



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा स्थापित

सैक्टर 81, नॉलेज सिटी, प.ओ. मनोली, एस. ए. एस. नगर, मोहाली, पंजाब 140306

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI

(Established by Ministry of Human Resource Development, Govt. of India)

Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab

PAN No. - AAAAI1781K TAN NO. PTLI10692D

• Phone : +91-172-2240086 & 2240121 • Fax : +91-172-2240124, 2240086 • <http://www.iisermohali.ac.in> • Email: stores@iisermohali.ac.in

CPPP/Institute Website

IISERM(876)17/18Pur

Dated- 30th November 2017

E-TENDER NOTICE

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** {Technical and Commercial} for the supply & installation of **Surface Area Analysis** as per technical specification given below and BOQ list the original manufacturer/supplier at CPPP i.e. <https://eprocure.gov.in/eprocure/app>. Tender documents may please be downloaded from the E-procurement portal website <https://eprocure.gov.in/eprocure/app> & Institute website www.iisermohali.ac.in.

-sd-

(Mukesh Kumar)

Assistant Registrar (S&P)



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा स्थापित

सैक्टर 81, नॉलेज सिटी, प०ओ० मनोली, एस० ए० एस० नगर, मोहाली, पंजाब 140306

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI

(Established by Ministry of Human Resource Development, Govt. of India)

Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab

PAN No. - AAAAI1781K TAN NO. PTLI10692D

• Phone : +91-172-2240086 & 2240121 • Fax : +91-172-2240124, 2240086 • <http://www.iisermohali.ac.in> • Email: stores@iisermohali.ac.in

CPPP/Institute Website

E-TENDER NOTICE

Tender Ref.- IISERM(876)17/18 Pur	Dated :- 30 th November 2017
-----------------------------------	---

Critical Date Sections

Sr.	Description	Date	Time
1.	Tender Publishing Date and time	30 th November 2017	6:00pm
2.	Tender Document download start Date & Time	30 th November 2017	6:00pm
3.	Bid Submission start Date & Time	30 th November 2017	6:00pm
4.	Bid Submission End date and Time	27 th December 2017	Upto 11:00am
5.	Tender opening Date and Time	28 th December 2017	At 11.30 am

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** {Technical and Commercial separately} for following item(s) from the original manufacturer/supplier at CPPP i.e. <https://eprocure.gov.in/eprocure/app>. Tender documents may please be downloaded from the E-procurement portal website <https://eprocure.gov.in/eprocure/app> & Institute website www.iisermohali.ac.in. Tender fee in shape of DD/Banker Cheque of Rs 500/- (Non-refundable) and EMD of Rs. 75,000/- should be submitted by DD /Banker Cheque/FDR/ Bank Guarantee in favour of the Registrar, IISER Mohali payable at Mohali. However, scanned copy of the both tender fee and EMD should be upload on website along with technical bid part. The hard copy of the same in original to be send to the address mentioned below duly superscribing the supply/work name and reference/ tender ID on the envelope and same must reach before opening the bid and if not received within due date the bid will be rejected summarily.

The Original EMD and tender fee should be sent to:

Assistant Registrar (S&P)

Indian Institute of Science Education and Research,
Mohali Sector 81, SAS Nagar, Mohali, Punjab, India,
Pin: 140306

Non-receipt of original EMD and tender fee will lead to rejection of tender.

Item Details:-

Sr.	Details of Specifications	Qty.
01	Surface Area Analysis instrument with associated capabilities-	01

Specifications for Surface area analysis instrument with associated Capabilities:

	Parameter	Specifications
PHYSISORPTION		
a)	Surface Area	The unit should have the capability of carrying out physisorption of various gases and should have features to measure the adsorption / desorption isotherms, surface area (Langmuir, BET), pore size, pore volume and micro pore distribution. It should preferably TWO sample measurement. The system should be capable of measuring surface area in the range of 0.01 m ² /g to no known upper limit (nitrogen) and 0.0005 m ² /g to no known upper limit (krypton)
b)	Pore Diameter	The system should be capable of measuring pore diameter in the range of 3.5-5000 A and micropore volume detectable within the range of 0.0001 cc/g or lesser.
c)	Analysis Station	The system should have minimum Two or more analysis station with one station micropore pore facility.
d)	Dewar Flask	The system should be supplied with a 75 + hour dewar, for ultra-long Measurements without any need to invoke error producing refills.
e)	Coolant Level Control	The system should have an automatic, motor-driven cryogenic coolant level controller to minimize the cold free space, ie within 4cm of base of lowest portion of sample cell for enhanced sensitivity or equivalent.
f)	P0 Station	The system reference pressure Po station should be served by its own dedicated 1000 torr transducer to constantly monitor saturation pressure without interrupting pressure readings at the sample station. The pressure transducer should have an accuracy of 0.1%FS
g)	Adsorbates	The system should be designed to use gases like, CH ₄ N ₂ CO ₂ H ₂ , CO, NH ₃ etc. the quoted systems should have at least Five gas inlet ports or more.
h)	Vapour adsorption	The system manifold should be temperature monitored and designed with corrosive resistant material and should have option to do vapour adsorption at least at one port or more.
i)	Pressure Transducers	The system should be equipped with pressure transducers in different ranges like 1000 mmHg, 10 mm Hg and 0.1 mmHg. The system should enable full range adsorption measurement, including micropore measurement. The pressure transducers should have high resolution and accuracy with high stability. The offer should provide the resolution and accuracy data of these transducers. It should have dedicated Po transducer.
j)	Analysis Capability	The system should have facility for, Isotherms: Up to 1000 data points (per station), adsorption and/or desorption. Hysteresis scanning. Surface Area: BET, Langmuir, STSA, DFT, BJH Micropores: NLDFT, QSDFT, Monte-Carlo, t-plot, alpha-s method, MP method, DR & DA methods. Mesopores: NLDFT, BJH, DH also it should have Total pore volume and average pore size. Automatic BET point selector for

		microporous materials.
k)	Degassing facility	Built in FOUR or more vacuum degassing stations, each consisting of sample port, heating mantle with over-temperature protection, PC programmable ramp / hold / test protocols. Degas ports should be served by the dry turbo vacuum system, and a dedicated cold trap. Temperature range ambient to 400° C. Temperature accuracy $\pm 1\%$ of set point at thermocouple
l)	Other facility	The system should have features for automated real time free space measurement. Certified reference standards to be supplied for while making adsorption studies. The system should have provisions for at least 12 gas inlets or more.
2	CHEMISORPTION	
a)	Analysis Station	The system should have One pretreatment / analysis station consisting of a sample port, a high-temperature furnace, furnace controller, automatic isolation / vent valve
b)	Treatment and Method	System should allow uninterrupted, single or repeated cycles of same or different treatments and analyses with user selectable program variables such as: method type, method order, temperature ramp rate, temperature set point, time, out-gassing rate, and gas switching.
c)	Furnace Temperature Range	Ambient +10°C to 1100°C
d)	Temperature Ramp Rates	1°C - 50°C / minute
e)	Furnace Cooling	Active cooling using built-in fan
f)	Sample Tube	Flow through sample tubes of appropriate design and associated accessories like quartz wool etc for handling powders and extrudites should be provided
g)	Gases	The system should be designed to use gases like N ₂ CO ₂ H ₂ , CO, NH ₃ etc.
3.		
a)	Facility	System should have built-in thermal conductivity detector with cold trap to expand chemisorption measurement from static volumetric to flow-based methods including TPR: Temp Programmed Reduction TPD: Temp Programmed Desorption TPO: Temp Programmed Oxidation & metal surface area measurements through pulse titration
b)	External degasser	Should be optionally quoted with 4 or more degassing ports
c)	Mass Spectrometer	The system should have facility to upgrade for Mass Spectrometer
d)	PC interface, Data analysis and software features	The system should controlled through windows based software. Calibration routines to be controlled by the software. Features for creation of methods for measuring the adsorption/desorption isotherms. The software should have built in features for automatic start up and shut down procedures, real time display of the sample analysis progress. The software should have all the data handling features like user defined report generation, data/figures export to spreadsheets, offline data processing etc.
e)	Standards and sample cells	Suitable performance evaluation standard for Surface Area and chemisorption should be included in the offer.

		Sufficient number of sample cells and filler rods (or anything else the supplier deem necessary)
f)	Gas Cylinders and Regulators (optional)	Gas cylinders must be 99.999% Ultra High Purity with two stage gas regulators. Helium, Hydrogen, should be supplied.
h)	COMPUTER	Latest Computer with minimum Windows 7
i)	Install Base	Supplier must have supplied and installed 15 similar systems or more to any of the leading institutions in India such as IISC/IIT's /CSIR/DRDO/DAE etc provide the list of users.
j)	Warranty	The Quoted should be under warranty for 36 Month or more from date of Installation

NB:- The online updated Price BOQ is in INR format. If bidder want to quote other than INR please specify the quoted currency in the technical bid/part and fill the amount in same updated BOQ.

SUBMISSION OF TENDER

- I. All bid/ tender documents are to be uploaded online at Central Public Procurement portal i.e. <https://eprocure.gov.in/eprocure/app> only and in the designated cover/ part on the website against tender ID. Tenders/ bids shall be accepted only through online mode and no manual submission of the same shall be entertained except tender fee and EMD. Late tenders will not be accepted.
- II. The online bids shall be opened at the office of the Assistant Registrar (P&S), IISER Mohali, on above given date and time. If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be attended on the next working day at same time and place. IISER Mohali will not be responsible for any error like missing of schedule data while downloading by the Bidder.
- III. The bidder shall upload the tender documents duly filled in and stamped by the authorized signatory on each and every page. Tender not submitted/uploaded in the prescribed form and as per the tender terms and conditions shall be liable for rejection.
- IV. The bidder shall upload scanned copy of the PAN Card, GST number duly signed and stamped.
- V. E-procurement system ensures locking on the scheduled date and time. The system will not accept any bid after the scheduled date and time of submission of bid.

INSTRUCTIONS

1. The Online bids should be submitted directly by the original manufacturer/supplier, If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company for quoting the price otherwise such quotation will be rejected.
2. The quantity mentioned in this inquiry is and shall be deemed to be only approximate and will not in any manner be binding on the Institute. Before the deadline for submission of the online bid, IISER Mohali reserves the right to modify the tender document terms and conditions. Such amendment/modification will be notified on website against said tender ID
3. The rates offered should be FOR Chandigarh/Mohali in case of firms situated outside Chandigarh/Mohali, and free delivery at the Institute premises in case of local firms. Supplier from outside India should mention the Ex-works/FOB/FCA/CIF/CIP price clearly. Conditional tenders will be summarily rejected.

4. In case of Ex-godown terms the amount of packaging forwarding freight etc. should clearly be indicated by percentage or lump sum amount. Institute has policy not to make any advance payments towards any purchase, Letter of credit can be opened if required.
5. THE INSTITUTE IS EXEMPTED FROM EXCISE AND CUSTOM DUTY under notification no- 51/96 – CUSTOM DATED 23/7/1996 AND DSIR REGISTRATION NO TU/V/RG/-CDE(1062)/2016 DT. 30/08/2016 / EXCISE NOTIFICATION NO. 10/97- CENTRAL EXCISE DT. 01.03.1997.
6. Tax: This Institute is not exempted from the payment of GST. The current rate (i.e. percentage of Sales Tax should be clearly indicated included or excluded) wherever chargeable. Please also provide/upload the copy of PAN card, GST number duly self-attested.
7. The delivery period should be specifically stated. Earlier delivery will be preferred.
8. The firms are requested to provide/upload detailed description and specifications together with the detailed drawings, printed leaflets and literature of the article quoted. The name of the manufactures and country of manufacture should also invariably be stated. In the absence of these particulars, the quotation is liable for rejection.
9. Validity of offer: 90 days. The warranty period after satisfactory installation should be mentioned and firm should replace all manufacturing defect parts/ whole item under warranty without any extra cost including clearance, freight, taxes. Security deposit/ Bank Performance Guarantee @ 10 % of the value of supply order as per norms may be sought from the firms.
10. The right to reject all or any of the quotation and to split up the requirements or relax any or all the above conditions without assigning any reason is reserved by the IISER Mohali. For any corrigendum and addendum please be checked the website <https://eprocure.gov.in/eprocure/app> and <http://www.iisermohali.ac.in>
11. Disputes, if any, shall be subject to jurisdiction in the court of Mohali only.

-sd/-
(Mukesh Kumar)
Assistant Registrar (S&P)