotometer (200nm-1100nm) With 2 nm B/W including operating software, but w/o PC)</p> <p>SPECIFICATIONS:-</p> <p><u>OPTICS</u>- Holographic diffraction grating with 1200 lines/.</p> <p>WAVELENGTH Range: 200 to 1100nm Accuracy : ± 0.5nm Repeatability : ±0.2nm Resolution : 0.1nm Bandwidth : 2.0 nm</p> <p>PHOTOMETRIC Range: -2.5 to 2.5 Abs (±4.0 Abs) Accuracy : ± 0.005 Abs at 1.0Abs Repeatability : ± 0.002 Abs at 1.0 Abs</p> <p><u>STRAY LIGHT</u> :Less than 0.05% T at 220nm and 370nm</p> <p><u>BASELINE CORRECTION</u> Automatic Baseline Correction, using Advanced Digital Signal Processing (DSP) techniques.</p> <p><u>BASELINE FLATNESS</u> Within ± 0.003 Abs from 200nm to 1100nm (excluding noises) after baseline calibration.</p> <p><u>SCAN SPEED</u> Slow, Medium & Fast</p> <p><u>DATA INTERVAL</u> Depends on wavelength scan range and scan speed</p> <p><u>SAMPLE HOLDER</u> Five position automatic positioning for 10mm cuvette for samples & one fixed position for reference cuvette</p> <p><u>SOURCE</u> Tungsten-Halogen lamp Deuterium lamp</p> <p><u>DETECTOR</u> Si-Photodiode</p> <p><u>ORDER CUT -OFF FILTER</u> Four glass filters, automatically positioned to eliminate grating special order interfaces</p> <p><u>OPERATING MODES</u></p> <ol style="list-style-type: none"> 1. Single Wavelength 2. Multi Wavelength(Max. 15 Wavelengths) 3. Scan (with multi-scan facility) 4. Time/Kinetic Scan (with Derivative facility) <p><u>MEASURING MODES</u></p> <ol style="list-style-type: none"> 1. Absorbance 2. %Transmittance 3. Concentration (K-factor, Multi Standard)

DPK

DL

4. Multi-Component Analysis (Max. 10 components)

AUTOMATIC CALIBRATIONS/OPTIMISATIONS (GLP/GMP)

1. Baseline Calibration
2. Source optimisation
3. Cell Optimisation
4. Wavelength Calibration
5. Electronic Calibration
6. Self-diagnosis.

DATA PROCESSING:

1. Peak Pick/Point Pick/Valley pick
2. Expansion/Compression of spectra
3. 1st, 2nd, 3rd, and 4th Derivative
4. Averaging of Scans
5. Subtraction of first two scans
6. Three level of smoothing of Spectra
7. Ratio, Corrected ratio, 2 point and 3 point Net Abs (The facilities can be used for DNA & Protein Analysis)
8. Comparison of concentration

DATA PRESENTATION :

Display of graphic and tabular data on computer Monitor, permanent data storage on hard disk or floppy disk; hard copy of graphic and tabular data on printer.
POWER: 230V, ± 10% , 50 Hz

2	PC with Printer for the Operation of above UV-VIS Spectrophotometer PC Pentium with 16" Colour Monitor RS 232 Port and USB Port with XPOperating system with compatible printer
3	Soil Moisture Meter Specifications: Measure Moisture Content 0%-to 50% moisture content ,IPWater Resistance of Soil Sample by 2Pins Electrode with converter Display LCD Size 28 mmx19 mm- PMS-714