

**BABA FARID UNIVERSITY OF HEALTH SCIENCES  
FARIDKOT - 151203**



**Tender No. BFUHS/GGSMCH/MRU/2015/15**

Date of submission of Tender on or before : 21.10.2015 up to 2.00 pm  
Date of opening of Tender : 21.10.2015 at 3.00 pm  
Venue: Committee Room, VC Office, Baba Farid University of Health Sciences, Faridkot

**SCOPE OF SUPPLY**

Supply and installation of the following equipments required in **Multidisciplinary Research Unit (MRU)** at Guru Gobind Singh Medical College & Hospital, Faridkot:-

Sr. No.	Name of Item	Qty. Required	EMD amount
1.	Microbillirubinometer with Microcentrifuge and Hematocrit Reader	1	Rs.5,000/-
2.	Biosafety Cabinet	1	Rs.12,000/-
3.	-20 Degree Deep Freezer	1	Rs.5,000/-
4.	Bacteriological Incubator	2	Rs.8,000/-
5.	Ultra pure water purification system	1	Rs.12,000/-
6.	Liquid Nitrogen Container	2	Rs.16,000/-
7.	Dry Bath	1	Rs.4,000/-
8.	Elisa Reader/Washer	1	Rs.15,000/-
9.	Analytical Balance	1	Rs.4,000/-
10.	Atomic Absorption Spectrophotometer	1	Rs.80,000/-

**Separate tender should be quoted for each item. The detailed specifications are available at Page No.14 to 25**

\* The quantity may increase /decrease as per actual requirement.

**BABA FARID UNIVERSITY OF HEALTH SCIENCES  
FARIDKOT**

**TENDER DOCUMENT FOR PROCUREMENT OF  
EQUIPMENTS FOR  
MULTIDISCIPLINARY RESEARCH UNIT (MRU)**

**AT GURU GOBIND SINGH MEDICAL COLLEGE & HOSPITAL, FARIDKOT**

**INSTRUCTIONS/ GUIDELINES TO THE TENDERERS**

1. Attach a copy of the tender notice (**Annexure-I**).
2. Attach an affidavit regarding Non-Black listing as per proforma given at **Annexure-II** duly attested by an Executive Magistrate or a Notary Public.
3. Attach Technical Bid Proforma (**Annexure-III**).
4. Attach a signed copy of the terms and conditions (**Annexure-IV**).
5. In case the Tenderer is Authorized Supplier/Agency, attach the Authorization Certificate as per the Format given at **Annexure-‘V’**.
6. In case the Tenderer is Authorized Supplier/Agency, an undertaking/certificate issued by their Principle Manufacturer/Supplier that in case dealership/distributorship is withdrawn after supply then the Principle Manufacturer/Supplier will be responsible for after sales service till the date of guarantee/warranty of the equipment and afterwards for a period of 10 years as per the Format given at **Annexure – ‘VI’**.
7. Detail of Bank Account for refund of EMD (**Annexure – VII**)
8. Check List (**Annexure – VIII**)
9. In addition to this, following documents are to be attached with Technical Bid:-
  - i) **Tender Fee** : In the shape of a Demand Draft for Rs.2000/- in favour of “Registrar, Baba Farid University of Health Sciences” payable at Faridkot.
  - ii) **Earnest Money Deposit (EMD)** : In the shape of a Demand Draft as mentioned in Scope of Supply in favour of “Registrar, Baba Farid University of Health Sciences”, payable at Faridkot.
  - iii) Details of registration as Company / Shop / Establishment.
  - iv) Copy of Certificate of Registration for service Tax/TIN/TAN/PAN.
  - v) A certificate from C.A. regarding Annual Turnover with Balance Sheet for the last 3 (three) financial years i.e. 2012-13, 2013-14 & 2014-15.
  - vi) Copy of the IT Returns for three financial years, 2012-13, 2013-14 & 2014-2015.
  - vii) ISI/ISO/CE/US FDA/TUV Certificate regarding Standard in Quality.
10. Price should be quoted only in proforma at **Annexure-‘IX’**.
11. Please ensure that (1) Technical Bid along with Tender Fee & EMD and (2) Price Bid are submitted in two separate envelopes and these should be put in an outer envelope, super-scribing, as “**TENDER DOCUMENT FOR SUPPLY OF EQUIPMENTS FOR MULTIDISCIPLINARY RESEARCH UNIT (MRU)**”, due on 21.10.2015 at 2:00 PM:-

**ENVELOPE – I** : Technical Bid/Tender Fee/EMD i.e. Annexures I to VIII along with other documents as indicated in Clause 9 above

**ENVELOPE – II** : Price Bid duly filled (Annexure-IX).

Note: In case the tender is not submitted in the above format it will be rejected straightway.

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**Annexure-I****BABA FARID UNIVERSITY OF HEALTH SCIENCES  
FARIDKOT****Tender No. BFUHS/GGSMCH/MRU/2015/15 due on 21.10.2015****NOTICE INVITING TENDER**

Sealed tenders are invited from manufacturers or their authorized agents/distributors for supply and installation of following equipments for **MULTIDISCIPLINARY RESEARCH UNIT (MRU)**. The tender document containing detailed terms & conditions may be downloaded from the website of Baba Farid University of Health Sciences, Faridkot ([www.bfuhs.ac.in](http://www.bfuhs.ac.in)) and Guru Gobind Singh Medical College & Hospital, Faridkot ([www.ggsmch.org](http://www.ggsmch.org)).

**EQUIPMENTS REQUIRED.**

Sr. No.	Name of Item	Qty. Required	EMD amount
1.	Microbillirubinometer with Microcentrifuge and Hematocrit Reader	1	Rs.5,000/-
2.	Biosafety Cabinet	1	Rs.12,000/-
3.	-20 Degree Deep Freezer	1	Rs.5,000/-
4.	Bacteriological Incubator	2	Rs.8,000/-
5.	Ultra pure water purification system	1	Rs.12,000/-
6.	Liquid Nitrogen Container	2	Rs.16,000/-
7.	Dry Bath	1	Rs.4,000/-
8.	Elisa Reader/Washer	1	Rs.15,000/-
9.	Analytical Balance	1	Rs.4,000/-
10.	Atomic Absorption Spectrophotometer	1	Rs.80,000/-

**Separate tender should be quoted for each item. The detailed specifications are available at Page No.14 to 25.**

\* The quantity may increase /decrease as per actual requirement.

**CONDITIONS:-**

- THE TENDER(S) MUST REACH in the Office of the Registrar, Baba Farid University of Health Sciences, Faridkot on or before 21.10.2015 up to 2:00 PM along with a DD for Rs.2000/- on account of Tender Fee and EMD as mentioned above in favour of “Registrar, Baba Farid University of Health Sciences”, payable at Faridkot.**
- The tenders will be opened on the same day at 3:00 PM in the Committee Room, VC’s Office, **Baba Farid University of Health Sciences**, Faridkot in the presence of intending tenderer(s).
- The date & time for opening of Price bids of technically qualified bidders will be intimated later on.
- The Registrar reserves all rights to accept or reject any or all the tenders without assigning any reason.

Registrar

Dated:

Place:

**Annexure-II**

**(To be furnished on non-judicial stamp paper worth Rs.30/- duly attested by Executive Magistrate or Notary Public).**

**AFFIDAVIT**

I/We \_\_\_\_\_  
partner/sole proprietor (Strike out which is not applicable) of (Name & Address of Firm)  
\_\_\_\_\_ do hereby declare and solemnly affirm:-

- a) That the individual/firm/ companies are **not debarred or black- listed** by any department of Union/ State Government or any autonomous institute.
- b) That no partner or shareholder, directly or indirectly connected with the applicant has been debarred or blacklisted by any department of Union Govt./State Govt./Autonomous Institute.
- c) and That the terms and conditions for supply and installation of equipments for **Multidisciplinary Research Unit (MRU)** at GGSMCH, Faridkot, are acceptable to me/us. I/We will abide by them in letter and spirit.

Date:

Place:

DEPONENT

**VERIFICATION**

I/We do hereby solemnly declare and affirm that the above declarations are true and correct to the best of my/our knowledge and belief. No part of it is false and nothing has been concealed therein.

Date:

Place:

DEPONENT

**Annexure-III**

**TECHNICAL BID**

Name and Address of the applicant / firm \_\_\_\_\_

Specify whether Manufacturer/Dealer/Distributor: \_\_\_\_\_

We hereby quote for supply & installation of \_\_\_\_\_ (name of equipment)

Sr. No. \_\_\_\_\_ Description of Items (complete specifications) \_\_\_\_\_ Qty \_\_\_\_\_

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**Signature & seal of bidder**

**Place:**

**Date :**

**Note: Please enclose Catalogue/Brochure/Pamphlets with specifications.**

**Annexure-IV****TERMS AND CONDITIONS****FOR SUPPLY AND INSTALLATION OF EQUIPMENTS IN  
MULTIDISCIPLINARY RESEARCH UNIT (MRU).****1. ELIGIBILITY**

- i) The sole manufacturers of equipments or their authorized agents/distributors may quote their rates.
  - ii) In case of Authorized Supplier/Agency/Distributor, the Authorization Certificate as per the Format given at Annexure-‘V’ should be attached.
  - iii) In case the Tenderer is authorized dealer/supplier an undertaking/certificate issued by their Principle Manufacturer/Supplier that in case dealership/distributorship is withdrawn after supply then the Principle Manufacturer/Supplier will be responsible for after sales service till the date of guarantee/warranty of the equipment and afterwards for a period of 10 years as per the Format given at Annexure – ‘VI’.
2. Unsealed tender (s) will be rejected.
  3. Tenders without earnest money or short of it or not in the form specified above will not be entertained and shall be rejected straightway.
  4. No tenderer shall be exempted from furnishing Earnest Money Deposit (EMD) under any circumstances.
  5. Earnest Money/ Security Deposit and/or any other sum of the tenderer(s) lying with the Baba Farid University of Health Sciences, Faridkot or Guru Gobind Singh Medical College & Hospital, Faridkot in connection with any other tender/case shall not be considered against this tender.
  6. The bids received after the specified date and time for receipt of bids will not be considered under any circumstance. Registrar, BFUHS, Faridkot shall not be responsible for postal delay.
  7. Minimum delivery period must be quoted clearly in the offer.
  8. **Warranty required for 5 years.**
  9. **Price of AMC/CMC should be quoted as required in the specifications & it will be optional for institute to opt for any.** The rates quoted should be F.O.R. destination and should also include packing and forwarding charges, taxes and other levies.
  10. The tenderer should keep his/her offer valid for acceptance for a period of six months from the date of opening of price bid. (In case, the tenderer is unable to keep his/her offer open for the above said period, his/her tender shall be treated as invalid.)
  11. The tenderer will be responsible to ensure that the tender is received on or before the due date and time in the office of the Registrar, Baba Farid University of Health Sciences, Faridkot.
  12. Each page of the tender document should be signed in full by the tenderer(s) and should bear the rubber stamp/seal of the firm affixed/ scanned, if applicable, on each page. Any cutting(s)/overwriting(s) etc. should also be initialed. In case of any infringement of these conditions, the tender is liable to be rejected.
  13. In the event of the date of receipt or opening of tender being declared a holiday for the Baba Farid University of Health Sciences, Faridkot, the last date of receipt/opening of the tender shall be the next working day at the same time and venue. The Price Bid shall be opened only in respect of those individual/ firms, who technically qualify.

14. Any conditional, telegraphic tenders, fax tenders, tenders without earnest money, and not in the prescribed form or in any deviation from the terms and conditions of the tender notice shall not be entertained and will be rejected out rightly.
15. The tenderer(s) shall be at liberty to be present, in person or through their authorized representative(s) at the time of opening of the tender as specified in the Tender Notice. In case the authorized representatives are to be present, they must furnish the authority letter from the tenderer, on whose behalf they are representing otherwise they will not be allowed to participate in the process of opening of tender.
16. In case of violation of any of the terms and conditions as mentioned above, Earnest Money/ Security Deposit of the successful tenderer(s) shall be forfeited and the tender shall be cancelled.
17. Any attempt, direct or indirect, to cast influence, negotiate on the part of the tenderer with the official/authority to whom he will submit the tender or the tender accepting official/ authority before the finalization of tenders will render the tender liable for rejection.
18. In case a demonstration of any equipment is required during the technical evaluation of tender, the Tender Bidding Company will make arrangements for demonstration of equipment before the Committee at their own expenses.
19. The tenderer should certify unequivocally that the articles or items offered conform strictly to the specifications given by him. Any accessories, as may be required, should form part of the machine.
20. The firm should have service center either in Punjab, Chandigarh, Delhi or Haryana. Acceptance of supply order implies acceptance of all the terms & conditions of tender/delivery.
21. Minimum delivery and installation period must be quoted clearly. The rates quoted should be F.O.R. destination i.e. BFUHS, Faridkot/GGS Medical College & Hospital, Faridkot and should also include packing and forwarding charges, taxes and other levies.
22. The Registrar reserves all the rights to accept or reject any tender without assigning any reason and also to impose/relax any term and condition of the tender.

**23. CRITERIA OF EVALUATION OF PRICE BID**

The Price Bids of technically qualified bidders shall be evaluated on the basis of lowest bid criteria without compromising on the quality of material. Rates of all types of taxes as applicable should be quoted clearly. The price of AMC/CMC will be included in the basic price while calculating the price of the equipment for comparison.

**24. SECURITY DEPOSIT:**

- i) The successful bidder shall be required to deposit a security of an amount equal to 10% of the final bid in the shape of Demand Draft in favour of Registrar, Baba Farid University of Health Sciences, Faridkot drawn on any commercial/nationalized bank, payable at Faridkot.
- ii) The EMD will be refunded to successful bidder on receipt of Security Deposit.
- iii) The Earnest Money Deposit will be refunded to the unsuccessful bidders within three months of the date of purchase order.

25. **PAYMENT TERMS**

80% payment will be made after delivery, Inspection and successful installation/commissioning of machinery at the destination and remaining 20% payment will be released after 60 days of successful running of the machinery/instrument and satisfactory performance. The material will be accepted only if it is found as per approved specifications.

26. **PENALTY CLAUSE**

If the supply is not made within the stipulated period then late delivery charges @2% will be imposed on the total amount of Supply Order up to delay of 30 days and thereafter @ 4% for another 30 days after which Supply Order/Rate Contract will be deemed cancelled & security/earnest money forfeited and company will be black-listed for future.

11. **ARBITRATION**

- i) In the event of any dispute or differences arising between the parties with regard to the terms and conditions of the agreement/contract and/or with regard to the breach or interpretation thereof including all rights and liabilities there under on any matter whatsoever touching upon the terms and conditions of the agreement/contract whether in course of or after its termination the parties will settle the same at the first instance by mutual discussions/conciliation which would be conducted by the Principal, GGSMCH, Faridkot.
- ii) In the event the said mutual discussions/conciliation fails, the aggrieved party shall initiate arbitration proceedings for resolution of differences/disputes etc., mentioned above by appointing a sole arbitrator, who shall be the Registrar, BFUHS, Faridkot in which event the said proceeding shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act enforce.
- iii) The venue of such arbitration proceeding shall be at Faridkot and the court in Faridkot alone will have jurisdiction in respect of all proceedings connected there with.

27. **Jurisdiction** – All disputes are subject to the jurisdiction of courts at Faridkot only.

Accepted

(Signature of Tenderer)  
With seal and full address

Dated:

Place:



**Annexure- V**

**MANUFACTURER’S/PRINCIPLE’S AUTHORIZATION FORM**

TO

The Registrar  
Baba Farid University of Health Sciences,  
Faridkot -151203

**Ref. No.**.....

**Dated:**

**Sub: Authorization Certificate in favour of M/s..... for supply of .....(name of equipment) for MRU.**

We, M/s....., who are established and reputable manufacturers of .....(name of equipment) having factory(ies) at ..... and ....., hereby authorize M/s.....(name and address) to bid, negotiate and conclude the Tender formalities with you against Tender No..... for the above equipment(s) manufactured by us.

No company or firm or individual other than M/s..... are authorized to bid, negotiate and conclude the tender formalities in regard to this business against this specific tender.

We, hereby extend our full guarantee and warranty as per the conditions of tender for the goods offered for supply against this tender by the above firm.

Yours faithfully,

(Name)

For and on behalf of M/s \_\_\_\_\_  
(name of manufacturer/Principle)

**Note: This letter should be signed by a person competent and having authority to sign on behalf of manufacturer, and should be on manufacturer Letter Head and same will be kept with Technical Bid Envelope.**

**Annexure - VI**

**UNDERTAKING BY MANUFACTURER/PRINCIPLE SUPPLIER**

TO

The Registrar  
Baba Farid University of Health Sciences,  
Faridkot -151203

**Ref. No.....**

**Dated:**

**Sub: Undertaking for after sales service**

We, M/s....., who are established and reputable manufacturers of .....(name of equipment) have authorized M/s.....(name and address) to bid, negotiate and conclude the Tender formalities with you against Tender No..... for the above equipment(s).

Further, we undertake that in case dealership/distributorship is withdrawn after supply of equipment then we shall be responsible for after sales service till the date of guarantee/warranty of the equipment and afterwards for a period of 10 years.

Yours faithfully,

(Name)

For and on behalf of M/s \_\_\_\_\_  
(name of manufacturer/Principle)

**Annexure- VII****Details about Bank Account of the firm who has deposited EMD**

Name of the firm: \_\_\_\_\_

<b>Sr. No.</b>	<b>Particulars</b>	<b>Detail</b>
1.	Account No.	
2.	Name of Bank	
3.	Branch Name	
4.	IFSC Code of Bank	
5.	Name of Operator	

**Annexure- VIII****CHECK LIST DULY FILLED IN TO BE ATTACHED WITH THE TENDER**

Sr. No.	Particulars	Remarks
1.	Whether the Technical bid, Price bid with EMD have been submitted?	Yes/No
2.	Whether a DD for Rs.2000/- on account of Tender Fee in favour of Registrar, Baba Farid University of Health Sciences” payable at Faridkot has been submitted?	Yes/No
3.	Whether a EMD as indicated against each item, in the shape of Demand Draft in favour of Registrar, Baba Farid University of Health Sciences” payable at Faridkot has been submitted?	Yes/No
4.	Whether an affidavit on the non-judicial stamp paper, duly attested by the Executive Magistrate/Notary, regarding non-black listing/ non-prosecution of firm has been submitted?	Yes/No
5.	Whether each page of the tender document and other enclosures as well as cutting(s)/ overwriting(s) have been signed/ initialed by the tenderer and also the forwarding letter duly signed by the authorized signatory, has been submitted?	Yes/No
6.	Details of registration as Company / Shop / Establishment attached.	Yes/No
7.	In case of Authorized Supplier/Agency, the Authorization Certificate as per the Format given at Annexure-‘V’ is attached.	Yes/No
8.	In case the Tenderer is authorized dealer/supplier an undertaking/certificate issued by their Principle Manufacturer/Supplier that in case dealership/distributorship is withdrawn after supply then the Principle Manufacturer/Supplier will be responsible for after sales service till the date of guarantee/warranty of the equipment and afterwards for a period of 10 years as per the Format given at Annexure – VI is attached.	Yes/No
9.	Copy of Certificate of Registration for service Tax/TIN/TAN/PAN attached.	Yes/No
10.	A certificate from C.A. regarding Annual Turnover with Balance Sheet for the last 3 (three) financial years i.e. 2012-13, 2013-14 & 2014-15 attached.	Yes/No
11.	Copy of the IT Returns for three financial years, 2012-13, 2013-2014 and 2014-15 attached.	Yes/No
12.	ISI/ISO/CE/US FDA/TUV Certificate regarding Standard in Quality attached.	Yes/No
13.	Bank Details (Anenxure – VIII) for refund of EMD attached	Yes/No

**Note: Non compliance to any of the above conditions will render the offer/ tender to be rejected out-rightly and Price bid of the firm will not be opened.**

Place: \_\_\_\_\_ Signature of Tenderer: \_\_\_\_\_

Dated: \_\_\_\_\_ Full name of the Tenderer: \_\_\_\_\_

Address: \_\_\_\_\_

**Annexure- IX**

(To be submitted in envelope No. II)

**PRICE BID**  
(ON LETTER HEAD)

Name and Address of the applicant / firm \_\_\_\_\_

Specify whether Manufacturer/Dealer/Distributor: \_\_\_\_\_

We hereby quote for supply & installation of \_\_\_\_\_ (Name of equipment) as under:-

<u>Sr. No.</u>	<u>Description of Items</u>	<u>Qty</u>	<u>Price</u>
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Signature  
(Name & Address)  
Seal  
Date & Place

**Note:**

- 1) Minimum delivery period must be quoted clearly in the offer.
- 2) **Warranty should be quoted for 5 years**
- 3) **Price of AMC/CMC after warranty, should be quoted as mentioned in specifications & it will be optional for institute to opt for any.** The rates quoted should be F.O.R. destination and should also include packing and forwarding charges, taxes and other levies. Any taxes, if applicable, should also be quoted clearly.

## TECHNICAL SPECIFICATIONS OF EQUIPMENTS FOR MULTIDISCIPLINARY RESEARCH UNIT

### *1. Microbilirubinometer with Microcentrifuge and Hematocrit Reader*

#### **Technical specifications**

1. Single/one Beam analysis for precise measurement of bilirubin by eliminating the interference of the Hemoglobin automatically.
2. Scale range 4 to 30 mg/ dl or 68/ 510  $\mu$ mol/ Liter.
3. Display on LCD.
4. Use Disposable Capillary Tubes of all sizes and specifications.
5. It should give total Bilirubin in serum or plasma form a Micro value of blood.
6. Total error should be less than 1% of reading.
7. Should display date & hour.
8. Should be ISO 9001 2000; EN 46001-96, CE 0051 certified.
9. System to include Hematocrit centrifuge and Hematocrit reader with the following specifications:
  - Rotating head for 24 capillaries (should be compatible with any type of micro capillaries).
  - Electronic timer up to 15 minutes
  - Speed 12000 rpm.
  - Safety-cover with lock
  - Supply hematocrit-reader one with each equipment
10. Power supply 220  $\pm$  20 AC for both micro bilirubinometer as well as microcentrifuge.
11. CVT 1KVA of standard company with two years warranty.
12. List of essential spares & accessories should be provided and quoted separately. Prices so quoted to be frozen for 5 years.
13. Warranty period : 2 years.
14. CAMC for 3 years after warranty inclusive of spares/ accessories.
15. Original literature, and not the photocopy, to be supplied with the quotation, otherwise quotations will not be considered.
16. Company should certify that model quoted is latest and not obsolete, and spares are available for minimum 5 years after warranty.

## **2. BIOSAFETY CABINET**

### Technical Specifications

- Class II Biosafety Cabinet Type A2 design.
- Should include a germicidal UV lamp, set of arm rest, an electrical outlet, and a support stand provided with leveling bases.
- Size 4 feet width; Single Piece (for easy cleaning and prevent contamination) stainless steel (SS304).
- Motor should be Dual DC & must automatically adjust the airflow speed (balancing inflow and down flow) without the use of a damper to ensure continuous safe working conditions.
- 30% exhaust and 70% recirculation should be achievable through HEPA filters.
- The microprocessor must display the inflow and down flow air velocities in real-time on an LED/LCD display.
- The front window must be a 10" sash opening and be made of laminated safety glass to ensure containment of potentially hazardous samples in the case of accidental glass breakage.
- Separatorless Minipleat anti-microbial HEPA filters of EU 13 grade with an efficiency of 99.97% on monodisperse, 0.3 micron challenge for supply.
- Separatorless Minipleat anti-microbial HEPA filters of EU 13 grade with an efficiency of 99.99% on monodisperse, 0.3 micron challenge for exhaust.
- Interlocking of supply & exhaust motor blower with logic control to ensure the system stops if either motor stops. This is for additional operator safety.
- The front of the cabinet must be angled 10° to help minimize glare on the window to the user.
- The cabinet must automatically reduce fan/blower motor speed to 30% when the front window sash is in closed position to ensure reduced energy consumption when the cabinet is not in use.
- UV light must be programmable to allow for specific exposure times from 0 to 24 hours. The automatic shut off feature on the UV light saves money on replacement of the bulbs.
- Lightening power should >1100 lux(100fc).
- The cabinet noise level must be less than 65 dB(A).
- Alarm to trigger in case blower trips as a safety measure.
- Cabinet should be NSF (National Sanitation Foundation) standard no 49 as per recommendation by WHO for safety of user, EN certified and certificate of the quoted model should be attached.
- Energy saving mode should be there; Power Consumption Normal mode :200W ±10%
- CE (European Conformity) and UL model only to be quoted.
- Warranty: 5 years

### 3. -20 Degree DEEP FREEZER

#### Technical specifications

- Finish: interior and exterior: hips & pre painted steel
- Anti-corrosive interior liner, clean & convenient to use.
- Insulation: hcfc and cfc free, polyethylene insulation.
- Upright Vertical Deep Freezer Capacity: 200-250 lit with temperature:-20 deg C at room temp.
- Door: solid door
- Microprocessor controlled with digital display for all functions.
- Storing configuration: multi level design to store: solid flaps and solid baskets
- Defrost: frost free
- Door gasket type: magnetic
- Control: electronic controller
- Set point: -20 c
- Settable range: -19 to -21 c
- Alarm: high temp alarm ( -15 deg c ) , low temp alarm ( -30 deg c)
- Electrical circuit breaker, time delay for compressor switch on, overload cut off relay for compressor.
- Refrigerant : r600a
- Compressor hp: high energy & efficient
- Access port (16mm)
- Pre-wired cord and plug type: European
- Full load amperes: 1-4, however lowest will be preferred.
- Voltage: 220-230v 50Hz
- Temperature variation inside the cabinet: -18 ~ -25 °c
- Operating ambient temperature - min/nom/max (c) : 15c/25c/32c
- Supplied with compatible serve controlled stabilizer of the same brand of the freezer for better compatibility.
- Supplied with minimum two mini coolers with gel filled so that the samples kept in coolers can maintain the temperature of 0 to -20 deg C in case of power failure.
- Efficient back-up system in case of power failure (compatible online UPS for 3 hours backup).
- CE (European Conformity) & UL mark certified
- Warranty – 24 MONTHS



#### **4. BACTERIOLOGICAL INCUBATOR**

##### **Technical specifications**

- Dual convection for versatility of application: forced air circulation by quiet air turbine and fan speed adjustable from 0 to 100% @ 10% steps for each segment individually.
- Advanced digital timer for daily or weekly on / off cycles
- Stainless steel interior SS304 is easy to clean and corrosion resistant
- Broad temperatures range from 5 °C above ambient to 105 °C – even suitable for drying application
- Temperature uniformity as good as  $\pm <\pm 0.5^{\circ}\text{C}$
- Temperature stability at  $\pm <\pm 0.5^{\circ}\text{C}$
- Chamber volume L / 150-200 liters.
- Intuitive user interface for setting temperature
- Large, easy to read LED or LCD
- Internal glass door allows sample viewing without impacting temperature
- Number of shelves supplied : three shelves
- Self diagnostics function for fault analysis
- Incl. work calibration certificate for +37 °C.
- Audible and visual alarm.
- Rated Voltage/Frequency; Rated Power; Max. Current; Plug: 230VAC 50/60Hz; 1100w; 4.8A
- Interior (at least) 450x605x450 MM
- Wt: 56 kg Approx CE European Conformity (230V, 50Hz models) & UL certified
- Warranty: 5 Years

## **5. ULTRAPURE WATER PURIFICATION SYSTEM**

### **Technical specifications**

#### **Pre-treatment system :**

- Three stage pre-treatment system with 10, 5 & 1 micron spun filters 10” long for removal of suspended particles and to take care of F.I. and Chlorine in feed water.
- The system should respond favourably to feed water having Fouling Index ( FI) approx 10, total Free Chlorine <0.5 ppm and Feed Water Conductivity upto 2000  $\mu\text{s}/\text{cm}$ ; maximum silica 30 ppm.
- Three stage purification process; primary purification by a Pre-filtration secondary purification through RO membrane, DI bacteria counts are low and provide Type II water. System should have unique integral recirculation ensures optimum water quality at point of dispense.
- System should be GLP compliance documentation. (GLP compliance is must as we require to work on ultra sensitive tests.
- System should have option to connect printer through RS 232 for data recording and traceability. (We need to record the data by taking printouts periodically for QA i.e no manual recording or manipulation).
- System should be supplied with 50 to 75L reservoir with vent filter and recirculation facility.

#### **Product Water Type II Quality :**

Resistivity	:	10 to 15 m $\Omega$ at 25 deg. C ( megaohm C).
TOC	:	<30 ppb
Removal, bacteria and particle, %	:	99.
Silica removal, %	:	>99.9%
Bacteria	:	<1 cfu/ml
Flow rate	:	6 - 10 liters / Hr at 25 deg. C.

- The system should have facility to remove Ionic and organic impurities by the ultrapure polisher cartridge, sterile 0.2 $\mu\text{m}$  filter, pressure regulator, UV lamp and Ultra filter.
- The water within the unit should be recirculated through the purification technologies to maintain purity. To reduce heat build up the recirculation is at reduced flow rate.
- The system should have recirculation of the purified water to maintain consistent peak quality.
- System should have dual wavelength UV lamp – UV photo oxidation 185/254nm.

#### **ULTRAPURE WATER Output Details:**

- ◆ *Inorganic* : 18.2M  $\Omega\text{-cm}$  @ 25 $^{\circ}$ C
- ◆ TOC : 1-5 ppb with RO water feed
- ◆ Bacteria : < 1 CFU/ml
- ◆ Bacteria endotoxin: <0.001EU/ml
- ◆ Flow Rate : 1 Ltr./min.
- ◆ RNase : <0.003 ng/ml
- ◆ DNase : <0.4 pg/ml
- ◆ Conductivity : 0.055uS/cm
- ◆ Particle,0.22  $\mu\text{m}/\text{ml}$  : <1

System should have facility to validate at site from time to time as and when required.

Warranty : 24 months.

## **6. Liquid Nitrogen container**

### **Technical specifications**

- LN2 Capacity: 70- 100 lit
- Vial storage capacity (2ml):2000 or above
- Neck Diameter: 8.5 in. / 21.5 cm
- Static Evaporation Rate: Not more than 0.8 lit/day
- Static Holding time: 80 days or more
- Outstanding temperature uniformity: samples are stored below -180°C, even when less than 2 in. (5cm) of liquid nitrogen remains in the vessel
- With Ultrasonic Level Monitor safeguards irreplaceable samples with minimal liquid nitrogen evaporation and conduction
- Monitor should provides continuous LED readout of liquid nitrogen level in 1/8 increments;
- Audible alarm sounds when nitrogen level falls below safe range; dry remote alarm contact for remote monitoring
- Advanced vacuum insulation minimizes liquid nitrogen evaporation and reduces operating costs
- Secure locking hasp prevents unauthorized entry
- Regulatory Listing: CE
- System should be supplied with full capacity of 2ml Racks
- Warranty: 5 years

## 7. Dry Bath

### Technical specifications

- Double Block Digital Dry Bath Heater
- Microprocessor control with large digital display
- Temperature accuracy of  $\pm 0.3^{\circ}\text{C}$ , and uniformity of  $\pm 0.2^{\circ}\text{C}$
- Wide temperature set range from ambient +5 to  $150^{\circ}\text{C}$
- Stainless steel block cavity for corrosion resistance
- Voltage 230V/50/60Hz
- Accessories
- Single Block, 20 x 2.0 mL tubes
- Single Block, 48 x 0.2 mL PCR tubes or 6 x 0.2 mL strips
- Single Block, 12 x 15 mL centrifuge tubes
- CE Certified
- Should Be ISO certified
- Should have inbuilt Shaking System .
- Heating Time <20 Min
- Accuracy :0.1 degree C
- Should Have Peltier Heating & cooling System .
- Shaking Speed : 200-1500 RPM
- Should have beep –Signal / Stop Program Completion .
- Warranty : 5 years

## 8. ELISA READER

### Technical specifications

Should be True Monochromator based dual beam spectrophotometer Elisa Reader for absorbance and turbidity measurements using 96 or 384 –well microplates using halogen lamp as light source and silicon photo detectors.

1. The system should have a linear measurement range of 0 to 6 Abs. with a photometric accuracy of  $\pm 2\%$  or better and resolution of 0.001 Abs.
2. Able to read Plate, Strip and have automated wavelength selection option.
3. Measurement wavelength range covers both UV and VIS wavelengths (from 200 nm to 1000 nm).
4. Reading speed for 96 well plates less than six seconds, capable of doing multi standard tests and controls.
5. It should have variable speed plate shaking capability in 3 different mode
6. Internal USB port for data transfer and storage using USB memory drives when internal user interface is used.
7. A reference channel system to compensate Xenon lamp flash to flash variations.
8. Possibility of upgradation to measure RNA, DNA & protein samples with very low volume (2-5 $\mu$ l) with specially designed low volume micro drop plate.
9. On- board pathlength correction for the correction of the variations in the photometric pathlength.
10. The instrument should be compatible for automation purposes. The instrument should have a power Save function for low energy consumption. The instrument should meet RoHS (Restriction of Hazardous Substances) directive
11. Low power consumption: Maximum 110 W, typical during operation <22W, in Power Save mode <2.5W
12. Measurement data stored in database without possibility to modify or accidentally delete any results.
13. The instrument should run in stand –alone mode and also with computer and software controlled.
14. Internal Software: The system should have inbuilt internal software for the measurement of samples with plates. The inbuilt software should be able to perform all calculations and save the data within the system. The data export should be through USB device.
15. Computer Controlled Software: The instrument should have the ability to choose free selection of plates from any manufacturer. The software should be able to display the results in the table or list format. The results can be exported in the excel or PDF format. The software should be able to perform parallel line assays.
16. The instrument should be provided with compatible branded computer and printer.
17. The company should provide training along with wet demonstration of the equipment at site & must provide consumable like Elisa Plates (at least 100 Plates with lids to be provided), for the initial wet demo & training.
18. Instrument should be quoted with standard warranty of 3 years.

### **ELISA READER (WASHER)**

1. It should have capability to wash 96 well micro plates, option for interchangeable wash heads option 1x8 or 1x12 way wash heads with programmable washing time, volume and soaking time. It should use non-pressurized bottles to minimize the risk of spillage and also choice for user to substitute bottles of different sizes but should be provided with two 2 litre wash bottles & one 4 litre waste bottle.
2. Should provide aerosol cover to prevent aerosols of infectious diseases from spreading.
3. Should have residual volume less than 1.5  $\mu$ l and dispensing volume should be 50- 400  $\mu$ l for 96 well.
4. Should have a USB port/RSB port for easy data transfer and should have large color screen for easy set-up of wash protocols.
5. Should have the liquid level sensors in both the wash and waste bottles to guarantee safe performance. And should have plate sensor to recognize if a plate is present or not.
6. The automatic rinse feature can be set after using the instrument, to operate in a specified time sequence to ensure that the liquid channels do not get clogged.
7. **Training and warranty**:-The company should provide training along with wet demonstration of the equipment at site.
8. Instrument should be quoted with standard warranty of 3 years.

## 9. ANALYTICAL BALANCE

### Technical specifications

- 1) Product should be on International Repute. (ISO & CE European Conformity Certified)
- 2) Max Capacity :220 gm Readability : 0.1 mg
- 3) Repeatability: 0.1 mg, linearity: 0.2 mg, response time: < 3 sec
- 4) Weight: < 5 kg.
- 5) Calibration: FACT Calibration.
- 6) Should Have MonoBloc Weighing Technology for Better repeatability &Stability.
- 7) Should Have LCD Back Light / HCD Display.
- 8) Should Have over Load protection in case of Accidental over Weight.
- 9) Should Have RS 232 Interface / GLP, GMP Compliant Model.
- 10) Should Have Other Features Like Piece Counting, Percentage Weighing , Dynamic Weighing & Totalization Functions .
- 11) Pan Size :90 mm
- 12) Easy to clean
- 13) Supplier should have Nearest Service Station.
- 14) Supplier should be able to perform test like Repeatability , Linearity , Eccentricity With Manufactures Original Weight box Duly Certified by NPL
- 15) Compliance should be submitted along with each product
- 16) Provided with AC adaptor.

## 10. Atomic Absorption Spectrophotometer (AAS) for detection of trace elements up to ppb levels in human blood or urine

### Technical specifications

Fully automated PC controlled true double beam multi element Atomic Absorption Spectrophotometer system with absorption and emission capability with deuterium and Zeeman/ Self Reversal background correction and should have the capability of measuring multi-elements in rapid sequence with following specifications:-

**Operation:** The instrument should have automatic operation and integrated, flame and furnace system, flame atomic absorption/emission measurement, true dual atomization, furnace vision system included as standard. The change of flame and furnace should be through software.

**Optics and background:-** The instrument should be provided with 6-8 lamp auto alignment turret with dedicated power supply for each lamp, double beam stockdale optics, high energy, silica coated, sealed optical system with self calibrating Echelle monochromator. It should have Reciprocal Linear Dispersion 0.5 nm/mm at 200 nm, Wavelength range 185-900 nm, Spectral band pass of 0.1, 0.2, 0.5 or 1.0 nm should be automatically selectable, deuterium and Zeeman/ Self Reversal lamp background correction system upto 2.5 Abs at 2ms response time with electronic modulation and automatic attenuation. The optical gratings should be of minimum 1800 lines/mm.

**Wavelength range:-** 185 - 900 nm

**Flame system:-** Universal Finned Titanium 50mm burner suitable for air/acetylene and nitrous oxide/acetylene flame types supplied as standard, an inert fluoroplastic spray chamber incorporating an externally adjustable inert impact bead and flow spoiler, an inert over-pressure membrane should be housed in the rear of the spray chamber for maximum operator safety.

Automatic gas system using binary flow control and programmable array state logic for reliability

Fuel and oxidant flow rates should be software controllable, One spray chamber configuration and burner for all gas mixtures and sample types, automatic flame optimization should be provided. The burner height should be automatically optimized and there should be controls for the rotational and transverse position of the burner.

**Graphite Furnace System:-** The instrument should have choice of Deuterium and Zeeman/Self reversal background correction furnaces, deuterium and Zeeman/ Self Reversal furnace should also have capability to use Deuterium background correction, Furnace should be mounted directly in dedicated compartment, Furnace head should be in all graphite containment with end loaded contacts. Furnace auto-sampler should also be included with furnace head and power supply. Graphite furnace atomizer temperature upto 3000<sup>0</sup> C

The system should be capable enough for the detection of trace elements upto ppb levels in human blood or urine samples so the system should also be quoted with Automated Mercury Hydride system: automated Continuous Flow Vapour Generation. It should have high sensitivity for determination of Mercury and Metallic hydride forming elements such as Bi, As, Sb, Sn, Se, and Hg.

**Safety System:-** Safety interlocks for burner, liquid trap, pressure relief bung, flame shield, flame operation, mains power, gas pressure, safety reservoir, spray chamber should be there

The Instrument should be with **suitable software** to control the complete system and virus protected.

The system should be supplied with hollow cathode lamps for detection of minimum 12 elements (Arsenic, lead, mercury, cadmium, copper, zinc, iron, aluminium, chromium, nickel, selenium and cobalt). All required accessories mentioned below should be either quoted or should be supplied along with the system :-

1) Fume hood



- 2) Suitable UPS with half an hour back up for entire system
  - 3) Branded PC with laser jet printer
  - 4) Air acetylene , N<sub>2</sub>O and argon cylinder with regulator with preheater and oil free compressor
  - 5) Chiller for graphite furnace
  - 6) Graphite tubes 50 nos
  - 7) Standard solutions for the desired elements
- The instrument should be provided with 5 year warranty. Installation and training should be at the site of installation to the persons of concerned departments.  
Rates for AMC/CMC should be quoted separately for 5 years after the expiry of warranty period.  
Certificate of assurance should be provided that the spare parts are available for at least 10yrs.

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