

SREE NARAYANA COLLEGE

CHEMPAZHANTHY

Affiliated to the University of Kerala)

Chempazhanty P O
Thiruvananthapuram-695 587
Kerala

Ph : 0471-2592077

: 0471-2596629

Fax : 0471-2596629

Limited Tender Enquiry: No. 1/FIST/CHEM/ 2008-09 dated 15-10-2008

To

Suppliers of FT-IR Spectrometer and UV- Visible Spectrophotometer

Sub: Procurement of FT-IR System and UV- Visible Spectrophotometer for the Department of Chemistry

Kindly send the sealed bids both technical and financial separately for **one** FT-IR System and **one** UV- Visible Spectrophotometer with the technical specification as given below on or before **14th November 2008** to the following address: Please subscript our reference number and date of tender opening on sealed cover.

**The Principal, Sree Narayana College, Chempazhanty, Trivandrum,
Kerala, Pin 695 587**

The Bids shall be opened in the office of the Principal at **2pm on 17th November 2008** and in the presence of such tenderers or their duly authorized representatives, who may like to attend. If due to any exigency, the due date for opening of tender is declared close holiday, in such case the tenders will be opened on next working day at the same time or any other day/time as intimated by the buyer.

Please note that the envelopes containing Bids are sealed properly i.e. either wax sealed or with adhesive cello tape on both ends. **Unsigned Bids, Unsealed/stapled envelopes** and bids **without EMD** shall be summarily rejected. **No exemption whatsoever** for payment of EMD shall be accorded.

Technical Specifications for the FT-IR Spectrometer

- The Instrument optics **preference for ZnSe** optics and window for operation in regions with high humidity.
- The instrument spectral resolution should be continuously variable to maximum optical resolution of **2.0 cm⁻¹**.
- The standard spectral operating range should be not less than **7500cm⁻¹ to 500 cm⁻¹**.
- Sampling modules for solids and liquids **Micro-ATR with ZnSe** crystal must be quoted. Change between different modules must be easy.
- The FT-IR must incorporate a high throughput 60 degree interferometer and Gold Coated optics for maximum light throughput.

The interferometer must be permanently aligned. Interferometer designs that require alignment (either manual or automatic) are not acceptable.

SOFTWARE specifications:

The software must be an "all-in-one" software for data measurement, manipulation and evaluation.

The software must be GMP/GLP conform.

The instrument must *be quoted* along with optional suitable 2KVA UPS, Computer, Printer , Local sample analysis kit (solid and liquid) with transmission mode) like, Hydraulic Press, 15 ton manual, KBr die 13 mm, Agate mortar & Pestle, Pellet holder, Demountable cells with KBr windows. KBr Powder IR grade etc..

The system should be supplied with multi media tutorials.

The system should be supplied with windows compatible operating software with standard features like Data collection, Data processing facilities.

Installation and Demonstration: Free of cost

Warranty: minimum one year.

Technical Specifications for the UV- Visible Spectrophotometer

High Resolution Double Beam UV –Visible Spectrophotometer with Variable Bandwidth

PC based high performance, double beam Spectrophotometer with 32-bit UV-Probe
Software working in WINDOWS software

Photometric System : Double beam optics direct ratio system with Dynode feedback

Wavelength Range : 900nm to 190nm

Spectral Bandwidth : 0.1, 0.2, 0.5, 1, 2 & 5 nm

Wavelength Accuracy: +/- 0.3nm

Resolution : 0.1nm

Wavelength Scanning Speed : Fast, Medium, Slow & Super Slow

Stray Light : Less than 0.015% at 220nm & 340 nm

Photometric Accuracy: +/- 0.004 Abs. at 1.0 Abs. & +/- 0.002 Abs. at 0.5 Abs.

Photometric Range : -4 Abs. to 5 Abs.

0.0% to 999.9 %T

0.0% to 999.9% R

Monochromator : Aberration corrected concave blazed holographic grating with
Czerny-Turner mounting.

Light Source : 50W Halogen and Deuterium lamp.

Detector : high sensitive PMT

Kinetics: Single / Dual wavelength measurement, simultaneous display of time course data, enzyme table and graphs; Enzyme Kinetics calculation; Michaelis-Menten calculations; event recording etc

Other operation : Fully multitasking; Windows NT compatibility 32-bit operation for stable operation; QA/QC functionality; GLP/GMP support functions; flexible report

generator, customized formats, editing of templates, multi-page print-out support; detailed on-line Help

Spectrum: Comparison of multiple spectra / relative processing, Audit trail functions, annotations, data normalisation, peak / valley detection, point pick, peak area calculation, Derivative calculations up to 4th order, arithmetic calculations, interpolations, averaging.

Quantitation: Single / Multiple wavelength and spectrum quantitation; K-Factor, Single point and Multi point curves; Photometric processing with user defined functions; weight corrections, dilution factor correction and other corrections; simultaneous display of standard, unknown tables and calibration curves; Display Pass / Fail indications

Accessories : Integrating Sphere Attachment with built in PMT for solid sample analysis.

PC ,Printer & 2KVA UPS

Quartz cell – 1 Pair

Thermoelectric cell holder or Peltier controlled temperature cell holder

Optional for Constant temperature cell holder

TERMS & CONDITIONS

1. The Bids should clearly give break-up of the cost of each equipment. The rates quoted should separately indicate Basic Cost, Excise Duty, Sales Tax, P&F charges, Freight, Insurance, VAT etc. Rates quoted should specifically state Sales Tax, Excise Duty or any other taxes/charges. In absence of any such stipulation, it will be presumed that the prices include all such charges and no claim for the same shall be entertained.
2. Each tender document shall be accompanied with **EMD of 2% of total cost of the equipment**. The demand draft for the EMD amount shall be drawn in favour of the **Principal, S N College, Chempazhanthi payable at Trivandrum**.
3. The successful bidder shall be required to furnish a 'Contract Performance Security' of value equal to 5 % of the cost of equipment(s) within 30 days of placement of order. The 'contract Performance Security' should be valid during guarantee/warranty period.

4. Contract Performance Security should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations.
5. The **warranty period** of the equipments **may be stated clearly** in the Technical Bids. In case the **same is not found stated**, it will be presumed that **warranty period as mentioned in their respective specifications of the bid document (if specified), is applicable**
6. Please mention clearly in the Technical Bids regarding address of **arrangements for service/repair** of the equipments are available
7. The bid should contain the complete technical specifications of the equipment supported with illustrative literatures/catalogues.
8. Necessary users manuals of hardware and software are to be supplied along with the equipments.
9. Bids should be clear in all aspects and those with ambiguous clauses shall be summarily rejected.
10. The Principal takes no responsibility for delay, loss or non-receipt of tenders after dispatch.
11. **In case of non compliance with the Terms & Conditions of the contract, the Principal reserves its right to:**
Cancel/rescind/revoke the order if supply is not made in time and is not conforming to the required specification.

Dr C Mohan Sreekumar

Principal

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Limited Tender Enquiry: No. 2/FIST/CHEM/ 2008-09 dated 15-10-2008

To
Suppliers of minor equipments

Sub: Procurement of minor equipments for the Dept of Chemistry

Kindly send the sealed bids both technical and financial separately for minor equipments with the technical specification as given below on or before **14th November 2008** to the following address: Please subscript our reference number and date of tender opening on sealed cover.

The Principal Sree Narayana College, Chempazhantny, Trivandrum, Kerala, Pin 695 587

The Bids shall be opened in the office of the Principal at **2pm on 18th November 2008** and in the presence of such tenderers or their duly authorized representatives, who may like to attend. If due to any exigency, the due date for opening of tender is declared close holiday, in such case the tenders will be opened on next working day at the same time or any other day/time as intimated by the buyer.

Please note that the envelopes containing Bids are sealed properly ie., either wax sealed or with adhesive cello tape on both ends. **Unsigned Bids, Unsealed/stapled envelopes** and bids **without EMD** shall be summarily rejected. **No exemption whatsoever** for payment of EMD shall be accorded.

1.Item: Micro Controller based Visible Spectrophotometer, Quantity: **One**

Specifications

Wavelength: 340-990 nm

Wavelength display : 3 digit

Modes: %T, Abs, Conc and k factor

Read out: 4 digital LED display

Grating : 600 lines/mm

Spectral Band width: 5 nm

Wave length accuracy: 2nm

Sample holder : 2 position

Source: Halogen Lamp (12V, 50W)

Glass Cuvette : 2 Nos.

2.Item: Analytical Balance , Quantity: **two**

Specifications

Capacity :220g

Minimum display 0.1 mg

Pan size : 80mm dia

Linearity : 0.2mg

Perfect Self Calibration

3.Item: Digital Balance , Quantity: **one**

Specifications

Top loading

Capacity :220g

Minimum display: 1 mg

Pan size : 100x100 mm

4.Item: Digital pH meter , Quantity: **one**

Specifications

pH range : 0 to 14

Millivolt Range : 0 to 1999mV

Polarising current : 10 μ A

Recorder output : 10mV + -1mV per pH

Display : LCD

Comb, Electrode, Stand/ Clamp, dust cover

5.Item: Micropipette , Quantity: **one each**

Specifications

Single channel with auto clavable tip cone and built-in tip ejector

Volume range 1) 0.2 to 2 μ L

2) 10 to 100 μ L

3) 20 to 100 μ L

6.Item: Digital Photoelectric Colorimeter , Quantity: **one**

Specifications

Wavelength range : 400-700 nm with minimum 8 optical filters

Measuring mode : % T, Abs, Conc, k –Factor

k –Factor display 0 to 1999

Display LCD

Sample volume : 1mL in 4 mL cuvette.

Spare bulbs

7.Item: Rotary Shaker with timer, Quantity: **one**

Specifications

Duty motor with controllable orbital speed up to 250 rpm

Platform : 12” x12”

For holding 250mL x 9 flasks

Digital timer

8.Item: Digital Melting Point Apparatus , Quantity: **one**

Specifications

Temp Range 30 $^{\circ}$ C to 350 $^{\circ}$ C

9.Item:, Hot air oven, Quantity: **one**

Specifications

Capacity : 45 Liters

Three side heating element
Double wall chamber
Inner shelves made of SS and outer of Mild steel
Thick glass wool insulation
Digital Temp Controller cum indicator
Air circulation Fan
Working Temp : 50 to 300 °C

10.Item: Glass double distillation Unit , Quantity: **one**

Specifications

Capacity : 1.5 L /Hr

Built in heater

Electronic relay unit

11.Item:, Vacuum pump(diaphragm type), Quantity: **one**

Specifications

Mode : Double stage

Capacity : 25 L/ min air displacement

Double Head with Teflon diaphragm

12.Item:, Mixed bed ioniser, Quantity: **one**

Specifications

Out put : 70 L/ hr

TWQ conductivity : < 01

TWQ pH :6.8 to 7.2

13.Item:, Traveling Microscope, Quantity: **one**

Specifications

Double motion with Newton disc attachment

14. Item:, Viscometer, Quantity: **one**

Specifications

Electrical Headed with energy regulator

15. Item: High speed Centrifuge, Quantity: **one**

Specifications

With rotor head and accessories

Angle head with polypropylene tubes (12x15 mL)

16. Item: Electrical Bunsen, Quantity: **five**

Specifications

Body made of SS

Glass wool insulation

Heating element: 300W

Energy regulator

17. Item: Double pan Balance, Quantity: **four**

Specifications

Capacity : 200g

Sensitivity : 0.1mg

Wood Base

18. Item: Polarograph, Quantity: **one**

Specifications

Micro controller based with printer interface

Operating mode : DC and sampled DC

Scan potential range : Up to 2000mV starting from initial potential, always negative in the Scan cycle with 1mV resolution

Current Range : 1 μ A to 10 mA

Drop time : 0.5, 1 and 2 sec

Filtering facility through software

Cell : Dropping mercury electrode assembly (3 electrode system)

Accessories : Dropping mercury electrode, connecting cable, printer.

19. Item: Refractometer, Quantity: **one**

Specifications

Refractive index range : 1.3000- 1.7000

Refractive index accuracy : 0.0002

Refractive index Min Div : 0.0005

Brix (%) Range : 0-95

Brix (%)Min Div : 0.25

Temp Range : 0 to 70 °C

20. Item: Macro pipette controller, Quantity: **three**

Specifications

Capacity : 0.1 mL to 100 mL

With spare membrane filter (Hydrophobic)

21.Item: Rotary vacuum Flash evaporator with pump, Quantity: **one**

Specifications

Condenser: double coiled

Digital display cum temperature controlled SS water bath

Geared drive unit

Accessory: Oil free portable vacuum pump

22.Item: Ultra Violet Fluorescence Inspection Cabinet(Dual Wave) ,

Quantity: **one**

Specifications

Fitted with separate UV tube for short wave (254nm) and pre-filtered UV tube for long wave length (365nm)

Separate lamp for visible radiations

TERMS & CONDITIONS

1. The Bids should clearly give break-up of the cost of each equipment. The rates quoted should separately indicate Basic Cost, Sales Tax, VAT etc. Rates quoted should specifically state Sales Tax, Excise Duty or any other taxes/charges. In absence of any such stipulation, it will be presumed that the prices include all such charges and no claim for the same shall be entertained.

2. Each tender document shall be accompanied with **EMD of 2% of total cost of the equipment**. The demand draft for the EMD amount shall be drawn in favour of the **Principal , S N College, Chempazhanthu payable at Trivandrum**.

3. The successful tenderer has to furnish Bank guarantee towards 'Contract Performance Security' for a sum of 5% of the order value within 7 days of the receipt of formal order. The 'contract Performance Security' should be valid during guarantee/warranty period.
4. Contract Performance Security should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations.
5. The **warranty period** of the equipments **may be stated clearly** in the Technical Bids. In case the **same is not found stated**, it will be presumed that **warranty period as mentioned in their respective specifications of the bid document (if specified), is applicable.**
6. Please mention clearly in the Technical Bids regarding address of **arrangements for service/repair** of the equipments are available
7. The bid should contain the complete technical specifications of the equipment supported with illustrative literatures/catalogues.
8. Necessary user's manuals of hardware and software are to be supplied along with the equipments.
9. Bids should be clear in all aspects and those with ambiguous clauses shall be summarily rejected.
10. The Principal takes no responsibility for delay, loss or non-receipt of tenders after dispatch.
11. **In case of non compliance with the Terms & Conditions of the contract, the Principal reserves its right to:**
Cancel/rescind/revoke the order if supply is not made in time and is not conforming to the required specification.

Dr C Mohan Sreekumar
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Limited Tender Enquiry: No. 3/FIST/CHEM/ 2008-09 dated 15-10-2008

To

Suppliers of Computer Machines and Computer Peripherals

Sub: Procurement of Computer Machines and Computer Peripherals for the
Department of Chemistry

Kindly send the sealed bids both technical and financial separately for Computer machines and Peripherals with the technical specification as given below on or before **14th November 2008** to the following address: Please subscript our reference number and date of tender opening on sealed cover.

**The Principal, Sree Narayana College, Chempazhantny, Trivandrum,
Kerala, Pin 695 587**

The Bids shall be opened in the office of the Principal at **2pm on 19th November 2008** and in the presence of such tenderers or their duly authorized representatives, who may like to attend. If due to any exigency, the due date for opening of tender is declared close holiday, in such case the tenders will be opened on next working day at the same time or any other day/time as intimated by the buyer.

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SYSTEM CONFIGURATION

SL.NO	DESCRIPTION	QTY
1	SERVER IBM SERVER X3200 M2 INTEL XEON 3110 DC @3GHz 2 GB ECC DDR II RAM (1 GB X2) 250 GB SATA HARD DISK DVD ROM 15" TFT MONITOR KEYBOARD. MOUSE 3 YEAR WARRANTY	1
2	PC INTEL CORE2DUO 7200 @ 2.53 GHz INTEL 31 PR MOTHERBOARD 2 GB DDR II RAM 250 GB SATA HARD DISK DVD WRITER (LG/SAMSUNG) ATX CABINET 17" TFT MONITOR (AOC/LG/SAMSUNG) MICROSOFT KEYBOARD MICROSOFT OPTICAL MOUSE	10
3	HP LASERJET PRINTER 1008	01
4	HP COLOUR LASERJET 1600	01
5	SCANNER UMAX/HP	01
6	3 KVA UPS WITH 1 HOUR BACKUP	01
7	PORT SWITCH	16
8	CAT 5 E CABLE	200m
9	RJ 45 COUNTERS	40
10	COMPUTER TABLE	11
11	COMPUTER CHAIR	15

TERMS & CONDITIONS

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2. Each tender document shall be accompanied with **EMD of 2% of total cost of the**

equipment. The demand draft for the EMD amount shall be drawn in favour of the **Principal , S N College, Chempazhanthy payable at Trivandrum.**

3. The successful tenderer has to furnish Bank guarantee towards 'Contract Performance Security' for a sum of 5% of the order value within 7 days of the receipt of formal order. The 'contract Performance Security' should be valid during guarantee/warranty period.

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Principal

