

**Office of the Dean Research and Development
Indian Institute of Engineering Science & Technology (IEST), Shibpur,
Howrah-711 103**

Department of Chemistry

**Indian Institute of Engineering Science & Technology
P.O.: Botanic Garden, Dist: Howrah, West Bengal, India- 711103**

**Ref.: Tender Advt. No. CHST 1234, published in "Bartmaan", "Sanmarg" and
Statesman (Kolkata, Bhubaneswar, Siliguri) on 13.02.2017 and Statesman (New
Delhi) dated 14.02.2017**

Project Code: DRC/NMPB-MoA/CHST/CDM/028/16-17

Notice Inviting Quotations

Complete sealed quotations are invited for the supply of items listed below as per specification mentioned. The quotation should include the delivery charges of the items to Indian Institute of Engineering Science & Technology, Shibpur, and should mention a firm delivery period. Preferences will be given to the suppliers who can supply ex-stock & can supply all the items mentioned below.

The relevant bidding document can be downloaded from the website.

Last date of submission of sealed quotation is **21 days from the date of publication and tender will be opened on the next working day at 12 noon.**

ITEMS

1. Inverted microscope with camera
2. Refrigerated centrifuge with changeable rotors
3. Cryotank for storage of cells
4. Microplate reader
5. Probe type ultra sonicator

Dean (R & D)

(A. Code DRC-T082/16-17)

This is downloadable

**INDIAN INSTITUTE OF ENGINEERING SCIENCE & TECHNOLOGY
PO: BOTANIC GARDEN, DIST: HOWRAH, WEST BENGAL, INDIA-
711103**



BIDDING DOCUMENT

(Project Code: DRC/NMPB-MoA/CHST/CDM/028/16-17)

For Supply of

6. Inverted microscope with camera
7. Refrigerated centrifuge with changeable rotors
8. Cryotank for storage of cells
9. Microplate reader
10. Probe type ultra sonicator

Under

**NMPB-MoA funded Project
Govt. of India (New Delhi)**

Centre for Healthcare Science and Technology

February 6th, 2017

SECTION I: TERMS & CONDITIONS AND IMPORTANT INSTRUCTIONS
FOR BIDDERS

1. Bidders are invited to submit sealed quotation as per the technical specifications for tendered items addressed to Dr. Chitragada Das Mukhopadhyay, Centre for Healthcare Science and Technology, within 21 days of publication in the web site.
2. Quotations received after the last date will not be entertained under any circumstances.
3. Date and time of opening of bid is **next working day followed by last date at 12.00 noon** and the place of opening of bid is Seminar Room of the Centre for Healthcare Science and Technology, Shibpur, Howrah-711103.
4. Bidders are to submit the quotations in Sealed Cover in the following address:

**Centre for Healthcare Science and Technology,
IEST, Shibpur
PO Botanic Garden
Howrah-711103, India**

5. All bids should be submitted in ONE-BID (TECHNO-COMMERCIAL BID) Format in covers (Enquiry Number must be mentioned on cover).

TECHNO-COMMERCIAL BID - giving Detailed Specifications, International Standards (BIS/INTERNATIONAL), Catalogues, List of users & Technical Details / Operating Parameters, Pre-Installation Requirements, payment terms, warranty, etc. along with PRICE BID - giving full Prices in Indian Rupees (only) for

- (a) Tendered item.
 - (b) Essential Accessories & Spares.
6. The price quoted should be inclusive of all Taxes, duties and levies. Inclusion of Tax/Levy at a latter stage will not be accepted. Freight, Insurance charges should be clearly indicated.
 7. The materials are to be supplied at CHST, IEST, Shibpur premises between 11.00 a.m. and 4.00 p.m. on working day. The tenderer will be responsible for any breakage, damage or defect in the items detected subsequently. The installation should be completed within a period not exceeding 3 months from the placement of the formal work order or opening of the LC failing which appropriate action will be taken as per rules.
 8. Earnest money deposit of 2% value of the tendered item is mandatory.
 9. For Indian purchase (*This clause is applicable only for Indian purchase and not applicable for foreign purchase*):

Bills in triplicate should be presented for payment within 15 days of Supply / Completion of work. No Advance Payment can be made. All bills are to be accompanied by Order copies and Challan Receipt. The Order Number is to be noted on both the Challan and the Bill.

10. Documents to be submitted with the tender:

Tender Documents/Terms & Conditions in Original duly signed by the Proprietor / Partner/ Director of the Company as a token of acceptance of Terms & Conditions of Tender.

11. Customs Duty & Excise Duty

- IEST, Shibpur will not issue any C or D form availing of concessional Sales Tax/ VAT.
- IEST, Shibpur will issue Customs Duty Exemption Certificate or Excise Duty Exemption Certificate for foreign purchase, if required.

12. IEST, Shibpur reserves the right to accept or reject any or all tenders at its sole discretion without assigning any reason thereof and its decision in this regard shall be final.

We accept the above terms and conditions.

Signature of Bidders/Suppliers With date & Seal

SECTION II: TECHNICAL SPECIFICATIONS

1. TABLE TOP REFRIGERAED CENTRIFUGE

The system should be complete with the following features & specifications:

- 1) Centrifugal system (motor operated) having built in refrigeration for cooling with fixed angle rotor of 6 x 85 ml tubes or equivalent with adapter for 50 ml (conical). and 15 ml.(conical),
- 2) Speed: up to 13500 rpm or more
- 3) RCF should be 20,000 x g or more..
- 4) Microprocessor controlled with large LCD Display of preset and actual values of speed, RCF, time, temperature & running time.
- 5) 10 acceleration and deceleration rates.
- 6) Automatic rotor recognition and speed correction.
- 7) Temperature range - 10°C to +40°C with 1⁰C increments.
- 8) Quick key for short runs with corresponding digital display of elapsed time in second.
- 9) Motor driven lid lock. Lid should be metallic.
- 10) Active imbalance identification & cut-off.
- 11) Audible signal at the end of each run.
- 12) Noise level < 60 dBA at maximum speed.
- 13) Should be manufactured according to IEC 61010 and 61010-2 standard & conforms to CE-requirements.
- 14) Rotor, bucket, lid and adapters must be autoclavable at 121°C.
- 15) Centrifuge timer should start after the set RPM reached.
- 16) Must have built in condensation drain to eliminate condensed water.
- 17) Should quote with suitable voltage stabilizer
- 18) 3 Years' comprehensive warranty/AMC must be quoted from the date of installation.
- 19) Operated on 230V/50-60 Hz
- 20) A technical compliance statement should be provided. Suitable literatures with photos of equipment should be provided.
- 21) Vendor has to provide at least 10 users' details in I.C.A.R / C.S.I.R. / I.C.M.R. Labs/ I.I.T.s / Universities in Eastern part of India.

Optional:

One Plate Rotor, Max. speed: 2,250 × g (3,700 rpm) to run up to 2 × 4 Cell culture plates,

NB: FOR destination price should be mentioned separately, including all handling charges.

2. CRYOTANK FOR CELL STORAGE

1. Double wall vacuum and super insulation for long term storage of cells and biological samples at liquid nitrogen ultra low temperature.
2. Rugged, efficient with minimum evaporation loss, narrow neck.
3. Capacity 35- 50L.
4. Should have 4-6 racks / canister
5. Static holding time should be 120 days or more.
6. Should be supplied with liquid level measuring scale, and optionally quote for liquid withdrawal device and Trolley

FOR destination price should be mentioned separately, including all handling charges.

3. PROBE TYPE ULTRASONICATOR

1. Purpose: Isolation of protein from cells and tissue samples by cell disruption and lysis, isolation of DNA and RNA, emulsifying, mixing, homogenizing, de-agglomeration of nanomaterials, dispersing powders into liquids etc.

2. Ultrasonic processor, preferably for operation suitable for volume up to 250 ml.
3. Output : 50 Watts, Frequency : 30 kHz.
4. Automatic frequency & adjustable pulse tuning system.
5. Variable amplitude, sonication should be carried out in pulsed mode or continuous mode.
6. Must be supplied with sound proof box case and mounting Tools.
7. Probe: Should be ideal for sample volume 50µl to 250ml by using various replaceable probes having diameters from 0.5 to 7 mm, specifically probes for 100uL and 10mL sample should be quoted.
8. One ultrasonic cuphorn to sonicate multiple vials at the same time, at the same intensity must be quoted so that cross-contamination by immersing the ultrasonic probe is avoided.
9. Should have suitable display on LCD monitor and key to set parameters for sonication.

FOR destination price should be mentioned separately, including all handling charges.

4. INVERTED MICROSCOPE with CAMERA

1. Inverted microscope for Cell culture, Live cell observation with integrated phase contrast system.
2. Infinity corrected Optical system illumination by white LED. LED Light source should have 25000h life and ON/OFF switch, Diascopic illumination brightness adjuster, Specimen stage with all accessory for XY movement and to accommodate large tissue culture bottles, petri dishes, micro-titerplates and culture flasks.
3. Preferably Detachable condenser to for observation of up to 190mm multilayered cell culture flask.
4. Pre Centered Phase Slider for Phase contrast
5. Trinocular tube with 10X eyepiece lens with FN22 or better and Port for attaching camera.
6. High resolution 10X, 20X, 40X and 100X objective lenses with phase contrast facility.
7. Computer interface and software should be provided.

Camera may be quoted separately

Digital Photography attachment: with at least 5MP High quality CMOS camera for BF, Phase contrast application. Should have C mount Adapter Features: Snap Shot, Time lapse imaging, Videos, 2D Measurement including calibration: Linear, Circular, Polygon, free hand ROI, Image stitching, Extended depth of focus, Color composite, Segmentation and cell/object counting, Image stacking, Image enhancement (Hue, Saturation, Contrast etc)

Imaging software should be supplied for image capturing, live image preview, white balance adjustment, interactive measurement, angel, contour, acquisition & annotations.

If the microscope is upgradable to Fluorescent microscope in future, please quote for that as alternative model.

FOR destination price should be mentioned separately, including all handling charges.

5. AUTOMATED MICROPLATE READER

Purpose: To detect and process biological and chemical data using absorbance (ELISAs, enzyme activity, and nucleic acid and protein quantification) optionally luminescence, and fluorescence detection modes, including intensity, TRF, and polarization.

Features Include:

1. Single and dual wavelength readings
2. 400-9000 nm Wavelength range or wider
3. Should have inbuilt plate shaker
4. 2 Reading speeds: "Rapid Mode" and "Standard Mode"
5. Extensive on-board software capability, including:
 - a. Curve-fitting (linear, log, polynomial, cubic spline, log-logit, 4-P, pt-to-pt)
 - b. Assay and control validation formulas
 - c. Transformation formulas
 - d. Template layout (blanks, controls, samples)
 - e. Cutoff and calls
 - f. Kinetic applications
6. Assay programs stored on-board (50 approx)
7. At least 8 plate results stored in memory.
8. Onboard Calibration plate software and Optical Tests
9. LCD display, keyboard, and "softkeys" for ease of data entry
10. Complete computer-control with printer and common software interface (KC4, DeltaSoft3, KCjunior, Capture Data for Excel, DOS, Windows, Macintosh)

Optionally also quote for multimode application like Fluorescence reading.

FOR destination price should be mentioned separately, including all handling charges.