

TENDER  
FOR  
SUPPLY & INSTALLATION OF  
INSTRUMENTS FOR CHARACTERIZATION LAB  
SCHOOL OF BASIC SCIENCES, IIT MANDI



Tender No.: IITMANDI/SBS/TEN/2011-12/CHRLAB/8

Tender date: December 20<sup>th</sup>, 2011

Last Date of submission: January 11<sup>th</sup>, 2012

Indian Institute of Technology, Mandi

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

**Tel.:** 01905-237917/7926/7931    **email:** sbs\_office@iitmandi.ac.in

Indian Institute of Technology Mandi, Mandi invites tender for supply, erection, installation and commissioning, testing, demonstration and training of a number of instruments, as per specifications given in the Schedule attached to the Tender form annexed hereto. 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, 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 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.
3. Each individual sealed envelope as well as the outer envelope should be marked with the following reference on the top left hand corner:  
**"IITMANDI/SBS/TEN/2011-12/CHRLAB/8/item no. /name of the item"**
4. 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.
5. 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 initialled, failing which the bids are liable to be rejected.
6. The technical and financial bids should be addressed to "The Director, Indian Institute of Technology Mandi, Mandi-175001 (H.P)"
7. Any bids received after **4.00 p.m. on 11<sup>th</sup> January, 2012** shall not be considered.
8. 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.
9. 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 this specified date and time shall not be considered. The postal address is:

**“The Head, School of Basic Sciences”  
Indian Institute of Technology Mandi (IIT Mandi),  
Academic Block (Vallabh Degree College Campus),  
Mandi – 175001 (H.P)”**

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”, Mandi 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 put forth by the tenderer shall be summarily rejected.

The date and time for opening of the technical bid will be notified separately. 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.

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 posted on Institute’s web site / Notice board. In exceptional situation, an authorized committee may negotiate price with the qualified bidder quoting the lowest price before awarding the contract.

**1. Clarifications:**

In case the bidder requires any clarification regarding the tender documents, they are requested to contact our office (e-mail: [sbs\\_office@iitmandi.ac.in](mailto:sbs_office@iitmandi.ac.in)) on or before 31/12/2011.

**2. Tender Cost:**

A Demand draft of Rs. 1,000/- (Rupees One Thousand only) towards non-refundable tender fee, for each item being quoted, 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 instrument, they should submit the same in separate envelopes along with respective tender cost for each.

### 3. Earnest Money Deposit (EMD):

If the cost of the equipment/item is more than Rs. 5 lakhs, a refundable amount @ 2% of the quoted price as earnest money deposit (EMD) in the shape of DD drawn in favour of "The Registrar, IITMandi" 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.

### 4. 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. 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.

c. OEM should be internationally reputed Branded Company.

c. 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.

### 5. 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). 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.

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. The breakup of price such as ex-works, FOB, FOR should clearly be mentioned.

### 6. 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.

### 7. Delivery:

The Equipment should be delivered and installed within the period as specified in the purchase order and be ready for use within 16 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 2 % per week of the total order value subject to the maximum of 10% of total order value will be deducted.

## 8. 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.

## 9. Warranty Declaration:

Bidders must give the comprehensive onsite 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 the their own cost.

If the cost of equipment is above Rs. 25 lakhs, a performance bank guarantee for an amount equal to 10 % of the price for the duration of the warranty period will be taken from the supplier or Indian agent.

**10. 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 Letter of Credit.

**11. 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.

**12. 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.

## 13. Return of EMD:

- The earnest money of the successful bidder will be returned to them without any interest after completing the successful contract.

- The earnest money of unsuccessful bidders will be returned to them without any interest within fifteen working days after awarding the contract.

**13. 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.

14. 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.

(Head, School of Basic Sciences)

### 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 :

## **Annexure A**

### **Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.1 / Horn/Probe  
Sonicator with sound proof box

The instrument should be versatile and should have the flexibility to cater for variable reaction volumes, variable amplitude and pulse modes.

**Ultrasonic Power rating** – 700 Watts or more

**Frequency** – 20 kHz or more

**Operation** - should be microprocessor based.

**Amplitude control** - from 10% or less to 100 % in increments of 1% or less

**Pulse mode** - with pulse duration of 1 second or less to 10 hours or more in increments of 1 s or less

**Timer** – Programmable timer up to 10 hours or more

**Programmability** – Should be programmable to run multiple programs in sequence. 10 programming sequences or more

**Display** – Real time digital display for total energy output, timer etc.

**Protection** - Should have overload protection

**Certification** – All parts and the assembly thereof should be CE compliant.

**Auto tuning** – Instrument should constantly monitor frequency changes (if any) in the converter and tip assembly and automatically tune frequency

Should have touch screen control.

#### **Accessories**

1. Sound Proof Box made up of corrosion resistant durable materials, with transparent windows to see the reaction
2. Jack stand to be used inside the sound proof box
3. High intensity horn with a threaded end for processing 10 ml or less to 250 ml or more
4. Microtip made of inert and durable materials such as titanium, sapphire etc. for processing volumes of 200 µl or less and 5 ml or more
5. All necessary accessories such as wrenches, power cables, converter cables etc. should be quoted

#### **Optional accessories**

1. Temperature probe and feed back control using temperature probe
2. Microtip made of inert and durable materials such as titanium for volumes of 5 ml or less to 50 ml or more
3. Microtip made of inert and durable materials such as titanium for 25 ml or less to 500 ml or more
4. Microtip made of inert and durable materials such as titanium for 200 µl or less to 5 ml or more
5. Microtip made of inert and durable materials such as titanium for 50 ml or less to 1000 ml or more

Available Input power: 220 V one phase/three Phase, 50 Hz

The quoted system should be certified as complete for carrying out the following experiments:

Cell disruption, dispersing materials including nanomaterials such as carbon nanotubes, metal nanoparticles etc. Preparation of nanoparticles using ultrasonic cavitation.

All necessary accessories must be included in the quotation .

**Three year on-site extended warranty on all parts.**

**Annual Maintenance Contract may be quoted as optional**

**Compliance statement for the tender specifications**  
**INDIAN INSTITUTE OF TECHNOLOGY MANDI**  
**HIMACHAL PRADESH-175001**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.1 / Horn/Probe  
 Sonicator with sound proof box

**Instructions**

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you should provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification should be explained in the remarks column

		<b>Bidder Specification</b>	<b>Remarks</b>
<b>S.No.</b>	<b>Check List of Documents/undertakings</b>		
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 present		
6.	Validity of 180 days or not?		
7.	Undertaking from bidder regarding acceptance of tender terms & conditions		
8.	List of reputed users for the past three years specific to the instrument		
9	<b>Technical Specifications</b>		
a	<b>Ultrasonic Power rating</b> – 700 Watts or more		
b	<b>Frequency</b> – 20 kHz or more		
c	<b>Operation</b> - should be microprocessor based.		
d	<b>Amplitude control</b> - from 10% or less to 100 % in increments of 1% or less		
e	<b>Pulse mode</b> - with pulse duration of 1 second or less to 10 hours or more in increments of 1 s or less		
f	<b>Timer</b> – Programmable timer upto 10 hours or more		
g1	<b>Programmability</b> – Should be programmable to run multiple programs in sequence.		
g2	10 programming sequences or more		
h	<b>Display</b> – Real time digital display for total energy output, timer etc.		
i	<b>Protection</b> - Should have overload protection		

j	<b>Certification</b> – All parts and the assembly thereof should be CE compliant.		
k	<b>Auto tuning</b> – Instrument should constantly monitor frequency changes (if any) in the converter and tip assembly and automatically tune frequency		
l	Should have touch screen control.		
m	<b>Accessories</b>		
m1	Sound Proof Box made up of corrosion resistant durable materials, with transparent windows to see the reaction		
m2	Jack stand to be used inside the sound proof box		
m3	High intensity horn with a threaded end for processing 10 ml or less to 250 ml or more		
m4	Microtip made of inert and durable materials such as titanium, sapphire etc. for processing volumes of 200 µl or less and 5 ml ore more		
m5	All necessary accessories such as wrenches, power cables, converter cables etc. should be quoted		
n	<b>Optional accessories</b>		
n1	Temperature probe and feedback control using temperature probe		
n2	Microtip made of inert and durable materials such as titanium for volumes of 5 ml or less to 50 ml or more		
n3	Microtip made of inert and durable materials such as titanium for 25 ml or less to 500 ml or more		
n4	Microtip made of inert and durable materials such as titanium for 200 µl or less to 5 ml or more		
n5	Microtip made of inert and durable materials such as titanium for 50 ml or less to 1000 ml or more		
10	Available Input power: 220 V one phase/three Phase, 50/60 Hz		
11	All necessary accessories are included in the quotation or not?		
12	<b>Three year on-site extended warranty on all parts.</b>		
13	<b>Annual Maintenance Contract may be quoted as optional</b>		

## **Annexure B Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.2 / Photoreactor assembly

A photoreactor chamber with enclosure having the following provisions:

1. Provision to install 6 or more UVA/UVC lamps on top and 4 or more UVA/UVC lamps on sides and the combination of all lights together providing an illumination area of uniform light intensity of at least 5 inch x 5 inch in size.
2. User should be able to change the lamps quickly with less effort.
3. Recessed/installed Turn table for turning samples around
4. Installed drive motor
5. Carousal for keeping liquid samples inside the chamber
6. Installed/recessed magnetic stirrer to stir liquid samples while doing irradiation.
7. Safety exhaust for product gases or vapors.
8. The chamber should have a door for providing easy access to the chamber
9. The door should have a transparent window to view and monitor the reaction inside the chamber.
10. Provision to keep the chamber, especially the illumination area at a constant temperature, preferably near ambient temperature.
11. Integrated and individual control of all electrical accessories such as lamps, motor, turn table, stirrer etc.
12. Digital timer to control the duration of exposure.

### **Accessories**

1. 14 UVA lamps (350 nm) having long life
2. 14 UVC lamps (254 nm) having long life
3. A set of safety goggles appropriate for the above lamps

### **Optional Accessories**

1. Power meter for a broad spectrum of UV and visible spectra range.
2. 14 UVB lamps (~300 nm)
3. 14 UV lamps (420 nm)
4. Xenon illuminator with performance of 400 W or more, self contained unit with adequate cooling system to maintain the temperature, along with xenon lamp giving full UV spectrum. The illuminator should be compact enough to be used inside photoreactor chamber above. The illuminator also should have clips for holding filters.

Photoreactor, parts and accessories should be CE compliant

Available Input power: 220 V one phase/three Phase, 50 Hz

**Warranty:** Three year on-site extended warranty on all parts may be quoted as optional.

The quoted system should be certified as complete for carrying out photoreduction of noble metals, photocatalytic organic reactions, photocatalytic inorganic reactions, photocuring of polymers etc.

Any necessary accessories should be included in the quotation

Annual Maintenance Contract may be quoted as optional

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.2 / Photoreactor assembly

### Instructions:

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

		<b>Bidder Specification</b>	<b>Remarks</b>
<b>S.No.</b>	<b>Check List of Documents/undertakings</b>		
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 present		
6.	Validity of 180 days or not?		
7.	Undertaking from bidder regarding acceptance of tender terms & conditions		
8.	List of reputed users for the past three years specific to the instrument		
9	<b>Technical Specifications</b>		
A	<b>A photoreactor chamber with enclosure has the following provisions:</b>		
	<ol style="list-style-type: none"><li>1. Provision to install 6 or more UVA/UVC lamps on top and 4 or more UVA/UVC lamps on sides and the combination of all lights together providing an illumination area of uniform light intensity of at least 5 inch x 5 inch in size. User should be able to change the lamps quickly with less effort.</li><li>2. Recessed/installed Turn table for turning samples around</li><li>3. Installed drive motor</li><li>4. Carousel for keeping liquid samples inside the chamber</li><li>5. Installed/recessed magnetic stirrer to stir liquid samples while doing irradiation.</li><li>6. Safety exhaust for product gases or vapors.</li><li>7. The chamber should have a door for providing easy access to the chamber</li><li>8. The door should have a transparent</li></ol>		

	<p>window to view and monitor the reaction inside the chamber.</p> <p>9. Provision to keep the chamber, especially the illumination area at a constant temperature, preferably near ambient temperature.</p> <p>10. Integrated and individual control of all electrical accessories such as lamps, motor, turn table, stirrer etc.</p> <p>11. Digital timer to control the duration of exposure.</p>		
<b>B</b>	<b>Accessories</b>		
B1	14 UVA lamps (350 nm) having long life		
B2	14 UVC lamps (254 nm) having long life		
B3	A set of safety goggles appropriate for the above lamps		
<b>C</b>	<b>Optional Accessories</b>		
C1	Power meter for a broad spectrum of UV and visible spectra range.		
C2	14 UVB lamps (~300 nm)		
C3	14 UV lamps (420 nm)		
C4	Xenon illuminator with performance of 400 W or more, self contained unit with adequate cooling system to maintain the temperature, along with xenon lamp giving full UV spectrum. The illuminator should be compact enough to be used inside photoreactor chamber above. The illuminator also should have clips for holding filters.		
10	Photoreactor, parts and accessories should be CE compliant		
11	Available Input power: 220 V one phase/three Phase, 50/60 Hz		
12	All necessary accessories are included in the quotation or not?		
13	The quoted system should be certified as complete for carrying out photoreduction of noble metals, photocatalytic organic reactions, photocatalytic inorganic reactions, photocuring of polymers etc.		
14	<b>Three year on-site extended warranty on all parts.</b>		
15	<b>Annual Maintenance Contract may be quoted as optional</b>		

## Annexure C Specifications

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.3/ Hydraulic press

1. Capacity – 15 tons or more
2. Piston size ~ 80mm
3. Piston travel ~ 25mm
4. Over all dimensions ~ 230 x 180 x 350 mm
5. Net weight ~ 30kg

Warranty: 3 years onsite extended warranty may be quoted as optional  
Any necessary accessories are included in the quotation.

### **Compliance statement for the tender specifications** **INDIAN INSTITUTE OF TECHNOLOGY MANDI** **HIMACHAL PRADESH-175001**

Ref:-ENQUIRY No:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.3/ Hydraulic press

#### **Instructions:**

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

		<b>Bidder Specification</b>	<b>Remarks</b>
<b>S.No.</b>	<b>Check List of Documents/undertakings</b>		
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 present		
6.	Validity of 180 days or not?		
7.	Undertaking from bidder regarding acceptance of tender terms & conditions		
8.	List of reputed users for the past three years specific to the instrument		
9	<b>Technical Specifications</b>		
A	Capacity – 15 tons or more		
B	Net weight ~ 30kg		
C	Piston size ~ 80mm		
D	Piston travel ~ 25mm		
E	Over all dimensions ~ 230 x 180 x 350 mm		
10	All necessary accessories are included in the quotation or not?		
11	<b>Three year on-site extended warranty on all parts.</b>		

## **Annexure D**

### **Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.4/ Heating Ultrasonic bath cleaner

Tank volume – 9 L or more

Tank internal dimension – Width x Depth x Height - ~300 mm x 200 mm x 200 mm

Oscillating tank made up of high quality, corrosion resistant stainless steel

Drip proof housing for the stainless steel tank

Drain cock for convenient emptying of the tank

Ultra sonic frequency – 35 kHz or more

Modes – Sweep mode, Degas mode, Heating mode

Inbuilt timer – Programmable from 1 minute or less to 99 minutes or more with a step resolution of 1 min.

Built in Heating – Thermostatically programmable between 30 °C or less to 80 °C or more

Integrated temperature probe with digital display with accuracy  $\pm 2$  °C or less

Power setting from 10% or less to 100% using microprocessor control

Equipped with carrying handles

Entire unit should be light weight - <10 kg while empty

All electronic parts should be RFI-proof and the entire unit should be CE marked.

#### **Accessories**

Baskets of appropriate dimensions to be used inside the bath

#### **Optional accessories**

Suitable tank lid with provision to hold one or more 250 ml beaker(s), 100 ml (beaker(s), A number of Test tubes, others

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.4 / Heating Ultrasonic bath cleaner

### Instructions:

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

		<b>Bidder Specification</b>	<b>Remarks</b>
<b>S.No.</b>	<b>Check List of Documents/undertakings</b>		
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 present		
6.	Validity of 180 days or not?		
7.	Undertaking from bidder regarding acceptance of tender terms & conditions		
8.	List of reputed users for the past three years specific to the instrument		
9A	<b>Technical Specifications</b>		
A1	Tank volume – 9 L or more		
A2	Tank internal dimension – Width x Depth x Height - ~300 mm x 200 mm x 200 mm		
A3	Oscillating tank made up of high quality, corrosion resistant stainless steel		
A4	Drip proof housing for the stainless steel tank		
A5	Drain cock for convenient emptying of the tank		
A6	Ultra sonic frequency – 35 kHz or more		
A7	Modes – Sweep mode, Degas mode, Heating mode		
A8	Inbuilt timer – Programmable from 1 minute or less to 99 minutes or more with a step resolution of 1 min.		
A9	Built in Heating – Thermostatically programmable between 30 °C or less to 80 °C or more		
A10	Integrated temperature probe with digital display with accuracy $\pm 2$ °C or less		
A11	Power setting from 10% or less to 100% using microprocessor control		

A12	Equipped with carrying handles		
A13	Entire unit should be light weight - <10 kg while empty		
A14	All electronic parts should be RFI-proof and the entire unit should be CE marked.		
B	<b>Accessories</b>		
	Baskets of appropriate dimensions to be used inside the bath		
C	<b>Optional Accessories</b>		
	Suitable tank lid with provision to hold one or more 250 ml beaker(s), 100 ml (beaker(s), A number of Test tubes, others		
10	Available Input power: 220 V one phase/three Phase, 50/60 Hz		
11	All necessary accessories are included in the quotation or not?		
12	The quoted system should be certified as complete for carrying out cleaning a number of laboratory glasswares, mixing, heating and homogenization of solutions in a chemical laboratory.		
13	<b>Three year on-site extended warranty on all parts.</b>		
14	<b>Annual Maintenance Contract may be quoted as optional</b>		

## **Annexure E**

### **Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.5/ Mechanical Stirrer

The instrument should have the following features:

1. Should be able to manage stirring solutions from 250 ml or less to 2 L or more round bottom flasks, reaction vessels, beakers etc..
2. Adaptable to carry out dry reactions
3. Exceptional control in stirring, noiseless, jerks less.
4. Should be designed for continuous operation.
5. Parts should be made of anti corrosive and chemical resistant.
6. Should have motor cut-out feature in a permanent over-load situation.
7. Speed range: 60 rpm or less and 1800 rpm or more.
8. Should have digital speed display of speed.
9. Sturdy vertical stand along with clamps should be quoted
10. Teflon stirrer blades
11. Should be efficient for both viscous and less-viscous medium
12. Power supply: 220 V, 50 Hz
13. The system should be CE compliant.
14. The system should carry one year warranty.
15. Three years on site extended warranty should be quoted as optional

The equipment should fulfil mixing requirements in a chemical laboratory.

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.5 / Mechanical stirrer

### Instructions:

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
<b>Technical Specifications</b>		
1. Should be able to manage stirring solutions from 250 ml or less to 2 L or more round bottom flasks, reaction vessels, beakers etc..		
2. Adoptable to carry out dry reactions		
3. Exceptional control in stirring		
4. Should be designed for continuous operation.		
5. Anti corrosive and chemical resistant parts		
6. Should have motor cut-out feature in a permanent over-load situation.		
7. Speed range: 60 rpm or less and 1800 rpm or more.		
8. Should have digital speed display		
9. Sturdy vertical stand along with clamps		
10. Teflon stirrer blades		

11. Should be efficient for both viscous and less-viscous medium		
12. The stirrer should be CE compliant		
13. Supply voltage, current and frequency: compatible to Indian conditions		
14. One year on-site warranty		
15. Three years on site extended warranty as optional		
16. The equipment is certified to fulfil the requirements in a chemical laboratory application		

## **Annexure F Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.6/ Chiller circulator

1. Temperature range ambient to  $-20^{\circ}\text{C}$  or lower.
2. Coolant Reservoir Capacity in the range of 5-8 liters or better.
3. Inner bath chamber and lid made of stainless steel.
4. Outer body made of CRC sheet duly powder coated.
5. Space between inner and outer chamber filled with high grade PUF insulation.
6. Mounted on castors for easy portability.
7. Microprocessor based PID DIGITAL TEMPERATURE INDICATOR CUM CONTROLLER WITH TIMER AND ALARM.
8. Powerful circulation pump with at least 15 Lpm capacities at zero head for water.
9. Two nos. Silicon tubing for 1 mtr each.
10. Supply voltage, current and frequency: compatible to Indian conditions
11. The system should be CE compliant.
12. Voltage stabilizer should be quoted if required.
13. Temperature accuracy:  $\pm 1^{\circ}\text{C}$  or better
14. Display resolution:  $0.5^{\circ}\text{C}$  or better
15. The system should be quoted with 3 years onsite extended warranty.
16. AMC should be quoted as optional.

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.6 /Chiller circulator

### Instructions:

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
<b>Technical Specifications</b>		
1. Temperature range ambient to – 20°C or better.		
2. Coolant Reservoir Capacity in the range of 5-8 liters or better.		
3. Inner bath chamber and lid made of stainless steel.		
4. Outer body made of CRC sheet duly powder coated.		
5. Space between inner and outer chamber filled with high grade PUF insulation.		

6. Mounted on castors for easy portability.		
7. Microprocessor based PID DIGITAL TEMPERATURE INDICATOR CUM CONTROLLER WITH TIMER AND ALARM.		
8. Powerful circulation pump with at least 15 Lpm capacities at zero head for water.		
9. Two nos. Silicon tubing for 1 mtr each.		
10. Voltage stabilizer should be quoted if required.		
11. Temperature accuracy: $\pm 1$ °C or better		
12. Display resolution: 0.5 °C or better		
13. Supply voltage, current and frequency: compatible to Indian conditions		
14. The system should be CE compliant		
15. Three year onsite extended warranty		
16. AMC should be quoted as optional.		

## **Annexure G**

### **Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.7/ Instrument for LED analysis

The quoted instrument should be capable of measuring luminescence properties of light emitting diodes/organic light emitting diodes (LED/OLED). The quoted system should have the following features:

1. Radiometrically calibrated CCD array detector (2000 pixels or better)
2. Fiber optic Integrating Sphere or equivalent for emission experiment.
3. Spectral range: of 250-1050 nm or better.
4. Stray light rejection: 0.1% or better.
5. Optical resolution: 1.5 nm or better.
6. Sensitivity: 75 photons/count at 400 nm or better; 40 photons/count at 600 nm or better.
7. Focal length: 75 mm or better
8. Non-linearity calibration
9. Signal to noise ratio should be mentioned
10. Temperature range: 20 °C to 40 °C or better
11. NIST-traceable LED POWER supply
12. Cosine Correctors-when used in a fiber coupled to a spectrometer, they measure light intensity at the surface of probe.
13. Optical fiber for connecting different parts such as fiber optic Integrating Sphere or equivalent to spectrometer etc.
14. Radiometric accuracy: 400-1050 nm:  $\pm 10\%$  or better  
300-400 nm:  $\pm 10.5\%$  or better
15. Labview compatible software for data acquisition, processing etc.
16. Compatible branded PC with licensed software
17. Calibration standard
18. Supply voltage, current and frequency: compatible to Indian conditions
19. All other necessary accessories should be quoted
20. The system should be certified as standalone system to perform LED analysis.
21. Three years onsite extended warranty.
22. AMC should be quoted as optional.

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.7 /Instrument for LED analysis

### Instructions:

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
Technical Specifications		
1. Radiometrically calibrated CCD array detector (2000 pixels or better)		
2. Fiber optic Integrating Sphere or equivalent for emission experiment.		
3. Spectral range: of 250-1050 nm or better.		
4. Stray light rejection: 0.1% or better.		
5. Optical resolution: 1.5 nm or better.		
6. Sensitivity: 75 photons/count at 400 nm or better; 40 photons/count at 600 nm or better.		
7. Focal length: 75 mm or better		
8. Non-linearity calibration		

9. Signal to noise ratio should be mentioned		
10. Temperature range: 20 °to 40 °C or better		
11. NIST-traceable LED POWER supply		
12. Cosine Correctors-when used in a fiber coupled to a spectrometer, they measure light intensity at the surface of probe.		
13. Optical fiber for connecting different parts such as fiber optic Integrating Sphere or equivalent to spectrometer etc.		
14. Radiometric accuracy: 400-1050 nm: ±10% or better 300-400 nm: ±10.5% or better		
15. Labview compatible software for data acquisition, processing etc.		
16. Compatible branded PC with licensed operating system		
17. Calibration standard		
18. The system should be certified as standalone system to perform LED analysis.		
19. Supply voltage, current and frequency: compatible to Indian conditions		
20. All other necessary accessories should be quoted		
21. Three year onsite extended warranty		
22. AMC should be quoted as optional.		

## **Annexure H**

### **Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.8/ Magnetic stirrer with hot plate and temperature feed-back control

#### **Quantity – 11 No.s (Tendative)**

1. Heating Power: ~ 600 Watts
2. Hot plate Temp: ambient to 300 degrees or more
3. Hot plate geometry: Circular with diameter 135-145 mm
4. Hot plate material: Stainless steel or Aluminium alloy or Silumin
5. Digital display of speed and hot plate temperature with display resolution of +/- 1 or better
6. External temperature sensor
7. Electronic contact thermometer
8. Stirring capacity: 20 L or better
9. Speed range: 50 rpm or less to 1400 rpm or more
10. Speed setting with speed setting accuracy: +/- 10 or better
11. Temperature control through microprocessor
12. Temperature control range: ambient to 300 degrees or more
13. Temperature accuracy of the hot plate: +/- 5 °C or better
14. Safely cut-off
15. Online actual digital display of heating media and set point required
16. Supply voltage, current and frequency: compatible to Indian conditions
17. One year on-site warranty

#### **Optional Accessories**

1. Teflon coated magnetic bar set of various dimensions (10 of each size)
2. Stands, rods and holder

**Compliance statement for the tender specifications**  
**INDIAN INSTITUTE OF TECHNOLOGY MANDI**  
**HIMACHAL PRADESH-175001**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.8 / Magnetic stirrer with hot plate and temperature feed-back control

**Instructions:**

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
<b>Checklist</b>	<b>Bidder Specification</b>	<b>Remarks</b>
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
<b>Technical Specifications</b>		
1. Heating Power: ~ 600 Watts		
2. Hot plate Temp: ambient to 300 degrees or more		
3. Hot plate geometry: Circular with diameter 135-145 mm		
4. Hot plate material: Stainless steel or Aluminium alloy or Silumin		
5. Digital display of speed and hot plate temperature with display resolution of +/- 1 or better resolution		
6. External temperature sensor		
7. Electronic contact thermometer		
8. Stirring capacity: 20 L or better		
9. Speed range: 50 rpm or less to 1400 rpm or more		
10. Speed setting with speed setting accuracy: +/- 10 or better		

11. Temperature control through microprocessor		
12. Temperature control range: ambient to 300 degrees or more		
13. Temperature accuracy of the hot plate: +/- 5 or better		
14. Safely cut-off		
15. Online actual digital display of heating media and set point required		
16. Supply voltage, current and frequency: compatible to Indian conditions		
17. One year on-site warranty		
<b>Accessories</b>		
1. Teflon coated magnetic bar set of various dimensions (10 pieces of each size)		
2. Stands, rods and holder		

## **Annexure I**

### **Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.9/ **Multi-position heat-on blocks for magnetic stirrer-heaters**

**Quantity – 6 No.s (Tentative)**

A complete set of the multi-position heat on blocks should consist of the following:

1. Made of durable and corrosion resistant material having temperature stability of 350 °C or more
2. Base plate(s) having capacity to accommodate at least 3 inserts for round bottom flasks of sizes 25 mL, 50 mL, 100 mL and 250 mL.
3. Compatible Inserts for round bottom flasks - 3 X 100 mL and 3 X 250 mL.
4. Compatible multi-clamp and other required accessories to support three reactions at a time on these blocks.
5. The complete system should be compatible with magnetic stirrer heaters having hot plate diameter of 135-150 mm
6. Option for inserting temperature probe directly into the inserts and multi-plate. The inserts and multi-base plate should have controlled heating facility.
7. The complete set-up should be capable of supporting minimum 3 reflux reactions in round bottom flasks on a magnetic stirrer-heater at a time.

**Optional accessories:**

Compatible Inserts for round bottom flasks 3 X 25 mL, 3X 50 mL capacity – 6 set.

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.9/ **Multi-position heat-on blocks for magnetic stirrer-heaters Instructions:**

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
<b>Technical Specifications</b>		
A complete set of the multi-position heat on blocks should consist of the following:		
1. Base plate(s) having capacity to accommodate at least 3 inserts for round bottom flasks of sizes 25 mL, 50 mL, 100 mL and 250 mL.		
2. Compatible Inserts for round bottom flasks - 3 X 100 mL and 3 X 250 mL.		
3. Compatible multi-clamp, and other required accessories to support three reactions at a time on these blocks.		
4. The complete system should be compatible with magnetic stirrer heaters having hot plate diameter of 135-150 mm		
5. Option for inserting temperature probe directly into the inserts and multi-plate. The inserts and multi-base plate should have controlled heating facility.		
6. The complete set-up should be capable of supporting minimum 3 reflux reactions in round bottom flasks on a magnetic stirrer-heater at a time.		
<b>Optional accessories:</b>		
Compatible Inserts for round bottom flasks 3 X 25 mL, 3X 50 mL capacity – 6 set.		

## **Annexure J Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.10/ **Magnetic stirrer with hot plate**

### **Quantity – 5 (Tendative)**

1. Heating Power: ~ 600 Watts
2. Hot plate Temp: 300 degrees or better
3. Hot plate geometry: Circular with diameter 135-145 mm
4. Hot plate material: Stainless steel or Aluminium alloy or Silumin
5. External temperature sensor
6. Stirring capacity: 20 L or better
7. Speed range: 50 – 1400 rpm or better
8. Speed setting with speed setting accuracy: +/- 10 or better
9. Temperature control through microprocessor
10. Temperature control range: 300 degrees or better
11. Temperature accuracy of the hot plate: +/- 5 or better
12. Safely cut-off
13. Supply voltage and frequency: compatible to Indian conditions
14. One year on-site warranty

### **Optional Accessories**

1. Teflon coated magnetic bar set of various dimensions (5 of each size)
2. Teflon coated magnetic holder rode

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.10/ **Magnetic stirrer with hot plate**

### Instructions:

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
<b>Technical Specifications</b>		
1. Heating Power: ~ 600 Watts		
2. Hot plate Temp: 300 degrees or better		
3. Hot plate geometry: Circular with diameter 135-145 mm		
4. Hot plate material: Stainless steel or Aluminium alloy or Silumin		
5. External temperature sensor		
6. Stirring capacity: 20 L or better		
7. Speed range: 50 – 1400 rpm or better		
8. Speed setting with speed setting accuracy: +/- 10 or better		
9. Temperature control through microprocessor		
10. Temperature control range: 300 degrees or better		
11. Temperature accuracy of the hot plate: +/- 5 or better		
12. Safely cut-off		
13. Supply voltage and frequency: compatible to Indian conditions		
14. <b>One year on-site warranty</b>		
<b>Accessories</b>		
1. Teflon coated magnetic bar set of various dimensions (5 of each size)		
2. Teflon coated magnetic holder rode		

## Annexure K Specifications

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.11/ **Magnetic stirrer**

### Quantity – 15 (Tendative)

1. Stirring capacity: 1 L or better
2. Speed range [rpm] 0 – 2000 or better
3. Chemical resistant Glass top/PVDF/or equivalent
4. Electronically controlled motor.
5. Supply voltage and frequency: compatible to Indian conditions
6. One year on-site warranty

### Compliance statement for the tender specifications

**INDIAN INSTITUTE OF TECHNOLOGY MANDI  
HIMACHAL PRADESH-175001**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.11/ **Magnetic stirrer**

#### **Instructions:**

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
Technical Specifications		
1. Stirring capacity: 1 L or better		
2. Speed range [rpm] 0 – 2000 or better		
3. Chemical resistant Glass top/PVDF/or equivalent		
4. Electronically controlled motor.		
5. Supply voltage and frequency: compatible to Indian conditions		
6. One year on-site warranty		

## **Annexure L Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.12/ **Acid Digestion Bomb (Teflon lined)**

- Capacity 23 ml with safety blow protection
- Maximum Temperature: 250°C
- Maximum pressure: 1800 psig
- Replacement PTFE cup with cover, 23 mL
- Corrosion disc
- Rupture disc
- The system should be certified to work smoothly for general digestion procedures at temperature and pressure mentioned above
- The system should carry 1 year warranty
- Three year onsite extended warranty should be quoted a optional

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.12/ **Acid Digestion Bomb (Teflon lined)**

### Instructions:

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorized dealer?		
If authorized dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
<b>Technical Specifications</b>		
<ul style="list-style-type: none"><li>• Capacity 23ml with safety blow protection</li></ul>		
<ul style="list-style-type: none"><li>• Maximum Temperature: 250°C</li></ul>		
<ul style="list-style-type: none"><li>• Maximum pressure: 1800 psig</li></ul>		
<ul style="list-style-type: none"><li>• Replacement PTFE cup with cover, 23 mL</li></ul>		
<ul style="list-style-type: none"><li>• Corrosion disc</li></ul>		
<ul style="list-style-type: none"><li>• Rupture disc</li></ul>		
<ul style="list-style-type: none"><li>• The system should be certified to work smoothly for general digestion procedures at temperature and pressure mentioned above</li></ul>		
<ul style="list-style-type: none"><li>• The system should carry 1 year warranty</li></ul>		
<ul style="list-style-type: none"><li>• Three year onsite extended warranty should be quoted a optional</li></ul>		
AMC should be quoted as optional.		

## **Annexure M**

### **Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.13/ **Heating Oven**

- Capacity 20L-25L or better
- Temperature range 25°C to 250°C or better
- Digital temperature control with Display
- Double metal sheet body
- The system should have **Programmable Temperature Controller**
- Should have Thermostat to control the transfer of heat for fine temperature control
- Should have two or more perforated stainless steel, removable racks for keeping samples.
- Supply voltage and frequency: compatible to Indian conditions
- Three year onsite extended warranty
- Air circulating fan (Optional)
  
- The equipment should fulfill the requirements in a chemical laboratory application.

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.13/ **Heating Oven**

### Instructions:

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
<b>Technical Specifications</b>		
Capacity 20L-25L or better		
Temperature range 25°C to 250°C or better		
Digital temperature control with Display		
Double metal sheet body		
The system should have <b>Programmable Temperature Controller</b>		
Should have Thermostat to control the transfer of heat for fine temperature control		
Should have perforated stainless steel removable two or more racks for keeping samples.		
Supply voltage and frequency: compatible to Indian conditions		
Three year onsite extended warranty		
The equipment should fulfill the requirements in a chemical laboratory application.		
Air circulating fan (Optional)		
AMC should be quoted as optional.		

## Annexure N Specifications

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.14/ **Indium Tin Oxide Coated Glass Slides/plates**

Surface resistivity: Anywhere between 5-12  $\Omega$ /square

Transmittance: >80%

Applications: Transparent electrodes of solar cells and light emitting diodes

Tentative quantity: 655 square cm

The bidder should quote "per square cm price"

The bidder should quote plate/slide cutter (to make small pieces for our research application) as optional

### Compliance statement for the tender specifications

**INDIAN INSTITUTE OF TECHNOLOGY MANDI**

**HIMACHAL PRADESH-175001**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.14/ **Indium Tin Oxide Coated Glass Slides/plates**

**Instructions:**

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
<b>Technical Specifications</b>		
Surface resistivity: Anywhere between 5-12 $\Omega$ /square		
Transmittance: >80%		
Applications: Transparent electrodes of solar cells and light emitting diodes		
Tentative quantity: 655 square cm		
The bidder should quote "per square cm price"		
The bidder should quote plate/slide cutter as optional		

## **Annexure O**

### **Specifications**

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.15/ **Melting point apparatus**

1. Temperature range: ambient to 350 °C or more
2. Temperature resolution: 0.1 °C or less
3. Temperature accuracy:  $\pm 0.6$  at 20 °C or better, and  $\pm 1$  at 350 °C or better
4. Ramping Rate: 0.5 °C to 10 °C or better
5. Cool down time 350 °C to 50 °C in approx. 10 minutes or better.
6. Supply voltage, current and frequency: compatible to Indian conditions
7. Display: Digital
8. Language: English
9. No. of samples: 3 or more simultaneously.
10. All other necessary accessories should be quoted.
11. The equipment should have CE compliance
11. Three year onsite extended warranty
12. AMC should be quoted as optional.

## Compliance statement for the tender specifications

INDIAN INSTITUTE OF TECHNOLOGY MANDI

HIMACHAL PRADESH-175001

Ref:-ENQUIRY NO:- IITMandi/SBS/TEN/2011-12/CHRLAB/8/ITEM No.15/ **Melting point apparatus**

### Instructions:

1. You have to fill in all columns and ensure that you furnish all the required information accurately and unambiguously.
2. If our specification contains any values, you have to provide your values against the column in the same unit as we have specified.
3. Deviation in values, materials etc. from our specification may be explained in the remarks column

Name of the bidder and address:		
Checklist	Bidder Specification	Remarks
Is Tender fees attached?		
Is EMD attached? (if applicable)		
Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
Undertaking from OEM regarding technical support & extended warranty present		
Validity of 180 days or not?		
Undertaking from bidder regarding acceptance of tender terms & conditions		
<b>Technical Specifications</b>		
1. Temperature range: ambient to 350 °C or more		
2. Temperature resolution: 0.1 °C or better.		
3. Temperature accuracy: $\pm 0.6$ at 20 °C or better, and $\pm 1$ at 350 °C or better		
4. Ramping Rate: 0.5 °C to 10 °C or better		
5. Cool down time 350 °C to 50 °C in approx. 10 minutes or better		
6. Supply voltage, current and frequency: compatible to Indian conditions		
7. Display: Digital		
8. Language: English		
9. No. of samples: 3 or more simultaneously.		
10. All other necessary accessories should be quoted		
11. The equipment should be CE compliant		
12. Three year onsite extended warranty		
13. AMC should be quoted as optional.		

