

**Nagarjun Medicinal Plants Garden**  
**Dr. Panjabrao Deshmukh Krishi Vidyapeeth,**

P.O. Krishi Nagar, Akola (MS), 444 104, India

No. AICRP/NMPG/ 826 /2024-25

Dated: 17/01/2025

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Subject: Quotation for **SUPPLY OF UV Visible spectrophotometer**

Particulars and conditions of supply as mentioned below:

**A. Particulars of supply to be made**

**Specifications for UV Visible Spectrophotometer**

Sr. No	Parameter	Specifications
1	Colored Touch Screen Display	10 inch
2	Photometric system	True Double beam Optics
3	UV/Vis Bandwidth Type	Variable
4	Wavelength range	180 to 1100 nm
5	UV/Vis Bandwidth Increments (nm)	0.1 nm to 5.0 nm
6	Wavelength Setting	0.1 nm increments
7	Wavelength Display Resolution (nm)	0.1 nm
8	Measuring Modes	ABS, %T, CONC with custom K- Factor and multiple standards
9	Wavelength Accuracy	+/-0.1 nm @ 656.1 nm ; +/-0.1 nm entire range
10	Wavelength Repeatability	+/-0.1 nm
11	Wavelength Slew rate	About 6000 nm/min
12	Wavelength Scan speed (nm/min)	4000 to 2 nm/min
13	Lamp interchange wavelength	Automatic changeover of wavelength with configurable wavelength
14	Stray light	Less than 0.02% at 220 nm (NaI) Less than 0.02% at 340 nm (NaNO <sub>2</sub> ) Less than 1.0% at 198 nm (KCl)
15	Photometric readability range (Abs)	Absorbance: -4.0 to 4.0 Abs Transmittance: 0% to 400%
16	Photometric accuracy	+/-0.002 Abs at 0.8 Abs +/-0.004 Abs at 1.2 Abs +/-0.006 Abs at 2.1 Abs
17	Photometric repeatability	Less than +/-0.001 Abs at 0.8 Abs Less than +/-0.001 Abs at 1.2 Abs Less than +/-0.003 Abs at 2.1 Abs
18	Baseline stability	Less than 0.0002Abs/Hr @ 700 nm (one hour after light source ON)

19	Baseline flatness ( $\pm A$ )	Less than $\pm 0.0005$ Abs (avg. points) (1100 to 190 nm, one hour after light source switched ON)
20	Noise level	Less than 0.00005 Abs (700nm)
21	Light source	Plug-in pre-aligned Tungsten Halogen lamp and UV Deuterium lamp
22	Monochromator	Blazed concave holographic grating 1200 lines/mm in Czerny Turner mounting
23	Detector	Dual matched silicon photodiode
24	Environmental requirements	Temperature 15 to 38 Humidity 30% to 80%
25	Output device	Inbuilt with desktop OS with high resolution 10 inch touch screen LCD
26	Software	Scanalyser software (Microsoft windows 7 and above) CFR 21 compliance
27	Validation	Automatic measurement and pass/fail evaluation and printing of results
28	Connectivity	LAN/Ethernet/Wifi/Bluetooth
29	Sample compartment internal dimensions (W x D x H) mm	115 x 250 x 90 Distance between light beams: 80 mm
30	Power Supply	230V/50 Hz

### 1. Scan Wavelength Range:

The system should feature a configurable scan wavelength range from 0.1 nm to 5 nm, enabling precise and rapid analysis for a wide range of applications.

### 2. Optical Configuration:

- The spectrophotometer should be equipped with pre-aligned true double beam optics, ensuring excellent stability and performance.
- The system should include a blazed holographic grating mounted in Czerny-Turner configuration, with a 1200 lines/mm grating, ensuring superior resolution, accuracy, and signal quality.

### 3. Bandwidth Options:

- The system must offer a user-selectable variable bandwidth ranging from 0.1 nm to 5 nm, providing flexibility to optimize spectral data collection for various analytical needs and improving both accuracy and speed.

**4. Upgradable Accessories:** The spectrophotometer should be field-upgradable to support a wide range of optional accessories, including:

- Microcell
- Long path 20, 40, 50, and 100 mm cells
- Circular test tube holder
- Peltier-based constant temperature attachment, controlled via software for precise temperature regulation
- Variable slit setup for enhanced resolution control
- Automatic multi-cell changer for higher throughput and greater sample handling efficiency.

### 5. User Interface:

- The system should be operable via a coloured touchscreen display, with a minimum screen size of 10 inches.
- An optional PC-controlled software interface should also be available, allowing for remote or enhanced control of the instrument.

### 6. Compliance:

- The system must meet USP-857 IQ/OQ criteria for Installation Qualification (IQ) and Operational Qualification (OQ), ensuring compliance with pharmaceutical and regulatory requirements.
- Optional CFR 21 Part 11 Compliance: The system should offer optional CFR 21 Part 11-compliant analysis software with server-client architecture, ensuring secure, validated electronic records and signatures, in line with FDA regulations for data integrity and compliance.

#### 7. Manufacturing and Supplier Criteria:

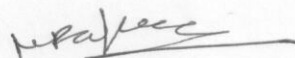
- The system should be manufactured in India, ensuring local production and support.
- The Original Equipment Manufacturer (OEM) should have an annual turnover of more than Rs 100 crores (INR 100 million), ensuring financial stability and capacity for reliable long-term support and service.

#### 8. Instrument Software Features:

- The instrument software must support server-based connectivity, enabling seamless integration with centralized systems for improved data management and accessibility.
- The software should be compatible with Laboratory Information Management Systems (LIMS), facilitating efficient data transfer, management, and traceability within the laboratory environment.
- Software must have inbuilt program for
  1. Photometric
  2. Quantization
  3. Multi-wavelength
  4. Scan Spectrum
  5. Time scan Kinetics
  6. DNA/Protein analysis

#### B. Terms and Conditions of Supply

- 1) The sealed quotation should be in the name of **Head, AICRP on Medicinal, Aromatic Plants and Betelvine, Nagarjun Medicinal Plants Garden, Dr. PDKV, Akola** and the envelop should be labeled as **QUOTATION FOR SUPPLY OF UV Visible spectrophotometer** and should reach in this office on or before **27/01/2025**.
- 2) The quotation will be accepted on all working days between 10.30 to 4.30 PM.
- 3) The rates quoted will have to be inclusive of all the taxes with delivery at **Professor, AICRP on Medicinal, Aromatic Plants and Betelvine, Nagarjun Medicinal Plants Garden, Dr. PDKV, Akola (MS)**.
- 4) The right to accept whole or part of the quotation or reject is reserved with the undersigned without assigning the reason.
- 5) The material will have to be supplied as per the specification given within 10 to 12 days from the receipt of confirm office order.
- 6) In the event of failure to supply the material within the specified period, the undersigned is authorized to cancel OR extend the period of supply.
- 7) The payment will be made after supply of material in good condition. No advance payment will be made. The payment will be made through Cheque only.
- 8) It is essential to mention the CST and BST No. of the supplier firm.



**Head**

**AICRP on MAP & B  
Nagarjun Medicinal Plants Garden  
Dr. PDKV, Akola**

