

No. F5(863)ST/MNIT/Chem/2019

Phone : 0141-2713312,2713352

Fax No. : 0141-2529078

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NOTICE INVITING QUOTATIONS

1. Registrar MNIT, JLN Marg, Jaipur invites sealed tenders for the supply of **“BET Surface Area Analyzer (Physical + Chemical) and Inverted Microscope with Fluorescence and Imaging System”** for **Chemical Engineering Department** of this Institute in **Two Bid System (Technical & Financial bids in separate envelop)**. As per schedule given below

Event	Date & Time
Download of Tender	14.06.2019
Bid Submission Last Date	05.07.2019 by 2.00 PM
Technical bid Opening	05.07.2019 at 3.00 PM
Financial bid Opening	Will be intimated later on
Earnest Money	Rs.1,10,000/- for Item No. 01 and Rs. 50,000/- for Item No. 02 in the name of The Registrar, MNIT and payable at Jaipur (Kindly attached the RTGS details with cancelled cheque along with the Earnest Money)

Quotation must be enclosed in a properly sealed envelope addressed to the MNIT, Jaipur with kind attention to **Deputy Registrar (S&P), MNIT, Jawahar Lal Nehru Marg, Jaipur -302017** by designation and not by name. The quotations must be super scribed **“Quotations for the supply of BET Surface Area Analyzer (Physical + Chemical) and Inverted Microscope with Fluorescence and Imaging System ----- as called for in Tender Notice No. ----- -- dated _____”**DUE ON----- AT -----AM/PM. The Quotation must reach on or before -----AM/ PM on or before the due date and time mentioned in the tender notice/tender document. The documents must be dropped in the tender box available in Central Store during office hours (9.30am to 6.00pm) on all working days. Bids delivered to any other place or any individual shall not be considered as valid document. Quotations sent by e-mail will not be considered valid. Tender documents may be downloaded from institute’s web site www.mnit.ac.in and CPPP site <https://eprocure.gov.in/epublish/app>

2. **THE RATES QUOTED SHOULD BE F.O.R. JAIPUR inclusive of all charges related to transportation from your end to MNIT, Jaipur in local currency. For imported items, the rates are to be quoted FOR destination (MNIT, Jaipur) only. In case the rates are quoted CIF/CIP New Delhi, then it will be the responsibility of the supplier to intimate us well in advance prior to dispatch and submission of all the relevant documents in time which will be required in clearing the consignment from Custom. If, there is delay in sending the documents and demurrage is imposed, then it will be in the account of foreign supplier. Kindly note that if any amendment is required in LC, after its establishment, the Bank Charges in this respect will be in the account of beneficiary only.** The rates and units shall not be overwritten. Quotations shall always be both in the figures and words. The words “No quotations” should be written across any or all of the items in the schedule for which a tender does not wish to tender.

Cost of each item should be quoted separately giving the unalterable delivery period. Rates of imported goods must be quoted excluding custom duty & GST as this institution is exempted from payment of custom & GST.

3. As far as possible, quotations should be given for goods of India manufacture which are readily available. Foreign goods quoted and proposed to be supplied should be covered by normal import quota of the dealer. This institute is exempted from payment of custom duty.
4. Detailed specifications and "make" of each item should be clearly given supported by the illustrated pamphlets wherever possible. Quotations without specifying the make and other particulars may be rejected. The accessories included in the equipment should also be clearly mentioned.
5. Losses or damage in transit will be in to the account of the supplier in case of rates **F.O.R. JAIPUR**. The supplier may, if he so desires, get the goods insured and include such charges in the tendered rate.
6. The payment for the ordered items would be made after the articles have been received and found in order. **Payment will be made by RTGS. Kindly send the RTGS details and cancelled cheque along with the Invoice. The payment to foreign supplier will be made through FDD/Wire Transfer OR Letter of Credit as the case may be.**
7. Your rates should be valid at least for three months from the last date of opening of bid.
8. All legal proceedings, if necessity arises to institute may be any of the parties (Institute or Contractor/Supplier) shall have to be lodged in the courts situated at Jaipur and not elsewhere.
9. The institute is not bound to accept the lowest tender and may reject any tender or any part of the tender giving justification for such an action.
10. The quotations should preferably be sent duly typed.
11. (a) The Penalty Clause is as under :-

If the seller fails to deliver any or all of the Goods/Services within the original /re-fixed delivery period specified in the Purchase Order, this Institute will be entitled to deduct/recover the Liquidated Damages for the delay at the following percentage:

(i)	Delay up to one month	1%
(ii)	Delay exceeding one month but not exceeding two month	2%
(iii)	Delay exceeding two month but not exceeding three month	5%
(iv)	Delay exceeding three month	5% for each month and part there of subject to maximum 10%

- (b) In case of failure to supply the goods within the prescribed time and in accordance with the specifications give in the Quotations, the institute shall be free to cancel the order and make purchases from the next higher tenderer or from the open market as the case may be. In that case the loss sustained by the institute shall be recovered from the defaulting supplier. The institute will be at liberty to recover the loss from the permanent earnest money/or any other pending claims of the supplier without prejudice to its general right to affect recovery from the supplier.
12. The prospective bidders can be those who are the manufacturers of the equipment. For items manufactured outside India, the manufacturer itself can be a bidder or its authorised Indian agent can bid on behalf of its Principal that is the manufacturer.

13. In the event, the country of origin of goods is India, only the manufacturers shall be considered eligible for bidding. Authorised agents of Indian manufacturers may be permitted to submit the bid, provided the concerned manufacturer states that as its policy, it does not bid itself in India and that there is no qualitative difference between manufacturer and its agent as bidder in respect of quality of supplies, cost, and responsibility of maintenance and servicing. The Indian manufacturer must describe the alternatives in clear terms, in the event the bidding agent ceases to continue as agent of the concerned manufacturer within the stipulated warranty period.
14. If any Indian manufacturer requires importing an essential part from a foreign country, the said company may be given to enjoy the benefit of customs duty exemption with the aid of CDEC of MNIT, Jaipur provided the import of the concerned item is done on behalf of MNIT, Jaipur.

15. **THERE IS TWO BID SYSTEM:-**

(TECHNICAL AND FINANCIAL BID, both bids should be submitted in separate envelopes):

(A) Technical Bid:

- a) Bidder shall enclose Earnest Money Deposit (EMD)
- b) Bidder must be a manufacturer/authorized distributor/ Dealers and they have to enclose a certificate of authorization of manufacturer
- c) All Indian agents of foreign company must provide valid proof that they are the agent in India on behalf of the manufacturer; any proof without due certification from the manufacturer under its own letter head shall be void *ab initio*.
- d) The manufacturers should supply documentary proof i.e. Registration with the Registrar of Industries, National Small Scale Industries Corporation or with penal of MNIT in case of manufacturer. Offers other than the manufacturers should be supported with an authority letter from the manufacturers, authorizing them to quote rates standing guarantee for the satisfactory execution of supply orders failing which offers are liable to be ignored.
- e) One declaration by the Manufacturer to the extent that in case of failure of its local agent /office to provide service support to the satisfaction of MNIT Jaipur, it shall make immediate arrangement for required service support.
- f) **Bidder should enclose technical compliance from the Manufacturer. The specifications of items should be strictly as specified. Deviation, if any may please be mentioned separately. If there is no deviation than it should be mentioned as “No Deviation”.**
- g) The leaflets catalogue, related to quoted equipment/model etc. should be sent invariably, so that a proper evaluation of the equipment offered is possible.
- h) Mention must be made of the pre-installation requirements for the equipment quoted viz. ambient temperature, humidity, weather specifications, power specifications, civil works etc. When items are provided full performance satisfaction should be demonstrated.
- i) Bidder must enclose the acceptance of terms and conditions and must enclose the duly signed and stamped tender document.
- j) All the Annexure enclosed should be duly filled up and signed.
- k) Please attach proof/certificate of each condition required in the tender document.

(B) Financial Bid:

- a) The rates to be quoted by the bidder should be clearly mentioned without any overwriting
- b) If there is any cutting in the price box, issued be duly signed
- c) The bidders should clearly mentioned their payment terms & conditions
- d) The GST or any other taxes including Custom duty Etc. should be mentioned clearly

16. **Delivery Period:-** The ordered quantity of stores must be delivered within 6 to 8 weeks in the case of indigenous equipment and 14 to 16 weeks in the case of imported equipment, F.O.R. Destination MNIT, Jaipur at Supplier's Risk within the period specified and got inspected as the delivery of store is required urgently and as such the renderers should quote their earliest delivery period accordingly. The extension of delivery period after placing the PO, if required, will be considered only on genuine reasons and proper justifications only.
17. **Installation:** - Successful BIDDER shall depute concerned specialist, for supervision of erection & commissioning of the machine to be carried out as and when necessary. The successful BIDDER shall make necessary arrangements during the entire warranty period at their own expenses for stay, transport and other expenses of their specialist during their stay in Jaipur;
18. **Performance Bank guarantee**
Successful Bidder has to Provide Performance security @ 10% of the equipment cost, valid for entire warranty period given in their offer which should be in the form of Bank's Guarantee from a commercial bank. Warranty will cover repair/replacement of all defective parts, if any, with the same or equivalent make for any part removed. Maintenance will be provided at site. Limited/carry in warranty will not be accepted. The supplier will provide after sale service during the warranty period from nearest place to installation. The supplier will attend the complaint within 24 working hours and not beyond 5 working days.
19. EARNEST MONEY: A Demand Draft/Banker's Cheque or Bank Guarantee of Rs. 1,10,000/- for Item No. 01 and Rs. 50,000/- for Item No. 02 from a Commercial bank only in the name of the Registrar, M.N.I.T. and payable at Jaipur may please be sent along with your tender as Earnest Money **without which no tender shall be considered. Cheques are not accepted as earnest money amount.** No interest is paid by us on the amount of earnest money. **Kindly attached the RTGS details with cancelled cheque along with the Earnest Money.**
20. **Arbitration Clause:** - In the eventuality of any dispute, the sole Arbitrator shall be Registrar, MNIT, Jaipur and his decision shall be binding on all the parties.
21. While submitting the tender, the **GST Registration No. & E-mail Address** is to be mentioned by the bidder positively. Failing this, there bid will be treated as non responsive. & Kindly provide
22. Specification Enclosed as annexure 1st

Deputy Registrar
(Store & Purchase)

Item No. 01**Technical Specifications for BET Surface Area Analyzer (Physical + Chemical)****Qty: 01 Nos**

The instrument should be capable of carrying out following analyses on three samples simultaneously:

- Single point and multi points BET / Langmuir Surface area;
- Total pore volume at a pre-determined pressure point;
- Meso-pore size distribution using well known adsorption models;
- High resolution micro-pore size distribution on at least one port using commonly acceptable models for N₂ and / or Argon gas;
- DFT pore size and DFT surface energy analyses.
- Standard Vapour option on two ports.

Hardware Features

- Sample pressure (P) measurement independently using following:
 - 0-1000 mmHg transducers individually on all the three ports.
 - 0-10 mmHg and 0-0.1 mmHg on micropore port.
- Manifold dosing pressure measurement using 0-10 mmHg; and 0-1000 mmHg transducers.
- Pressure measurement at saturation port (P₀):
 - Range: 0-1000 mmHg
- Servo control for dosing and evacuation.
- Temperature control for manifold, sample ports and ambience.
- 25-bit A/D conversion.
- Cryogen level control around sample tube without need for any level sensor.
- Dedicated port for measurement of saturation pressure in addition to three sample ports, with its dedicated 0-1000 mmHg transducer.
- Vacuum system comprising of turbo-molecular drag pump in series with diaphragm pump.
- Dual cold cathode/micro-pirani vacuum gauge placed near the sample port.
- In-situ degassing for three samples at the sample ports prior to analysis.
- Manifold outgas rates less than 0.05 mm Hg per min

Software Features

- Four Free-Space modes - Entered, Measured, Measured Post Analysis, and Calculated.
- Standard library of adsorption properties to include 30 fluids.
- Software should allow automated method development to create analysis conditions, report options and degassing conditions.
- Software to allow diagnostics for system monitoring and performance.
- Routine event monitoring to include: Diaphragm pump life; saturation pressure; manifold out-gas rate etc.

Performance

- **Transducers: total eight (8 Nos.) numbers positioned as under:**
 - a) 0-1000 mmHg and 0-10 mmHg on manifold to measure dosing pressure;
 - b) 0-10 mmHg; and 0-0.1 mmHg on one micropore sample port.

- c) 0-1000 mmHg on all the three ports.
- d) 0-1000 mmHg on saturation measurement port.

- **Transducer accuracy:**
 - a) 0-1000 mmHg: 0.12% of reading or better
 - b) 0-10 mmHg : 0.12% of reading or better
 - c) 0-0.1 mmHg: 0.15% of reading or better
- **Vacuum system:**
 - a) Ultimate vacuum: 3.75×10^{-9} torr
 - b) Pump discharge capacity: 50 L/s or better for H₂, and 60 L/s or better for N₂
- Lowest measured P/P_0 : better than 10^{-8} for Nitrogen adsorptive.
- Length of experiment without refilling the dewar: > 65 h with three sample tubes and saturation tube.

The instrument software should be capable of generating following reports:

- Single-point multi point BET surface area/ Langmuir surface area
- Adsorption isotherm
- Desorption isotherms
- Langmuir surface area
- BJH mesopore volume and area distribution
- Total pore volume
- Micropore volume
- Micropore area
- High resolution micropore size distribution
- Mesopore size distribution using well known adsorption models
- DFT pore size and DFT surface energy analyses.
- Active metal area
- Crystallite size
- Strong and weak chemisorptions
- Active metal dispersion

Chemisorption Features

Programmable Furnace: 0.1 - 50 °C/min or better

50°C/min to 600°C or better

20°C / min 600 to 800°C or better

10 °C / min from 800 to 1100°C or better

Mass Flow Controller: Standard, Flow up to 200 cm³/min, ± 1% of set point

Standard External Dedicated Port: Heated port for connection of external detectors including an available Quadrapole Mass Spec

A/D Data acquisition: 25 bit

Total no. of Pressure Transducers: eight numbers (8)

- **2 kVA Online UPS with 2 h back up** - one number
- **Filled Gas Cylinders 47 Ltrs.**
 - Nitrogen - 99.999% - one number
 - Argon - 99.999% - one number
 - Helium - 99.999% - one number
 - Carbon Dioxide (CO₂) - 99.995% - one number
 - Hydrogen - 99.999% - one number

- **Double Stage SS Regulator for above gases** - six numbers
- **Gas Purification for Single Gas with Trap for Gas Service: N₂, He, H₂ & Ar** - four numbers
- **Gas Purification for Single Gas with Trap for Gas Service: CO₂ & O₂** - two numbers
- **Standard Fittings like Nuts, Ferrules, Couplings etc. for Total Gas line** Quantity on actual requirement basis
- **SS-316 1/8" OD Tubing for the identification of Gas Line** Quantity on actual requirement basis
- **LN₂ Container 35 Liters** - one number
- **Air compressor** - one number

Note:

- The firm should be globally established.
- Specifications mentioned above should be available at the website of the manufacturer.
- Price should be quoted FOR, MNIT, Jaipur.

Item No. 02**Technical Specifications for Inverted Microscope With Fluorescence & Digital Imaging System Qty: 01 Nos.**

Optical System	Infinity corrected optical system
Frame	Frame with high static rigidity, water proof construction to help block penetration of water inside the frame. Frontal Controls for Light path selector 0:100/50:50/100:0, Transmitted light Intensity control and light ON/OFF switch. Tier system to enable addition of components like right side port, second fluorescence turret etc.
Illuminator	100W transmitted light illumination pillar having tilt Mechanism, condenser holder, with 4 filter holder, adjustable field iris Diaphragm. 12V100W external power supply unit with ON/OFF switch & intensity control. Bidders can also quote LED illumination system matching the intensity of 12V100W Halogen bulb.
Observation Tube	Binocular observation tube having diopter adjustment function. Provided with paired widefield eyepieces. F.N. 22
Eyepieces	Should be of at least 10X magnification, with diopter adjustment facility, F.N. 22mm or higher.
Nosepiece	Sextuple (6-position) or better revolving DIC nosepiece
Objectives	The following objectives should be quoted:- 1. Plan Achromat 10X 2. Plan Semi Apochromat/Fluorite 10X, Phase 3. Long Working Distance Plan Semi Apochromat/Fluorite 20X, Phase 4. Long Working Distance Plan Semi Apochromat/Fluorite 40X, Phase 5. Plan Apochromat 60X, Oil Immersion 6. Plan Apochromat 100X, Oil immersion
Stage	Rectangular mechanical stage with holders for 96 well plate, 35 mm culture dish and glass slides.
Condenser	Long working distance universal condenser N.A. 0.55 or higher W.D. 27 mm or higher, with at least 5 positions for BF, PH & DIC. Built in iris
Magnification Changer	Intermediate magnification changer with at least 3 positions – 1x, 1.6x & 2x.
Epi-fluorescence Attachment	Mercury light source, pre-aligned fibre coupled illumination system of 130 watts or higher with life span of at least 2000 hours. The light source should be connected to microscope with a fiber to avoid direct heat transfer to the specimens. 6 positions or more rotatable turret with narrow band pass, interference (hard coated) fluorescence filters for DAPI, FITC, TRITC and Cy5.
Digital Cooled CCD Camera	Both color and fluorescence imaging should be possible with the system. Color cooled CCD camera for imaging of colour specimens like H&E or DAB should have CCD Sensor, at least 12.5 mega pixel with pixel size of at least 3 μm x 3 μm or higher, chip size 2/3 inch or larger, bit depth of at least 14 bit, binning options of 2x2, 4x4 or better. The

	<p>captured image should have a resolution of at least 12.5 mega pixels without any software enhancement.</p> <p>Monochrome cooled CCD camera for fluorescence imaging should have CCD sensor, 1.4 mega pixel with pixel size of 6.45 μm x 6.45 μm or higher, bit depth of at least 12 bit, binning options of 2x2, 4x4 or better. Should be capable of imaging up to Cy7 wavelengths, frame rate of at least 15 fps per second at full resolution. The bidders can quote for single or two independent cameras meeting all the above specifications.</p>
Image Analysis Software	<p>The software should be capable of performing multidimensional (XYZtλ) image acquisition, merging & unmerging of multiple fluorescent channels, 3D viewing, intensity measurement, time-lapse at specified interval, colocalization, region and line measurement, etc. Modules for 2D deconvolution, 2D real time deconvolution, extended focal imaging (single in-focus image from multiple Z stacks) should be a standard part of the quote.</p>
Computer Workstation	<p>Branded computer system with i5 processor or better, minimum 16 GB RAM, DVD Writer, Latest Original Windows 10 64-bit OS, 1 TB HDD or higher, at least 19" TFT color monitor, keyboard and mouse, Color laser printer.</p>
Power Backup	<p>Online UPS (1 kVA) with at least 2 hours of backup</p>
Other mandatory conditions	<ul style="list-style-type: none"> - The system should be on-site upgradable to step-wise motorization (motorized 6 position or better DIC nosepiece, at least 6 positions motorized fluorescence turret, at least 7 position motorized universal condenser). The microscope, camera and software should be from the same manufacturer for better compatibility and integration. - Point-wise compliance should be enclosed along with technical bids.

Note:

- The firm should be globally established.
- Specifications mentioned above should be available at the website of the manufacturer.
- Price should be quoted FOR, MNIT, Jaipur.

Deputy Registrar
(Store & Purchase)