TENDER

FOR

SUPPLY & INSTALLATION OF LABORATORY FUME HOOD 6 FEET AND WATER PURIFICATION SYSTEM (RO+MILLIQ) IIT MANDI

Tender No.: IITMANDI/S&P/PUR-59/2015-16/3034-35

Tender date: 08st July, 2015

Last Date of submission: 28th July, 2015

Indian Institute of Technology Mandi

Transit Campus: Mandav Hotel, 2nd Floor (Near Bus Stand), Mandi – 175001 (H.P)

Tel.: 01905-237917 **email**: amitprasad@iitmandi.ac.in

Indian Institute of Technology Mandi, Mandi invites tender for supply, erection, installation, commissioning,testing,demonstration and training of **Laboratory Fume Hood 6 Feet And Water Purification System (Ro+Milliq),** as per specifications given in the Annexure attached to the Tender form. All offers should be made in English and should be written in both figures and words. Tender forms can be downloaded from the website (http://iitmandi.ac.in/administration/tenderseoi.html) of the Institute.

The bidders are requested to read the tender document carefully and ensure compliance with all specifications/instructions herein. Non-compliance with specifications/instructions in this document may disqualify the bidders from the tender exercise. The Director, IIT Mandi, Kamand reserves the right to select the item (in single or multiple units) or to reject any quotation wholly or partly without assigning any reason. Incomplete tenders, amendments and additions to tender after opening or late tenders are liable to be ignored and rejected.

Terms and Conditions:

1. The technical and financial bids should be quoted separately and put in different sealed envelopes marked "**Technical bid**" or "**Financial bid**" as applicable. These separate bids envelopes are to be put in an outer envelope which should also be sealed.

2. The Vendors who have earlier supplied the equipment to any of the IITs, IISc, IISERs and other Scientific Institute of National Repute may only tender. The details of such institutions and the cost with name of equipment may also be supplied with the bids.

3. The technical and financial bids should be submitted in original. The financial bid should include the cost of main equipment/item and its accessories. If there is any separate cost for installation etc. that should be quoted separately.

4. Each individual sealed envelope as well as the outer envelope should be marked with the following reference on the top left hand corner: "**IITMANDI/S&P/PUR-59/2015-16/3034-35/Item Name.__ ____dated 08th July, 2015"**

5. The printed literature and catalogue/brochure giving full technical details should be included with the technical bid to verify the specifications quoted in the tender. The bidders should submit copies of suitable documents in support of their reputation, credentials and past performance.

6. The rates should be quoted in figures (typed or printed) and cutting should be avoided. The final amount should be in figures as well as in words. If there are cuttings, they should be duly initialed, failing which the bids are liable to be rejected.

7. Any bids received after **1:00 P.M. on 28th July, 2015** shall not be considered

8. The Technical Bids will be opened on **28th July, 2015 at 03:00 P.M.** The date & time for opening of Financial Bids will be informed later on to the technically qualified bidders.

9. While sending rates, the firm shall give an undertaking to the effect that "*the terms/conditions mentioned in the enquiry letter/Tender Notice against which the rates are being given are acceptable to the firm.*" In case the firms do not give this undertaking, their rates will not be considered.

10. If the supplier/firm is original equipment manufacturer (OEM)/authorized dealer/sole distributor of any item, the certificate to this effect should be attached.

11. The quantity shown against the item is approximate and may vary as per demand of the Institute at the time of placing order.

12. All tender documents should have to be sent through courier, speed post or registered post only. All tender documents received after the specified date and time shall not be considered.

    The postal address for submitting the tenders is:

    "**Assistant Registrar, Stores and Purchase"**
    Indian Institute of Technology Mandi (IIT Mandi),
    Administrative Block (Mandav Hotel,
    Near Bus Stand), Mandi – 175001 (H.P), India"

13. In the event of any dispute or difference(s) between the vendee Institute (IIT Mandi) and the vendor(s) arising out of non-supply of material or supplies not found according to specifications or any other cause whatsoever relating to the supply or purchase order before or after the supply has been executed, shall be referred to "The Director, IIT Mandi", Kamand who may decide the matter himself or may appoint arbitrator(s) under the arbitration and conciliation Act,1996. The decision of the arbitrator shall be final and binding on both the parties.

14. The place of arbitration and the language to be used in arbitral proceedings shall be decided by the arbitrator.

15. All disputes shall be subject to Mandi Jurisdiction only.

16. All tenders in which any of the prescribed conditions is not fulfilled or any condition is putforth by the tenderer shall be summarily rejected.

17. IIT Mandi reserves the right to cancel the tender at any point of time without assigning any reason.

18. The bidders or their authorized representatives may also be present during the opening of the Technical Bid, if they desire so, at their own expenses.

    Note: Price bids of only those bidders will be opened whose technical bids are found suitable by the committee appointed for the purpose. Date and time of opening of price bids will be decided after technical bids have been evaluated by the committee. Information in this regard will be intimated to the technically qualified bidders. In exceptional situation, an authorized committee may negotiate price with the qualified bidder quoting the lowest price before awarding the contract.

19. **Clarifications**:

    In case the bidders requires any clarification regarding the tender documents, they are requested to contact our office (e-mail: amitprasad@iitmandi.ac.in & arsp@iitmandi.ac.in on or **before 20/07/2015**.

20. Tender Cost:

A Demand draft of **Rs. 1,000/-(Rupees One Thousand only)** towards non-refundable **tender fee, drawn in favour of "The Registrar, IIT Mandi"** payable at Mandi should accompany the Technical bid documents. If the same firm is submitting bids for more than

one Item/ instrument, they should submit the same in separate envelopes along with respective tender cost for each. In the absence of tender cost, the tender will not be accepted.

21. **Earnest Money Deposit (EMD)**:

A refundable amount of **2%** of quoted price as earnest money deposit (EMD) in the shape of DD from a scheduled bank in India **(valid for a minimum period of 3 months from the date of submission of tender)** should accompany the bid documents. The DD drawn in favour of "The Registrar, IIT Mandi" payable at Mandi should accompany the bid documents. The EMD should be kept in a separate sealed envelope, should be marked clearly and put in the outer envelope that contains the technical and financial bid envelopes. The bidders should enclose a pre-receipted bill for the EMD to enable us to return the EMD of unsuccessful bidders. Failure to deposit **Earnest Money** will lead to rejection of tender. The bidders should submit separate EMD. In the event of the awardee bidder backing out, EMD of that bidder will be forfeited. The bidders should submit separate EMD for each item, if quoting for more than one item.

22. **Pre – Qualification Criteria**:

a. Bidders should be the manufacturer / authorized dealer. Letter of Authorization from original equipment manufacturer (OEM) on the same and specific to the tender should be enclosed.

b. The Vendors who have earlier supplied the equipment to any of the IITs, IISc, IISERs and other Scientific Institute of National Repute may only tender. The details of such institutions and the cost with name of equipment may also be supplied with the bids.

c. An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well.

d. OEM should be internationally reputed Branded Company.

e. Non-compliance of tender terms, non-submission of required documents, lack of clarity of the specifications, contradiction between bidder specification and supporting documents etc. may lead to rejection of the bid.

f. **Furnishing of wrong/ambiguous information in the compliance statement may lead to rejection of bid and further black listing of the bidder, if prima-facie it appears that the information in the compliance statement was given with a malafide/fraudulent intent.**

23. **Prices**:

a. The Prices quoted should be inclusive of all taxes or duties, packing, forwarding, freight, insurance, delivery and commissioning etc. at destination site (IIT Mandi, Mandi/Kamand). IIT Mandi is registered with DSIR, Govt. of India and is exempted from Custom / Excise Duty. Exemption Certificate to this effect will be issued by IIT Mandi. **Hence, Customs/Excise Duty exempted price should be quoted**. The rates shall be firm and final. Nothing extra shall be paid on any account. **In the price bid/financial bid, the vendor should clearly mention the final price breakup i.e. ex-work price/FCA price, FOB price, CIP/CIF price & FOR IIT Mandi, Kamand Campus price, as applicable in their bid.**

b. In case of imported equipment(s)/item(s), the agency commission, if any, payable in Indian rupees should be mentioned separately. For imported equipment, the Letter of Credit will be opened for the amount excluding agency commission in Indian Rupees. The firm should clearly mention the address of foreign bank in the financial bid.

24. **Validity**:

The bid should be valid for acceptance up to a period of 180 Days. The Bidders should be ready to extend the validity, if required without any additional financial implications.

25. **Delivery**:

The Equipment should be delivered and installed within the period as specified in the purchase order and be ready for use within 24 weeks of the issue of purchase order unless otherwise prescribed. If the bidder fails to deliver and place any or all the Equipments or perform the service by the specified date, penalty at the rate of 1% per week of the total order value subject to the maximum of 10% of total order value will be deducted.

26. **Training**:

Bidders need to provide adequate training to the nominated persons of IIT Mandi at their cost. IIT Mandi will not bear any training expenditure.

27. **Warranty Declaration**:

Bidders must give the comprehensive on-site warranty as required from the date of successful installation of Equipment against any manufacturing defects and also give the warranty declaration that "*everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship and shall be of the highest quality and material of the type ordered, shall be in full conformity with the specification and shall be complete enough to carry out the experiments, as specified in the tender document.*

Any deviation in the material, and the specifications from the accepted terms may liable to be rejected and the bidders need to supply all the goods in the specified form to the satisfaction / specifications specified in the order / contract and demonstrate at their own cost.

28. **Performance Bank Guarantee:** A performance bank guarantee from a scheduled bank in India for an amount equal to 10% of the price for duration of two months beyond the expiry of warranty period will be taken from the supplier or Indian agent.

29. **Terms of Payment**: Payment will generally be made only after delivery and satisfactory installation, testing, commissioning etc. **This must be specified in the tender/quotation.**

- In case of imported supplies, payment (excluding Indian agency commission, if any) will be made through irrecoverable Letter of Credit in two installments. 80 % of the money will be released on submission of shipping of documents. Remaining 20 % will be released after successful installation of the instrument and submission of a performance bank guarantee for 10% of the order value from a nationalized bank, valid for 2 months beyond the expiry of the warranty.

30. **Tender expenses and documents**: All costs incurred by the bidder in the preparation of the tender shall be at the entire expense of the bidder.

31. **Tender Evaluation Criteria**: The technical bids will be opened and evaluated by a duly constituted committee. After evaluation of the technical bid, the financial bid for only those offers which have qualified in the evaluation of technical bid will be opened.

32. **Return of EMD**:

- The earnest money of unsuccessful bidders will be returned to them without any interest within 15 working days after awarding the contract.
- The earnest money of the successful bidder will be returned to them without any interest within 15 Days after supply of material.

33. **Manual and documentation**: All the manuals necessary for operating and servicing the equipment (including details of electronic circuits) will have to be provided along with the instrument.

34. The IIT Mandi reserves the right to cancel the tender at any stage (point of time) without assigning any reason.

35. Bidders should go through the tender terms, conditions and specifications carefully and fill in the attached compliance statement accurately and unambiguously. They should ensure that all the required documents are furnished along with the bid.

Sd/-
Assistant Registrar
Stores & Purchase

BID PARTICULARS

1. Name of the Supplier :

2. Address of the Supplier :

3. Availability of demonstration of equipment : Yes / No

4. Tender cost enclosed: : Yes/No if yes

D.D. No._____ Bank_____ Amount_____

5. EMD enclosed : Yes / No if (Yes)

D.D. No._____ Bank_____

6. Name and address of the Officer/contact person to whom all references shall be made regarding this tender enquiry.

Name :

Address :

Telephone No. :

Fax No. :

Mobile No :

e-Mail :

Web

Technical Specification for both the items are as under. Submit separate bid for each item.

Annexure – 1

Ref:-ENQUIRYNO:-IITMANDI/S&P/PUR-59/2015-16/ItemNo.1/Laboratory Fume Hood (6 feet)

Laboratory Fume Hood (6 feet, ONE)

Airflow Type: For Air Conditioned laboratories.

Overall dimensions: minimum 6 feet bench top fume hood (approx. 1800 mm W X 900 mm D X 2400 mm H)

Laboratory Fume Hood should incorporate a sleek glacier white powder-coated steel exterior with a molded one-piece fiberglass liner of specially-formulated fiberglass-reinforced polyester, which will offer corrosion and fire resistance and easy clean up and pre-set baffle(s) with flame spread less than 25 per ASTM E-84.

1. The fume hood should have Clean-Sweep Sash Handle. The sash handle should include Clean-Sweep slots to bleed air into the hood chamber and direct chemical fume concentrations away from the user's breathing zone. The slim-line radiused sash handle sweeps airflow into the hood with minimal turbulence.

2. The fume hood should have Opti-Zone or better Baffle system (the technology should be described)- The Opti-Zone Baffle is required for decreasing the typical face velocity variations found with other baffles. The slot pattern should increase the velocities in the middle and at the work surface of the hood where it is needed while slowing velocities at the corners. This uniformity lowers the required average face velocity necessary for containment. Tapered slots decrease resistance to air entering the baffle.

3. The fume hood should have Eco-Foil or better Air Foil (the technology should be described) **-** The Eco-Foil is required to reduce energy consumption by 7-10% compared to flat air foils while its aerodynamic curve allows air to sweep the work surface for maximum containment. Clean-Sweep openings should pull inflow air from under the air foil forcing air into non-turbulent air streams. The curve should be comfortable for arms resting on it while encouraging users to keep fume-generating items well within the hood's interior. Cord-Keeper Slots on left and right side of air foil.

4. Upper Dilution Air Supply - The sash interior should be constantly bathed with room air from the dilution supply above the work area to eliminate chemical fumes along the sash plane, near the critical breathing zone. A small Percentage (5-10%) of the required air volume should be introduced through the dilution air supply to ensure maximum containment.

5. Ergonomic air foil, which will allow air to sweep the work surface for maximum containment. Clean-Sweep airflow openings pull inflow air from under the air foil so that clean air continually flows over the air foil creating a constant barrier of protection from contaminants.

6. ~3/16" thick tempered safety glass vertical-rising sash(es) with cable pulley and with epoxy coated sash handle. Sash should not extend above the hood when fully open.

7. Removable front and side panels and front access panels for access to plumbing and electrical wiring. About 37.5" (95.3 cm) high sightline from the work surface to header panel.

8. One-piece molded fiberglass liner for superior corrosion and chemical resistance, durability and light reflectivity. It will help in seamless and smooth, radiused corners for easy cleaning and less deterioration resulting longer life. The hood should have molded fiberglass approx. 12.8" ID exhaust connection(s).

9. **Lighting:** The hood should have explosion proof anti-glare cool white light system. Pre-wired T8 fluorescent lighting with vapor-proof design and ADA-compliant light and blower switches.

10. **With built-in blower:** Quiet built-in blower is required which should be belt-driven with molded thermoplastic housing and coated aluminum impeller that is non-sparking and corrosion- resistant. It should be available with explosion-proof or standard motor.

Silent high efficiency remote blower is required. The construction should be chemical and heat resistant. **No additional blowers should be required for the fume hood operation.**

11. Total exhaust CFM/Static Pressure at 100 fpm: With sash open 18" high, exhausts 735 CFM at 0.16" static pressure, with sash open 28" high, exhausts 1180 CFM at 0.41" static pressure or better

12. Should meet following certifications:

CFR 29, Part 1910 • SEFA 1-2010
NFPA 45-2011 • ASTM E84-09C
ASHRAE 110-1995 • ANSI Z9.5-2011
UL 61010-1 • CAN/CSA C22.2 No. 61010-1
UL 1805 • CE Conformity Marking (230 volt models)
SEFA 8-2010, Cabinet Surface Finish Tests

13. **Ducting:** Required [approximately 15 feet length], the fume extraction system should comprise a blower with dynamically balanced impeller fitted at the top of the fume chamber, PVC make ducting. Manual duct damper should be included.
14. **Valve tubing and service line:** Provisions for utility services like nitrogen, vacuum (brass lacquer coated fixtures and SS304 or similar piping), compressed air, and water (brass lacquer coated fixtures and SS304 or similar water piping) should be provided through remote controlled valves located within the end panels, controlled by extension rods projecting through the control panels of the hood, with color coded plastic handles. All plumbing fittings should be factory installed and piped between the valve and the outlet. Inlet piping should have a single-point connection for each valve provided and carried to a point 1" above the fume hood roof or 1" above the worktop rear corner depending on the rough-in locations.

15. Chemical storage base cabinet:

(a) Acid storage base cabinet-

Where indicated acid storage cabinets should use the same gauges of steel and construction features as other base cabinets. The cabinet width should be approximately 36" (91 cm) with manually closing dual doors and filler panel depth of 8.0". In addition, they should have a one-piece liner insert made of linear low-density polyethylene. The liner insert should form a one-inch pan at the bottom to retain spillage. The door should have durable epoxy-coated steel construction with corrosion-resistant polyethylene-lined interior. It should have attractive glacier white exterior which complements laboratory casework. It should able to support loads up to 800 pounds. Each cabinet should be vented into the fume hood with a

1- 1/2” vent pipe to provide a positive airflow directly into the fume hood exhaust system. Vent Kit and Shelf Kit with PVC Tray should be included.

(b) Solvent Storage Cabinets-

Solvent storage cabinets should be specifically designed for the storage of flammable and combustible liquids. The cabinet width should be approximately 36” (91 cm) with manually closing dual doors and filler panel depth of 8.0”. The door should have durable epoxy-coated steel construction with 1.5” air gap. It should have attractive glacier white exterior which complements laboratory casework. It should able to support loads up to 800 pounds. It should include epoxy coated steel shelf. The cabinet should include two rear vent connections with flame arrestors and closure plugs. It should include four leveling feet and one 8" filler panel to increase cabinet depth from 22" to 30".

16. Should have spill stopper work surface molded from a special formulation of corrosion resistant epoxy resins with sink & faucet at the right side of the hood.
17. Should have Vacuum, Nitrogen, Argon service fixtures
18. Should be supplied with built-in Blower Remote Blower Features (Optional)
    - Should be ideal for fume hood exhaust systems in moderate to highly corrosive conditions
    - CFM: Between 1000 and 2000, Less than 1000
    - Thermal override protection. RPM speeds should be automatically reduced when motor is overloaded.
    - Should have flow-through vent holes and louvers allow air to circulate.
    - Speed control box should be included for mounting on top of customer-supplied fume hood and blower switch and label for multiple speed operation.
    - When blower is properly installed to ductwork, sound levels should range from 50 to 70 dba.
    - Should have direct drive, UL listed ECM motor which uses one third less energy than belt drive motors.
19. Should be responsible for installation of the Hood.
20. Should have minimum 4 power points on the panel of the hood (two 15 amps and 2 5 Amps). Should have pre-wired GFCI electrical duplex receptacle on lower right side and one additional prewired GFCI electrical duplex receptacle on the lower left side.
21. **Electrical:** 208-230 volts, 50/60 Hz.

22. The following accessory should be included
    - Airflow Monitor, 208-230V, 50/60 Hz
    - 230V, 50 Hz Receptacle Kit
    - Fiberglass Blower, 12", 3/4 hp

23. Lattice Rod Assemblies (Optional): 1/2” diameter solid epoxy rods should be clamped with the epoxy clamps to form a lattice arrangement to hold the test samples and rotors within the fume hood.

Other Important Requirements:

- A temperature controlled sonication bath of 5.75 L capacity with a dual frequency of approx. 30 Hz, with a 3/8 inch drain duct and ~400 W heating power and with integrated sweep and activatable pulse should be provided with the Fume hood.
- In addition a Hot air oven of 100 Litre capacity with gravity convection technology having the temperature range from 50 ^{o}C to 250 ^{o}C (spatial temperature deviation at 150 ^{o}C: ±4 ^{o}C and temperature deviation over time at 150 ^{o}C: 0.4 ^{o}C) should be provided.
- The supplier should have at least 10 installations Base in India.
- **Three Years on site comprehensive warranty** with a provision for AMC after the warranty period and availability of spare parts for next ten years after installation.
- Installation should be done at free of cost at the site.
- IIT Mandi is presently located in its transitory campus. We will move to our permanent campus in the near future. Vendor should take the responsibility of moving the instrument from the present location and reinstalling the same in our own campus as and when it is required.

Annexure-II

Ref:-ENQUIRYNO:- **IITMANDI/S&P/PUR - 59/2015-16/Item No. 2/Water Purification System (RO+MilliQ)**

Water Purification System (RO+MilliQ) equivalent (1 unit) Specifications:

System for Ultra Pure, Tissue culture grade water, free of particulate matter, Bacteria, RNase, DNase, Protease, Endotoxins.

Microprocessor controlled single integrated system with Type 1 and Type 2 Water producing capability and should dispense water directly from system to avoid remote dispenser.

Type II Water purification System: Should include

a) Pre-treatment system including pre-filters, activated carbon filter and hardness treating filter capable of giving out water with at least 6L/minute with a pressure of 2 bar minimum

   The pre-treatment should accommodate water of following specifications: Conductivity: 0.67-0.1µ S/cm or better; Chlorine: 3 ppm; Silt Density Index: 20; Pressure: 0.1bar or better

b) Reverse Osmosis + Ion exchange water system to generate TYPE II Water with capacity to produce 1L/Minute or more & upgradeable looking to future requirements Conductivity: < 0.1µS/cm; Resistance at 25°C clearly 15 – 10 MΩ.cm or better ("typically" or "may be" will not be accepted)
c) Storage tank of minimum capacity of 60 Ltr or better

Type I water purification system:

Ultrapure System UF including pre-treatment to generate TYPE I water for Tissue Culture and PCR use. Performance: 1.0 ltr/ min or better; Operating pressure in bar, min/max: 1 - 6 bar or better, Bacteria count: <1 CFU/ml or better; Conductivity: 0.055µ S/ cm or better; Resistance: 18.2 MΩ×cm; Pyrogens/Endotoxins free <0.001EU/ml, DNase <0.4pg/micro liter, RNase <0.003ng/ml, TOC: <5ppb

Other Requirements/ specifications

- Supply voltage: Automatic voltage regulation to 230 V
- Connector size: R 3/4"; RS: 232 interface
- Should have a storage tank for purified Type I water of minimum 20 liter capacity.
- Complete Set of a spare cartridge (this should include all the required Cartridge) and UV Lamp required in the system should be quoted.
- Should be wall mountable.

- **Five Years on site comprehensive warranty** with 2 years free AMC. Complete installation and demonstration should be provided by factory-trained certified engineers.
- Manufacturer should be DIN ISO 9001:2008; ISO 14001:2009 certified
- Should have minimum 30 installations in India and the company will provide users list in India with contact numbers and email id
- IIT Mandi is presently located in its transitory campus. We will move to our permanent campus in the near future. Vendor should take the responsibility of moving the instrument from the present location and reinstalling the same in our own campus as and when it is required.

COMPLIANCE STATEMENT FOR THE TENDER SPECIFICATIONS
(Submit separate sheet for each Item)
INDIAN INSTITUTE OF TECHNOLOGY MANDI
HIMACHAL PRADESH-175001

Ref:-ENQUIRYNO:- **IITMANDI/S&P/PUR-59/2015-16/Item No.1 & 2**

S. NO	**Check list of documents/ Undertakings ?**	**YES/NO**	**Remarks (Give explanation if answer is No)**
1	Is Tender fees attached?		
2	Is EMD attached? (if applicable)		
3	Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
4	If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
5	Undertaking from OEM regarding technical support & extended warranty period		
6	Validity of 180 days or not?		
7	Undertaking from bidder regarding acceptance of tender terms & conditions		
8	Whether list of reputed users (along with telephone numbers of contact persons) for the past three years specific to the instrument attached.		
9	Whether special educational discount for Indian Institute of Technology (IIT) Mandi (H.P) given.		
10	Whether required weeks training of operator and research students without any charges offered.		
11	**Does the instrument complies with all the required specifications as per annexure 1 & II. Attach a separate sheet showing compliance with the specifications and explanations thereto if the equipments varies from the requested specifications.**		
12	Whether free Installation, Commissioning and Application Training offered.		
13	Whether required comprehensive onsite extended warranty offered.		
14	Whether Annual maintenance after expiry of comprehensive onsite warranty quoted separately as optional.		