



VIVEKANANDHA COLLEGE OF ARTS AND SCIENCES FOR WOMEN



[Autonomous]

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VIVEKANANDHA
EDUCATIONAL INSTITUTIONS

INVITED QUOTATIONS FOR THE PURCHASE OF EQUIPMENTS

(Under DST FIST 2022 Program)

Ref. No. SR/FST/COLLEGE-/2022/1290, dt. 19.12.2022

Name of the equipment(s) and Quantity

- | | |
|--|--------|
| 1. HPLC | 01 No. |
| 2. Double Beam Atomic Absorption Spectrophotometer | 01 No. |
| 3. Spectrofluorimeter | 01 No. |
| 4. CO2 Incubator | 01 No. |
| 5. Refrigerated Centrifuge | 01 No. |

The quotations for the above mentioned equipments are invited as per the enclosed specifications through principal@vicas.org on or before 05th November 2023

Encl. Specifications of the equipments



Principal
19/10/23

PRINCIPAL

PRINCIPAL

VIVEKANANDHA COLLEGE OF ARTS AND
SCIENCES FOR WOMEN (Autonomous),
ELAYAMPALAYAM - 637 205,
TIRUCHENGODE TK, NAMAKKAL DT,
TAMIL NADU.

SPECIFICATIONS FOR THE EQUIPMENTS

1. HPLC - 1 No.

Type of Pump: SSQD (Slow Suction Quick Delivery)

Flow rate setting range : 0.001 ~ 10.0 mL/min

Applicable flow rate range : 0.5 ~ 6.0 mL/min (~ 70 MPa) ~ 10.0 mL/min (~ 35 MPa)

Maximum pressure : 70 MPa (~ 6.0 mL/min) , 35 MPa (~ 10.0 mL/min)

Flow rate accuracy : +/- 1% or +/- 2 μ L/min, whichever is larger. (0.5 ~ 10.0 mL/min)

Flow rate precision : 0.05% RSD or +/- 0.04min SD, whichever is larger. (0.5 ~ 5.0 mL/min)
(measurement by chromatogram)

Plunger: Ceramic

Plunger Washing System: Standard

Should be upgradable to Binary (or) Quaternary.

UV-VIS DETECTOR – 1 No.

Wavelength range : 190 ~ 600 nm

Light source : Deuterium

Noise level: +/-0.2 x 10⁻⁵ AU (230 nm, 1.5 sec)

Spectral bandwidth: 8 nm

Drift : 1 x 10⁻⁴ AU/h (250 nm, constant room temperature)

Data Output : 100Hz

Linerarity : 3 % @ 2 AU

Measurement Range : 0.0005 to 2.56 ABU/10 mV

MANUAL INJECTOR – 1 No.

HAMILTON SYRINGE 25ul – 1 No.

INJECTOR MOUNT MODULE – 1 No.

INTEGRATING SOFTWARE – 1 No.

C18 COLUMN – 1 No.

BOTTLE STAND – 1 No.

TUBING & MAINTANENCE KIT – 1 Set.

2. SPECTROFLUOROMETER – 1 No.

LIGHT SOURCE : Long Life 150W Xe lamp with shielded lamp house

MONOCHROMATOR : Holographic concave grating

WAVELENGTH RANGE : Zero Order, 200 – 750nm

WAVELENGTH ACCURACY: ± 1.5 nm

WAVELENGTH REPEATABILITY: ± 1.0 nm

SPECTRAL BANDWIDTH : 1, 2.5, 5, 10, 20 nm

W.L. SCAN SPEED : 20, 50, 100, 200, 500, 1,000, 2,000, 5,000,
10,000, 20,000 nm/min

SLEW SPEED : 30,000 nm/min

SENSITIVITY : 4,500:1

RESOLUTION : 1.0 nm (at 546.1 nm)

RESPONSE : 10, 20, 50, 100, 200, 500 msec, 1, 2, 4, 8 sec

DETECTOR : Ex: Silicon photodiode, Em: PMT

PHOTOMETRIC RANGE : -10,000 - 10,000

SAMPLE ILLUMINATING SYSTEM : Horizontal illumination

Automatic sensitivity calculation system to be provided at standard

Automatic Gain control should be provided as standard.

Should have start button for starting measurement immediately after placing the sample for kinetic measurements.

Should have auto accessory recognition software for identifying the accessories and to select necessary parameters.

Should be provided with Mercury Lamp for validation of the instrument.

Should have USB Communication.

Should Provide Windows Based Software for Quantitative Measurement, Spectrum Measurement, Time Course Measurement, Fixed Wavelength Measurement, 3d Fluorescence Measurement, Abs measurement and spectral correction, validation, Spectral Analysis, File Viewer, and Canvas Facility for Documentation & Presentation.

3. DOUBLE BEAM ATOMIC ABSORPTION SPECTROPHOTOMETER - 1 No.

Sr. No.	Item	Description
1	Optics	True Double Beam, sealed & vibration free optical with automatic Wavelength and Slit Selection
2	Monochromator	Czerny-turner type Monochromator
3	Wavelength Range	185 – 910 nm Diffraction grating min :1800/mm lines and Reciprocal linear Dispersion better than 1.6nm/mm
4	Slits	0.1 to 2.0 nm or more
5	Detector	PMT (Photomultiplier)
6	Background Correction	Deuterium (D2) lamp/Self reversal background correction
7	Lamp Support (Turret)	Minimum 8 lamps turret with automatic aligning turret selection & control by computer for both flame and furnace
8	Burner	Single or separate Corrosion (both Inorganic and organic acids/solvents) resistant burner for Air-Acetylene and Acetylene -Nitrous Oxide gases with auto adjustment of High and low gas flow.
9	Nebulizer	Corrosion resistant to all acids and solvents.
10	Hollow Cathode Lamps	K, Li, Cd, Ba, Pb and Cu
11	Air compressor	It should be Oil free, Noiseless with moisture trap and air Purifier suitable for the quoted AAS
12	Exhaust Hood	It should be anti corrosive coated SS hood with fan and other Fittings suitable for the quoted AAS.
13	Standards	100ml each with 1000ppm with respect to Hollow Cathode Lamps
14	Safety system	Safety interlocks for Burner, Pressure relief Bung, Flame shield, flame Operation, Spray Chamber, Gas Oxidant pressure, trap, gas leak check...
15	Gas Cylinder	One Acetylene and one N ₂ O Cylinder with suitable double stage regulator
16	Safety features	<ul style="list-style-type: none"> i) Burner Identification ii) Flame Sensor iii) Gas leak Sensor iv) Low Gas Pressure Sensor v) Drain Trap Sensor vi) Power Loss Protection vii) Circulation Water (graphite) viii) Over Temperature Sensor (graphite) ix) Argon Gas pressure sensor x) Water Flow sensor xi) Over Temperature sensor xii) Broken Graphite Tube protection
17	Power	230 \pm 10 , 50 Hz

4. CO₂ INCUBATOR – 1 No.

Interior volume - 1.87 Cu.Ft. Number of shelves - 2/3 Temperature range: +4 °C above ambient temperature to 60 °C Humidity: up to 95% RH, Auto-sterilization with hot air at 180°C, Humidification system with condensation protection, CO₂ gas-mixing jet with Venturi effect, CO₂ sensor with infrared technology, LED Display, Tightly-sealed inner door made of tempered safety glass, Seamless, deepdrawn inner stainless steel chamber. With CO₂ Cylinder, regulator

5. REFRIGIRATED CENTRIFUGE – 1 No.

With rotor FA-45-24-11HS and rotor F-3-6-30
