

INDIAN INSTITUTE OF SCIENCE EDUCATION AND
RESEARCH-THIRUVANANTHAPURAM
[IISER-TVM]

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1ST FLOOR, DEPT: OF COMPUTER SCIENCE & ENGG,
CET CAMPUS, ENGINEERING COLLEGE. P.O
THIRUVANANTHAPURAM 695016,
KERALA, INDIA.

IISER/PUR/PT/10/10

Date: 29th September 2010

INVITATION TO TENDER

Dear Sirs,

SUB: HIGH SPEED CENTRIFUGE, BOX FURNACE AND
SPECTROGRAPH WITH CCD CAMERA

We invite Sealed Tenders for Equipments as per 'Schedule' attached.

Please quote your lowest rate and shortest delivery period. "Instructions to Tenderers" [Imports & Indigenous] attached are to be followed strictly.

YOUR OFFER IN SEALED COVER SUPERSCRIBING TENDER NUMBER AND DUE DATE
SHALL REACH US ON OR BEFORE 25TH OCTOBER 2010 (3 PM). LATE AND DELAYED
OFFERS WILL NOT BE CONSIDERED UNDER ANY CIRCUMSTANCES.

Thanking You,

Yours Faithfully


CONSULTANT
(PURCHASE & STORES)

IISER-TVM
PUBLIC TENDER NO. IISER/PUR/PT/10/10
SCHEDULE

1. TENDER No. IISER/PUR/848/10

FLOOR MODEL HIGH SPEED REFRIGERATED CENTRIFUGE WITH FIXED ANGLE AND SWING BUCKET CARBON FIBER ROTORS AND ACCESSORIES.

SPECIFICATIONS:

- Must be able to run select rotors up to 22,000 rpm (55, 193xg) and must allow to set and control in both RPM (Revolutions Per Minute) and RCF (Relative Centrifugal Force) directly for any selected rotor.
- Should be able to process at least up to 4-Liters of sample per run while using a fixed-angle rotor, and at least 2 liters of sample per run while using a swingingbucket rotor.
- The centrifuge chamber must be a closed system and not require a vacuum for operation.
- Should be microprocessor-controlled, with easy to use operating controls.
- Actual run conditions should be simultaneously visible during operation.
- With at least 7 acceleration and deceleration profiles.
- Should have the capability to store up to 30 operating programs.
- Should have real time control or delayed start/stop feature to allow users to program the centrifuge at a future date and time.
- Should offer a temperature set range of atleast -20°C up to +35°C with a temperature control range of +2°C up to +40°C with an accuracy of not more than +/-2°C.
- Should contain a built-in electrical management system to ensure instrument performance, even under poor power supply condition. The system must accept at least +/-10% fluctuations in input line voltage.
- Must not require anchoring to floor via bolts.
- Should have a brush less, high frequency direct drive motor.
- Refrigerant should be CFC-free.
- Should be capable of doing continuous flow centri'fugation.
- Should be able to spin/accommodate carbon fiber rotors.
- Should provide suitable voltage stabilizer system.

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Rotor Specification:

All rotors should be made of carbon fiber and autoclavable.

Type	Material	Maximum speed(rpm)/RCF (x g)	Capacity in litres	Accessories
Fixed angle	Carbon fiber	At least 9000/16000	At least 3 L (To hold atleast 6 bottles with 500 ml capacity)	Centrifuge bottles, lids and "O" rings with 500 mL and 250 mL capacity.10 numbers each
Fixed angle	Carbon fiber	At least 13000/28000	At least 1.5 (To hold at least 6 bottles with 250 ml capacity)	Adapters to hold 50ml and 15 ml tubes. 10 numbers each.
Fixed angle	Carbon fiber	At least 19000/47000	At least 0.4 (To hold at least 8 tubes with 50 ml capacity)	10 numbers of cushioning to hold 50 ml glass tubes.
Swing bucket	Carbon fiber	At least 4500/3700	At least 3 (To hold at least 4 bottles with 750 ml capacity)	Micro plate carrier 2 sets, 10 numbers each of bottles, lids and "O" rings to hold 750 ml, 500 ml and 250 ml. Adapters to hold 750 ml, 500 ml and 250 ml bottles and 50 ml, 15 ml and 1.5 ml tubes.

- P.S:**
- (1) TWO YEARS WARRANTY REQUIRED.**
 - (2) PRE - INSTALLATION REQUIREMENTS SHALL BE MENTIONED IN THE QUOTE.**
 - (3) THE CENTRIFUGE SHALL BE INITIALLY INSTALLED AT OUR TRANSIT CAMPUS [CET, TVM] AND LATE TO BE DISMANTLED AND RE – INSTALLED AT PERMANENT CAMPUS, VITHURA, 40 KM AWAY FROM TRIVANDRUM. YOUR QUOTE SHALL SPECIFICALLY ADDRESS THIS REQUIREMENT**

2. TENDER NO. IISER/PUR/849/10

HIGH TEMPERATURE BOX FURNACE

SPECIFICATIONS:

- Maximum temperature: 1700C/1800C
- Capacity: 15-20litres
- Programmable temperature controller with multiple programs and segments
- One setpoint facility
- Better temperature stability (1700 ± 10)C with proper insulation
- Connecting cable
- Molybdenum disilicide heating elements with long life time
- Up-down or left-right slidable door
- Over temperature protection
- RS485 digital communication facility
- Fan cooling
- Simultaneous LED display of actual temperature and set point display
- Specify the minimum and maximum possible heating and cooling
- One extra set of heating elements

[ALL TECHNICAL DETAILS SHALL BE PROVIDED]

3. TENDER NO. IISER/PUR/850/10

I. SPECTROGRAPH + 3 GRATINGS

Specifications:

- Aperture: f/4 (typical)
 - Focal length: Between 300 -325 mm
 - Operating wavelength: 350 -1000 nm
 - wavelength resolution: < 0.2 nm
 - Motorised input slits
 - Motorized swing entrance and exit mirror
- Grating: Triple grating turret
- Grating 1: 150 grooves/mm; 800 nm blaze
 - Grating 2: 300 grooves/mm; 500 nm blaze
 - Grating 3: 600 grooves/mm; 500 nm blaze
 - Size: 68 x 68 mm
- ❖ Stray light [measured a few nanometres away from a laser line] : $< 2 \times 10^{-4}$
 - ❖ The spectrometer should be pre-aligned and pre-calibrated with the Si CCD specified below.
- Should provide control software capable of adjusting the swing mirrors, slits & gratings and to take spectra using CCD camera; should be possible to easily integrate with other labview programs already used in the laboratory.

Continued....4

II. SILICON CCD

Format: 1024 x 256 pixels

Pixel size: 26 x26 μm

Image area: 100% fill factor

Detection Range: 350 -1000 nm

Thermoelectric cooled CCD (optionally alongwith water cooling)

Low dark signal

The quotation should also include

- (i) Input/exit and electronic accessories necessary for adapting the CCD to the spectograph, control of the combined system from the control software etc.
- (ii) Performance values and charts for spectral response, dark current etc. for various gratings

NOTE:

1. LEAFLET/CATALOGUE OF THE ITEMS QUOTED SHALL ACCOMPANY THE QUOTATION WITHOUT FAIL.
2. ALONG WITH THE TECHNICAL DETAILS PROVIDE A TABULAR COLUMN INDICATING WHETHER THE MODEL OF THE EQUIPMENT OFFERED BY YOU MEETS THE SPECIFICATIONS BY INDICATING 'YES' OR 'NO'. IF 'YES' SUPPORT THE CLAIM WITH PROOF.
3. NAMES OF INSTITUTES WITH CONTACT PERSON AND TELEPHONE/ EMAIL WHERE SIMILAR EQUIPMENT SUPPLIED BY YOU IN INDIA [PREFERABLY SOUTH] SHALL BE MENTIONED IN THE BID.


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[PURCHASE & STORES]

IISER – TVM
INSTRUCTIONS TO TENDERERS [INDIGENOUS].

1. Tenders should be sent in sealed envelopes superscribing the relevant tender no. and the due date of opening. Only one tender should be sent in each envelope.
2. Late tender and Delayed Tenders will not be considered under any circumstances.
3. Sales Tax and /or other duties/levies where legally levied and intended to be claimed should be distinctly shown separately in the tender.
4. (a). Your quotation should be valid for a minimum period of 60 days from the date of opening of the Tender. Quotation with firm prices will be preferred.
(b). Prices are required to be quoted according to the units indicated in the Invitation to Tender. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
5. (a) Preference will be given to those tenders offering supplies from ready stocks and on the basis of delivery at IISER site.
(b) Preference will also be given to those who agree our payment terms of within 30 days of receipt and acceptance of the item at our site.
6. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.
(b) Samples, if called for, should be submitted free of all charges by the tenderer and the IISER shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to take back the samples at his own expense.
(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.
(d) **Specifications:** Stores offered should strictly conform to our specifications. Deviations, if any should be clearly indicated by the tenderer in their quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary along with the quotations. Test Certificates wherever necessary should be forwarded along with supplies. Whenever specifically mentioned by us the tenderer could suggest changes to specifications with appropriate reasons for the same.
7. IISER shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the tenderers shall supply the same at the rates quoted.
8. Corrections, if any, in the Quotation must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.
9. The tenderer should mention the name of his bankers, Sales Tax Registration, PAN number etc in the tender.
10. The authority of the person signing the tender, if called for, should be produced.
11. The purchaser reserves the right to accept or reject the lowest or any other offer in whole or in part without assigning any reason.
12. IISER being a Govt of India Educational and Research Institute, is exempted from payment of Excise Duty and Customs Duty under Notification No. 51/96- Customs dated 23rd July 2009. Also, we can issue Form 16 as per VAT Rules.
13. There is no EMD or Tender Cost.


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IISER-TVM
INSTRUCTION TO TENDERERS [IMPORTS]:

1. **PRICE:** The price quoted shall be firm. The terms of FOB/EXW/FCA/CIF/CIP etc shall be clearly mentioned.
2. **AGENT & AGENCY COMMISSION:** In case Tenderer is represented by any agent in India, their name and address shall be furnished. The amount of commission included in the price shall be clearly shown in the offer; which will be paid directly to the Indian Agents by purchaser in equivalent Indian Rupees. In case Indian agents existing and their agency commission is not shown in the Tender, reasons for the same shall be clearly mentioned in Tender. Details of Indian agent's statutory registration shall be stated. If Agency Commission is paid by Principals in foreign currency, the reasons for the same and exemption from Enforcement Directorate in India shall also be provided.
3. **LEAFLET/CATALOGUE:** Tenderer should furnish all necessary leaflet/catalogue etc., of the stores offered by him to enable the Purchaser to evaluate his offer correctly.
4. **MODE OF DESPATCH:** Tenderer shall indicate the mode of dispatch (*i.e.*, Sea/Air-freight/Parcel Post, etc.) depending upon the normal mode of dispatch adopted by him for the type of stores offered for consideration of the Purchaser.
5. **COUNTRY OF ORIGIN:** Tenderer shall indicate in his offer the country of origin of goods offered and the name and address of the manufacture.
6. **INSURANCE:** If insurance of the goods is felt necessary, the same shall be advised by the Tenderer in the offer.
7. **DELIVERY/SHIPMENT:** The time for and date of delivery quoted shall be reasonable/realistic and shall strictly be adhered to in case of placing order on the Tenderer.
8. **MODE AND TERMS OF PAYMENT:** Payment in full (excluding the amount of Agency Commission included in the price payable directly by the Purchaser to the Indian Agents in Indian Rupees) will be made immediately on presentation of the prescribed documents against SIGHT DRAFT or LETTER OF CREDIT.
9. **WARRANTY:** Period of warranty and conditions shall be clearly mentioned in the Tender.
10. **GENERAL:** The Tenderer shall also be complied with the following:
 - a. Mention your Banker's name and address.
 - b. Show approximate net and gross weight and dimensions of packages/cases.
 - c. Furnish list of recommended spares for satisfactory operation for a minimum period of one year if the quote is for Plant & Machinery, Equipments etc.
 - d. Details of any technical service, if required for erection assembly, commissioning and demonstration.
 - e. Conform that the prices quoted are inclusive of all taxes, levies, duties arising in the tenderer's country.
 - f. The offer is valid for a minimum period of 90 days from the due date of opening of the tender.
 - g. Samples, if called for, will be sent free of all charges.
 - h. Late tenders and Delayed will not be considered.
 - i. Offers made by Indian Agents on behalf of their Principals, should be supported by the Proforma Invoice of their Principals.
 - j. The authority of person signing the tender, if called for, shall be produced.
 - k. The purchaser reserves the right to accept or reject the lowest or any other offer in whole or in part without assigning any reason.


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