## INVITATION FOR QUOTATION

**HSCC/PUR/KCGMC/Low Value/Medical College Items/2017/MC-May (6)**

**Dated: 06th June, 2017**

**To**

**All Bidders**

**Subject:** Invitation for Quotations for supply of Low Value Items for Blood Bank Department of Kalpana Chawla Medical College, Karnal, Haryana.

Dear Sirs,

1. HSCC (India) Ltd. for and on behalf of Director General, Medical Education & Research, Panchkula, Govt. of Haryana invites your most competitive quotation for the following goods of the respective Departments are details below:

   **Annexure - I (Including name of items, Specification and Quantity)**

   (A) Department of Blood Bank.

2. Quotation:

   2.1 The contract shall be for the full quantity as described above.
   2.2 Corrections, if any, shall be made by crossing out, initialling, dating and rewriting.
   2.3 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
   2.4 The unit price/ rate of the item should be clearly indicated in the tender. Rates /Prices quoted shall be Inclusive of all taxes, duties, forwarding, and insurance & transportation up to the destination, Kalpana Chawla Medical College – Karnal.

3. Each bidder shall submit only one quotation.

4. Evaluation of Quotations:

The Purchaser shall evaluate and compare the quotations determined to be substantially responsive i.e. which;

4.1 are properly signed; and
4.2 confirm to the terms and conditions, and specifications.
4.3 final considerations of equipments shall be based on the quality of equipments during demonstration / inspection.

5. The Quotations would be evaluated item wise.

6. Award of contract:

6.1 The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest rate for the item subject to quality of the items during demonstration / inspection.
6.2 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and cancel the bidding process and reject all quotations at any time prior to the issue of Purchase Order, without assigning any reason.

7. Delivery period shall be within **07** days from date of placement of order.

8. Payment shall be made only in Indian Rupees as follows:

**Satisfactory Acceptance and delivery - 100% of total cost**

100% Payment on submission of following documents (Duly signed & stamped at your end):-

- Copy of Purchase order.
- Consignee receipt in original issued by KCGMC/HSCC
- Invoice in favour of consignee/Director, KCGMC, Karnal through HSCC (I) Ltd
- Warranty Certificate in original.

9. All supplied items shall be under warranty ***as mentioned in the Technical Specification against each item*** from the date of successful acceptance and date of delivery of items ***& also quote for AMC / CMC separately year wise for the period mentioned in the Technical Specification. Wherever in Technical Specification the Warrantee is not mentioned/indicated, it should be for*** **12** months from the date of successful acceptance and date of delivery of items**.**

10. You are requested to provide your offer as follows:

| Sr. No. | DESCRIPTION | No. of ITEMS | Closing date & time for submission & receipt of tender | Date and time of Opening of Techno – Commercial Tenders |
|---|---|---|---|---|
| A | Equipments for Department of Blood Bank | 25 | 19.06.2017 at 14:00 | 19.06.2017 at 14:30 |

**NOTE:** (Under any unforeseen circumstances if the due date for submission of Tender is declared as holiday then the tender shall be submitted & opened on the next working day at the scheduled time).

The quotations will be opened in HSCC office, NOIDA as mentioned above in the presence of renderer or their authorised agents as they may choose to attend.

11. Information brochures/ Product catalogue, if any, must be accompanied with the quotation clearly indicating the model quoted for.

12. Sealed quotation to be submitted/ delivered at the address mentioned below:

**General Manager (Procurement)**
**HSCC (India) Ltd**.
**E- 6 (A), Sector -1**.
**NOIDA – 201 301.**

**THE COVER SHOULD BE SUPERSCRIBED WITH THE FOLLOWING:**

Reference to letter of enquiry.
Due date of opening.
Serial No of the Items.

13. Quoted amount should be in Indian Rupees only.

14. For all items, the Technical Evaluation Committee may opt for Demonstration of the items. The Committee may also ask for Demonstration / Inspection before supply / delivery of the items for quality assurance.

15. Insurance shall be arranged/borne by supplier.

**Note:** Please indicate the quotation reference no. (Given at the top of page 1 of this letter) and Serial No of the Items on the top of the envelope.

The details of various medical equipment shall be also made available at www.hsccltd.co.in, and modification/amendments etc, if any, shall only be notified on website only.

We look forward to receiving your quotation and thank you for your interest in this project.

General Manager (Procurement)

# I. DEPARTMENT OF BLOOD BANK

## LIST OF ITEMS & QUANTITIES

| Sr. No. | DESCRIPTION | QTY |
|---|---|---|
| A | ***Equipments for Department of Blood Bank*** | |
| 1 | Blood Bank Refrigerator (for storing kits, reagents and samples) | 3 |
| 2 | Serological Water Bath | 4 |
| 3 | Plasma Thawer (Water Based) | 1 |
| 4 | Plasma Thawer ( Dry system) | 2 |
| 5 | Refrigerator Cryoprecipitate / Refrigerated Water Bath | 1 |
| 6 | VDRL Shaker (Rotator) | 3 |
| 7 | Laminar Air Flow Bench (Bio Safety Cabinet) | 1 |
| 8 | Coagulation Analyzer (Semi) | 1 |
| 9 | Digital Analytical Balance | 2 |
| 10 | Hand Held (Portable) Battery Operated Tube Sealer | 4 |
| 11 | Dielectric Tube Sealer (Bench Top) | 4 |
| 12 | Manual Plasma Expresser (Plasma Separator) | 6 |
| 13 | Donor Couch | 6 |
| 14 | Blood collection monitor | 5 |
| 15 | ELISA plate shaker and incubator | 2 |
| 16 | Sealer, Stripper and Cutter for Blood Bag tubing | 4 |
| 17 | Digital pH Meter | 2 |
| 18 | Hot Air Oven | 2 |
| 19 | Vertical Autoclave | 2 |
| 20 | Domestic Refrigerator | 2 |
| 21 | Haemoglobin Estimation Device (Point of Care Testing) | 2 |
| 22 | Centrifuge Bucket Equalizer | 2 |
| 23 | Blood collection monitor with data management system (Bi-Directional) | 3 |
| 24 | Incubator | 2 |
| 25 | Glasswares | Various |

# TECHNICAL SPECIFICATIONS

## 1. Technical Specification of Blood Bank Refrigerator (for storing kits, reagents and samples)

1. Purpose of Equipment:
   A refrigerator for storing kits, reagents and samples
   Type : Vertical

2. Capacity: minimum 300 litres
3. Temperature range 2-8ºC with set temperature of 4 ºC
4. Microprocessor based temperature control
5. Wide LED display and alarm system for high and low temperature, power failure and door ajar
6. Hermetically sealed compressor with castor wheels facility for mobility
7. Factory calibrated digital sensor
8. Flicker free CF lamp/ LED light for internal view
9. Built in temperature chart recorder and controller
10. Inner surface made of medical grade stainless steel
11. Outer body of high grade polished galvanized steel
12. Automatic defrost mechanism, if possible
13. Energy efficient
14. Uniform cooling by forced air circulation using evaporator fan
15. Adjustable stainless steel slide out trays
16. Clear product visibility with toughened dual/triple glass door filled with PUF
17. Wireless data transmission to remote server, if possible
18. Electrical Characteristics: Input voltage: 220/240V, 50Hz. With voltage stabilizer

19. Certifications:

• Product Certification: European CE or US FDA / ISO 13845 certified
• Electrical Safety: Equipment meets electrical safety specifications such as that of IEC (Class I);
• Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
Performance certificates from reputed government institutes like PGIMER, CHD, AIIMS New Delhi or equivalent institutes.

Warranty : 2 years

AMC/CMC : Five years after expiry of warranty

## 2. Technical Specification of Serological Water Bath

| | |
|---|---|
| 1. | Temperature Range: $20^0$ C to $90^0$ C |
| 2. | LCD display of set/actual and over temperature safety values |
| 3. | Electronic sensing of low liquid levels with no sticky float valves. |
| 4. | Bath Volume: 15 to 20 liters. |
| 5. | Stainless steel chamber and cover with slot for thermometer<br><br>Power requirement : 200-230 volts, 50-60 HZ |
| 6. | Warranty period at least for two years. |
| 7. | AMC for Five years after the expiry of warranty. |
| 8. | Original literature of the quoted equipment should be attached. |
| 9. | List of users/installation having been done of such equipment in Blood Banks in the last five years, should be supplied |

## 3. Technical Specification of Plasma Thawer (Water Based)

- For uniform thawing of plasma bags at preset temperature of 37 ºC with temperature range of 37 ºC to 56 ºC with LED display and display resolution of 0.1 ºC
- Capacity 10-15 bags per run or per one cycle.
- System to prevent contamination of individual ports during thawing.
- Outer and inner chamber made of Stainless steel with a cover for preventing contamination.
- Should be water based system
- Continuous water circulation to facilitate optimum and uniform thawing of plasma by pumping mechanism and filter near water inlet tank
- Individual stainless steel SS304 compartments for holding of plasma bags.
- Input power supply: 230 ±10% V, 50 Hz with voltage stabilizer
- Audio-visual alarm system for temperature deviations and cycle over
- Temp controller: Microprocessor based digital controller.
- Outlet drainage facility for water change to be present
- Certification: European CE or US FDA certified;
- Quality Certification: ISO 13845 certified
- Electrical Safety: Equipment meets electrical safety specifications such as that of IEC (Class I) IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
- Performance certificates from reputed government institutes like PGIMER, CHD, AIIMS New Delhi or equivalent institutes.
- Warranty for 2 years
- CMC for 5 years after the completion of warranty period

## 4. Technical Specifications of Dry System Plasma Thawing Device (Plasma Defroster) and Blood Warmer:

1. Should be electronically regulated dry system for thawing of Plasma bags & also for warming of blood & Blood Products like Erythrocyte concentrate, cryopreserved preparation, cryo preserved stem cell or infusion solutions.
2. The heat transfer is through heat transfer fluid running through heat transfer cushions without getting in direct contact with the bags of blood & blood products
3. Mode of Operation: Provable & documentable thawing out & warming Process.
4. Should have pre set program to run for Plasma thawing ,warming of Blood, infusions, thawing of HPC's
5. Should have sensors for leakage detection in case of Plasma bag is getting leaked during the thawing process, fill level of the water tank.
6. Should have LCD display with audio visual Alarm system & touch pad key with the display of Temperature, Menu system, information about information of running program with count down timer, error message, output warnings
7. Should ensure uniformity of temperature throughout the operations with optical & acoustic signal after heating duration is complete
8. Should ensure thawing & warming of blood & blood products without direct contact with water to ensure contamination free operations
9. Should have option for attaching Printer, Barcode reader etc
10. The device should be light weight, portable with maximum weight of the device not beyond 20 kgs without the heating fluid
11. Should have corrosion free operation due to high quality synthetic body with rounded interiors to ensure easy cleaning process
12. Should have a transparent cover to ensure that the blood & plasma bags are visible during the heating & thawing process
13. The heat transfer fluid should flow through heat transfer cushions in a closed system to ensure contamination free operations.
14. There should be a filler opening to fill the device with heat transfer fluid to be changed once a year
15. It should be maintenance free, There should not be any requirement to change the heating fluid after even after leakage to allow the thawing fluid to be changed only after one year
16. Should be class 1 safety device with CE marking. The manufacturer should be certified for ISO 9001 & ISO 13485
17. Warranty for 2 years
18. AMC/CMC for 5 years after completion of warranty
19. Performance certificates from reputed Govt Institutes like PGIMER, CHD or AIIMS, New Delhi or equivalent Govt Institutes.

## 5. Technical Specification of Refrigerated Cryoprecipitate / Refrigerated Water Bath

1: Uniform thawing of plasma bags at preset temperature of 4 ºC with operating temperature range of 3.7ºC to 4.3 ºC
2: Continuous water circulation to facilitate optimum and uniform thawing of plasma. With liquid level sensor
3: Temperature range of controller : 3 ºC to 56 ºC. resolution of at least 0.1 ºC, LED display
4: Thawing mechanism : pumping mechanism by high capacity imported pumps. Temperature maintenance by heater and compressor
5: Capacity 10-15 bags per run or per one cycle with facility of castor wheels
6: System to prevent contamination of individual ports during thawing.
7: Microprocessor based controller for precise monitoring and controlling of temperature at 4 ºC.
8: Other requirements:

- Input power supply: 230 ±10% V,50 Hz, with voltage stabilizer .
- Audio-visual alarm system for temperature deviations and cycle over
- Temp controller: Microprocessor based digital controller.
- Stainless steel tank with cover for preventing contamination.
- Time taken for one Process: Not more than two hours for plasma bags store at -40 º C.
- Individual compartments for holding of plasma bags.
- Outlet drainage facility for water change to be present

9: Certification: European CE or US FDA certified;
10:Quality Certification: ISO 13845 certified

Electrical Safety: Equipment meets electrical safety specifications such as that of IEC (Class I) IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.

- Performance certificates from reputed government institutes like PGIMER, CHD, AIIMS New Delhi or equivalent institutes.

- Warranty for 2 years
- CMC for 5 years after the completion of warranty period

## 6. Technical Specification of VDRL Shaker (Rotator)

**1.** Used for rotating slides for VDRL testing

**2.** Digital display of time and speed

**3.** Minimum speed : 50-300 rpm.

**4.** Countdown timer : 0-99 minutes

**5.** Brushless motor for maintenance free operations

**6.** Adjustable rollers to fix sample of different sizes.

**7.** Power supply 220 volts, 50 cycles, single phase with complete in all respects.

**8.** Should comply all standard safety features.

**9.** It should be covered with two years warranty with spare. The firms should quote their rates for AMC/CMC for five years after expiry of warranty period of 2 years.

**10.** The firms should have good setup of installation in North India.

**11.** The tenderer should send list of reputed institutions where such type of equipment's installed by the firms.

## 7. Technical Specification of Laminar Air Flow Bench (Bio Safety Cabinet)

1- Microprocessor controlled Class-II (Type-A) Biological Safety Cabinet suitable for working with precious clinical samples liable to be contaminated with micro organisms assigned to biological safety level 1 to 3 while processing , providing full protection to personnel, specimens and laboratory environment.
2- Should conform to NSF international standard 49 (1992)
3- HEPA/ULPA filters on inflow as well as exhaust with an efficacy of 99.999% for equal or more than 0.3µ size particles (DOP test certificate to be produced).
4- 30% exhaust air via high performance exhaust filter and 70% air should be re-circulated.
5- Dimension of work Chamber in the range of 1100-1300mm (length) 500-700 mm (width) and 550-750mm (Height).
6- Main body made of up rust proof stainless steel.
7- Safe and ergonomic design for movement in all directions in the chamber (Comfort for users while working).
8- Sliding front window, electrically operated , made up of safety (UV) glass, completely tight sealed while closed for complete protection against contamination and fumigation. Provision for manual operation of sliding front window should also be present.
9- Independent fan for impulsion and exhaust.
10- Work table should be fitted with white lamp for local illumination, self operating UV germicidal light (15W) on window opening, static pressure monometer and exhaust system.
11- The unit should be fitted with pre filter and HEPA filters.
12- Display for following parameters:
    A. Optical and acoustic notification of alarms.
        i. Low exhaust flow
        ii. Low down flow air velocity
        iii. Impulsion and exhaust fan malfunction
    B. Cabinet Information (with digital Display)
        i. Exhaust air flow in $m^3/hr$
        ii. Laminar flow air velocity in m/sec
        iii. Cabinet temperature in degree Celsius
        iv. Elapsed hour meter for UV.
        v. HEPA filter last changed date
13- Stainless steel pan under working surface to allow safe collection of spilled fluid.
14- Low noise level ≤65 dBA
15- Service port with stopcock at both end of gas.
16- Minimum one electronic socket inside the chamber.
17- Working aperture 200mm.
18- Cabinet should be mounted on compatible wheel trolley/ stand.
19- Power supply of 220 v, 50Hz.
20- Essential accessories:
    i. One inflow HEPA /ULPA filter and one exhaust HEPA /ULPA( Original and compatible to the cabinet, DOP tested) should be supplied in addition by the firm with cabinet as spare accessories.
    ii. Should provide one UPS of required KvA to carry out uninterrupted for 30 minutes.
21- Other terms:
    i. Installation should be on turnkey basis
    ii. The price of HEPA/ULPA filter should be quoted separately.

22- Warranty:
    i. System- Two years
    ii. Compressor- Seven years
23- CMC for Five years after expiry of two years warranty period including replacement of each and every part of the papers.
24- Compatible stabilizer with same warranty as for the main equipment.
25- The firm should submit a track record / service/ performance record certificate from the well known Govt. institutions (AIIMS, New Delhi, PGIMER, Chandigarh etc.) of having supplied such equipment within last Five years.
26- USFDA or council of Europe Certification of Technology in Medical refrigeration
27- Firm should submit an original literature of the model quoted.

## 8. Technical Specification of Coagulation Analyzer (Semi)

1- Semi Automated Coagulation Analyzer with build in printer
2- With at least four measuring channels and at least 16 incubation blocks.
3- Applicable for all clotting assays i.e, PT, PTTK, FIBRINOGEN,TT and Factor assays.
4- Based on electromagnetic change in viscosity clot detection or change in OD mode.
5- Should have microprocessor based control systems.
6- Programmable for at least , PT, PTTK, FIBRINOGEN,TT and Coagulation Factor assays and should be able to generate standard curve for factor assays.
7- Liquid crystal display of results.
8- Built in analyzer to give result in sec/INR/%age/mg/dl.
9- Automatic start or stop with minimum lowest read out within 10 seconds.
10- Cable connected and calibrated pipette with variable volumes.
11- Should be an open system.
12- Should work on 240±20 volts.
13- UPS for half an hours backup supply.
14- Warranty for 2 years.
15- AMC for 5 years after expiry of warranty.
16- All essential consumables must be mentioned and quoted as rate per tests and rate may be frozen for next 5 years.
17- Consumables for at least 200 tests for FIBRINOGEN, and Factor VIII assays should be quoted along with the equipment.
18- Should be FDA/CE approved product.
19- The firm should submit a track record / service/ performance record certificate from the well known Govt. institutions (AIIMS, New Delhi, PGIMER, Chandigarh etc.) of having supplied such equipment within last Five years.

## 9. Technical Specification of Digital Analytical Balance

1. Capacity: 300 gm
2. Readability: 0.01 gram or mg
3. Linearity: Plus minus 0.01gms.
4. Reproducibility: Plus / Minus 0.001 gm
5. Stainless steel pan
6. The Balance should be supplied with graft shield
7. Power supply : 220/240 volts, 50Hz, Single phase
8. The equipment should be capable of working at 0 to 40 degree Celsius and 15% and 95% of relative humidity.
9. Complete technical specifications, illustrative technical literature/ leaflet etc shall be enclosed along with the offer indicating the model quoted.
10. Warranty for Two years.
11. AMC for 5 years after expiry of warranty.
12. Should be FDA/ CE/BIS approved product.

## 10. Technical Specification for Hand Held (Portable) Battery Operated Tube Sealer

| | |
|---|---|
| 1 | Should be portable, light weight (Hand unit and battery weight) less than 3kg, not bench top type. |
| 2 | Should be able to do at least minimum of 500 quality seals with one fully charged battery. The sealing time should not be more than 2 seconds. Tear seal feature to make segments that can be separated by hand. |
| 3 | Battery should have visual indication showing charge status of battery at any given time. Sealing trigger should be automatic (on sensing tube in the slot). No warm up time is required. |
| 4 | Should have visual indication on sealing handle as well as battery, when the sealing process is going on. |
| 5 | Should be able to do sealing of all types and sizes of tubes of upto 5mm outer diameter without causing Hemolysis. |
| 6 | Should have a sensing system, to adapt to the sealing time depending upon the thickness and quality of PVC tube. |
| 7 | Should have a carrying case for battery for ease of operations during outdoor collections |
| 8 | Sealing should be based on radiofrequency mode. |
| 9 | Charger should be compatible with Input voltage: 220-240V/ 50 Hz Single Phase AC |
| 10 | Battery should be rechargeable. |
| 11 | Warranty : Two years |
| 12 | AMC/CMC for Five years after two years warranty period including replacement of each and every defective part of the equipment. |
| 13 | Users list/installation of having supplied such equipment in AIIMS/PGI or any other govt. Institutions within last Five years. |
| 14 | • Manufacturing should be compliant with ISO 13485.<br>• Should be compliant with European CE Class IIA and/or US FDA<br>• Equipment must meet electrical safety specifications of IEC 60601. |

## 11. Technical Specification of Dielectric Tube Sealer (Bench Top)

1. Blood Bag Tube Sealer is a compact equipment to seal the Blood Bag pilot tubing.
2. The system should be heavy duty and be able to seal the blood bag PVC tubings quickly and effectively.
3. System should gently seal the tubing with no hemolysis using radio frequency.
4. Should be for bench-top use.
5. The sealing time should not be more than 3 seconds.
6. Capable of sealing max tube diameter of 6mm
7. Sealing trigger should be automatic.
8. Should also have extended portable hand unit Sealing hand should be with coaxial cable of 1.5-2.0 meter.
9. Should have indication lamps for "Sealing Process" on handle as well as main unit.
10. No warm-up time should be required.
11. Should ensure easy separation of tube segments after the sealing
12. System should run on both mains and battery (more than 10hrs. back up and charger).
13. Power input: 220-240V/ 50 Hz AC Single phase or 380-400V AC 50 Hz Three phase fitted with appropriate Indian plugs and sockets.
14. If possible, suitable Auto voltage corrector with spike protector should be available.
15. Electrodes should be well protected by a cover and easy to clean
16. Certifications:
    Product Certification: European CE or US FDA certified;
    Quality Certification: ISO 13485 certified
    Electrical Safety: Equipment meets electrical safety specifications such as that of IEC (Class I) Class II A or US FDA certified / EN61010
17. Warranty for Two years
18. AMC for 5 years after completion of warranty
19. The firm should submit a track record / service/ performance record certificate from the well known Govt. institutions (AIIMS, New Delhi, PGIMER, Chandigarh etc.) of having supplied such equipment within last Five years.

## 12. Technical Specification of Manual Plasma Expresser (Plasma Separator)

| | |
|---|---|
| 1 | Should be suitable to extract blood components (Plasma and platelets) from all types of Blood Bags system available in the market. |
| 2 | Mode of operation: Manual. |
| 3 | Front panel should be spring loaded to exert uniform pressure on plastic blood bags for transfer of components. |
| 4 | Compression plate should be made of durable transparent acrylic material. |
| 5 | Metal used for equipment should be stainless steel, non-corrosive and can be cleaned with disinfectant. |
| 6 | Base and vertical portion of the equipment body should be powder coated and sturdy enough to hold the blood bags in vertical position. |
| 7 | Warranty for Two years. |
| 8 | AMC should be for Five years after Two years warranty period. |
| 9 | Should submit the original Technical Literature. |
| 10. | European CE / US FDA certified with ISO13485 quality certification |

## 13. Technical Specification of Donor Couch

1. Description of Function:

- Blood Donor Couch is a completely automatic enveloping, variable tilt Chair especially designed to make blood withdrawals easier, safe and functional.

2. Operational Requirements:

- Provides a comfortable position for the donor.
- Variable positioning for either arm with comfortably wide armrests.
- Armrests have swinging out as well as up and down moving facility.
- Reclining and upright body positions with a smooth shifting to any Position.
- Both sides have supporting brackets.
- Drawers provided for the upkeep of equipment & consumables.
- If a vasovagal attack occurs the Donor's head needs to be lowered immediately and his legs lifted above his heart level so that blood can flow back to the brain and other vital organs.

3. Technical Specifications of Blood Donor couch

- Comfortable chair type with soft padding for cushioning and rexin
- Seat, back rest and leg rest size designed for donor comfort. It should have step less electric remote controlled height adjustment.
- Adjustable arm rest for donor's comfort and phlebotomist friendly
- Electrically operated
- Lifting capacity - Approx
- 150 kg
- Lockable castors for easy mobility
- Storage Drawers for storing consumables & Blood Collection Monitors
- UP/DOWN control
- Preferable to have inbuilt trays & stands for keeping all blood collection accessories.
- Should have interface for blood collection monitor

4. System Configuration Accessories, spares and consumables required with the equipment.

- Dust Cover -01
- Power cable -01
- Additional Arm Rests (pair) -01 pair
- Remote control -01

5. Certifications:

- Product Certification: European CE/ US FDA certified;
- Quality Certification: ISO certified
- Electrical Safety: Equipment meets electrical safety specifications such as that of IEC (Class I)

6. Power Supply

- Power input: 220-240V/ 50 Hz AC Single phase or 380-400V AC 50 Hz Three phase fitted with appropriate Indian plugs and sockets.
- Warranty for 2 years
- AMC for 5 years after completion of warranty
- The firm should submit a track record / service/ performance record certificate from the well known Govt. institutions (AIIMS, New Delhi, PGIMER, Chandigarh etc.) of having supplied such equipment within last five years.

### 14. Technical Specification of Blood Mixer & Collector

1. The system is used to collect blood from the donors . It is meant for both stationary and mobile use.
2. Volume Setting: Pre-selection of volume to be collected. Tarring of bag volume before collection, preferably automatic. Tarring range: 0 - 600 g. Automatic storage and recall of set volume.
3. LED indication on commencement of collection.
4. LED indication and audible alarm at the end of collection
5. Indication of time taken for collection.
6. Indication of blood flow with audio alarm when blood flow is higher than 180ml/minute or lower than 20ml/minute than desired.
7. Continuous display of set volume, collected volume, process status, flow and time during collection.
8. Automatic clamping at termination of preset volume collection
9. Automatic release of bag when lifted.
10. Continuous agitation of blood bags during collection: 12-16 rpm.
11. Accuracy : ±2% of programmed weight
12. Easily detachable blood collection tray for cleaning purpose.
13. Should be easy to calibrate .
14. Equipment carry case for BCM should be provided for portability.
15. Should operate on mains as well as rechargeable battery. On battery it should operate for a minimum of 5-8 hours.
16. Power input to be 220-240VAC, 50Hz,/440 V 3 Phase as appropriate fitted with Indian plug;
17. Battery operated option should be available.
18. Product Certification: European CE or US FDA certified
19. Quality Certification: ISO certified
20. Electrical Safety: Equipment meets electrical safety specifications such as that of IEC (Class I) or Class II type-B device to protect against electric shock. Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
21. Warranty for 2 years
22. AMC for 5 years after completion of warranty
23. The firm should submit a track record / service/ performance record certificate from the well known Govt. institutions (AIIMS, New Delhi, PGIMER, Chandigarh etc.) of having supplied such equipment within last five years.

## 15. Technical Specification of Elisa plate shaker and incubator

1. Speed setting : 300-1800rpm
2. Orbital diameter : 1-2mm
3. Timer setting: 99 minutes to 24 hours
4. Display : LED for time , speed and temperature
5. Power supply : 110-240 volts
6. Capacity : 3-6 microplates
7. Incubator programmable temperature range : 14-40 c
8. Resolution; 0.1 c
9. Incubation time: at least 24 hours
10. Warranty for 2 years
11. AMC for 5 years after warranty expiry

## 16. Technical Specification of Sealer, Stripper and Cutter for Blood Bag tubing

| | |
|---|---|
| 1 | Feature:<br>For sealing, stripping and cutting the blood bag tubing. Made of stainless steel |
| 2 | Each sealer, stripper and cutter should be supplied with 50000 (fifty thousand aluminium clips) |
| 3 | The firm shall positively submit printed illustrated technical literature/ leaflets indicating the model quoted by them. If quoted model is a modified version of their any standard product that also be indicated in the offer. European CE certified. ISO 13485 certified. |

## 17. Technical Specification of Digital pH Meter

1- Should have a measuring range of 0 to 14 with a resolution of 0.01 pH
2- Should have a good repeatability 10.01pH and stability.
3- Should have automatic temperature compensation.
4- Should run 230v ±10 volt, 50Hz, AC
5- Should be able to read pH at low volume(Approx. 1 ml)
6- Should have digital LED display.
7- Should have a warranty of 2 years.
8- AMC for 5 years after expiry of warranty.
9- Original literature of user manual should be provided.
10- Should be FDA/ CE/BIS approved product.

## 18. Technical Specification of Hot Air Oven

1. 2 to 4 shelves, dimensions - minimum 24”x 24” x24”,
2. Single door, microprocessor controlled.
3. Double walled.
4. Outside made up of mild steel with paint.
5. Inside made up of Stainless Steel.
6. The double walled door with asbestos gasket lining is fitted on heavy brass cast , chromium plate hinges and has a chromium plated latch type lock.
7. Temperature controlled from 50°c to 250°C by electronic digital temperature indicator cum controller.
8. Warranty for 2 years

## 19. Technical Specification of Vertical Autoclave

Vertical Jacketed AUTOCLAVE

- **Description of Function**
  - Autoclaves are required for sterilizing an object in high temperature and high-pressure steam.
- **Operational Requirements**
  - Microprocessor based electrically heated vertical steam sterilizer
- **Technical Specifications**
  - Pressure range 5- 40psi, adjustable , temper proof and touch sensitive control panel
  - Pressure control switch with Digital display of Pressure, Temperature and time.
  - Outer and inner chamber made of thick stainless steel, argon welded, ground and polished
  - Inner chamber made of at least 18 SWG SS sheet with minimum chamber capacity of 100 liters.
  - Stainless steel Steam jacket insulated with high grade glass wool
  - Water level indicator
  - Joint less gasket
  - Water inlet and drain valves
  - With standard safety features
- Warranty for 2 years
- AMC for 5 years after completion of warranty
- Additional accessories – (to be quoted separately): gaskets (2), stainless steel perforated drums (4), heating coils (2).
- **Power Supply**
  - Power input to be 220-240VAC, 50Hz
- **Standards and Safety**
  - Electrical safety conforms to standards for electrical safety IEC-60601IS-13450
  - Should be FDA or CE or ISI approved product
  - Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities. For indigenous items: BIS & CPCB Standards.

## 20. Technical Specification of Domestic Refrigerator

1. Capacity (Litre): 250-300
2. Refrigerant: Eco-friendly Refrigerant
3. Temperature Control: Knob Type
4. Compressor: Smart Inverter Compressor
5. Works without stabilizer: 100V-290V LVS
6. With **Freezer Compartment**

## 21. Technical Specification of Haemoglobin Estimation Device (Point of Care Testing)

1. At least dual wavelength device for Hb measurement of capillary, venous or arterial whole blood
2. Should have color LCD display
3. Should be Cuvette based , with operating range from 10-40° C
4. Power supply : 100-240volts, 50-60hz.
5. Measurement range : 0-25.5g/dl, 0-15.9mmol/L
6. Should be able to display results in less than 3 seconds
7. Weight of the device should be less than 1 kg, with batteries installed
8. Shelf life of Cuvettes shall be at least 2 years
9. Should be able to connect to printer
10. Should be factory calibrated against ICSH reference method
11. Blood based liquid controls should be available
12. Should comply IEC-60950-1/ IEC61010
13. Warranty -2 years.

## 22. Technical Specification of Centrifuge Bucket Equalizer

1. Microprocessor controlled device designed to equalize the counter facing buckets of refrigerated centrifuge simultaneously
2. External body material : non corrosive and non magnetic
3. Optimum balancing with accuracy and precision
4. Accuracy : ±0.5 gm/±0.5ml
5. Deviations : ±0.01%
6. Conversion of weight to volume for all blood components
7. Independent tarring for both the pans
8. Audiovisual alarm on equalization and error reporting
9. US FDA/ European CE certified
10. Warranty-2 years

## 23. Technical specification of Blood collection monitor with recording and bi-directional data communication and management system

1. Function: Internally Powered and battery operated blood collection device/mixer for collection of blood and uniform mixing of Anticoagulant to the blood with a facility to store data, also should have facility for future protocols like bar code reader, central monitoring, data management systems etc
2. WEIGHT: less than 10 kg
3. Voltage input: AC100V-AC 240V, the equipment functioning should not be affected by voltage fluctuation
4. Range of balance: 0-1g
5. Weighing accuracy of the balance: +/- 3G for 0-500g

6. Volume setting : Facility to set desired volumes
7. Agitation : 12+/-2 rpm, Adjustable
8. Display info: Should be able to display step by step instruction for collection, flow rate, status of donation, time elapsed, flow rate, error msg etc
9. Display range of flow rate: 0-999 Ml/min
10. Display range for volume delivered: 0-650ml
11. Display range of donation time: 00:00-30:00 (mm:ss)
12. Alarms and indication: Should have audio visual alarm system for high flow, low flow, battery malfunction, clamp malfunction, system alarm, memory full alarm, network connection error etc, visual alarms should be visible from distance such as optical anteena showing different colors for different alarms
13. User interface: 145mm(5.7) color graphic touch screen display with context dependent frames for graphical user interface
14. Input: Touch screen or should have remote control facility for user input
15. Operating conditions: Ambient temperature: 15C-30C. Relative humidity:30%-70%
16. Communication ports: Communication ports for USB,ETHERNET or wifi
17. Battery backup: 90-100 collection once fully charged
18. Clamping: Should be able to accommodate all tube sizes, Automatic clamping when desired volume is reached and should be able to be monitored from user interface in case of emergency to clamp manually
19. Tray: Tray should be easly removable for cleaning purpose and should have integrated filter holder facility
20. Memory: Should have data storage and data retrieval facility
21. CERTIFICATION: European CE certified Class IIB
22. Warranty for 2 years, CMC for 5 years after warranty period expiry.

## 24. Technical Specification of Dry Incubator

1. **Chamber Capacity: 30x30x30cms.**
2. **Electric Connection:** 220V, 50HZ
3. **Temperature Range:** 30oC to 80oC

**A) Cabinet:**

1. Triple walled, inside wall made of stainless steel 304 grade and outside made of steel painted with epoxy powder coating.
2. Interior equipped with lighting arrangement
3. Cabinet with a quick locking facility and heat resistant silicon gasket**.**
4. Insulation of at least 75mm of ceramic/mineral wool to avoid heat loss
5. Unit equipped with suitable safety thermostats.
6. Mechanism for uniform incubation be in built without forced air convection.

B) **Shelves:**

Minimum two adjustable perforated shelves fabricated from 304 grade SS sheets minimum 1.2 mm thick with adjustable tray spacing.

**C) Control Panel:**

1. Control panel housed with necessary controls viz. temperature controller, timer, on off switches and indicator lamp to be provided.
2. Digital LED display to show operational parameters.

**D) Warranty and CMC:**

1. Warranty: Two years from the date of installation.
2. Comprehensive Maintenance Contract (CMC) for five years after warranty period and shall include all spare parts and consumables and regular servicing and calibration of the equipment.
3. The equipment should be ISI certified and the manufacturer will submit the certificate for the same.
4. Attach original literature of the quoted model with the quotation.

## 25. Technical Specification of Glassware & Other Consumables

| SR NO | ITEMS | MAKE | SIZE | QUANTITY |
|---|---|---|---|---|
| ***A*** | ***GLASSWARE*** | | | |
| | | | | |
| 1 | PLAIN MICROSCOPIC GLASS SLIDES | Borosil or Pyrex or Corning or Supertek or Fisher | | 10000 piece |
| 2 | TEST TUBES ( 12 * 75MM) | | | 10000 piece |
| 3 | GLASS BEAKERS | | 250ML | 10 piece |
| | | | 500ML | 10 piece |
| 4 | MEASURING CYLINDER | | 250ML | 5 piece |
| | | | | |
| 5 | PETRI DISH | | | 10 piece |
| 6 | ROUND BOTTOM FLASK | | 1000ML | 2 piece |
| 7 | PASTERUR PIPETTE WITH TEAT | | 1000ML | 200 piece |
| 8 | HYDROMETR (1000-2000 SPECIFIC GRAVITY) | | | 2 |
| 9 | CLINICAL THERMOMETER FOR PATIENTS | | | 5 |
| 10 | THERMOMETER FOR LAB | | | 5 |
| | | | | |
| ***B*** | ***PLASTIC WARE*** | | | |
| | | | | |
| 1 | Vacutainers – EDTA | Becton Dickenson (BD) or Polymed | | 10000 |
| | Vacutainers – PLAIN | | | 10000 |
| | Vacutainers – CPDA | | | 5000 |
| | | | | |
| 2 | MICROTIPS WITH RACKS( Sterile/ Autoclavable) | TARSON or Eppendrof or Genexy or Corning or Abdos | 0.5-500µL | 10000 |
| | | | 200-1000µL | 10000 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| 3 | Plastic Dropper | | | 200 |
| 4 | Plastic Racks | | SMALL | 20 |
| | | | BIG | 10 |
| | | | | |
| 5 | Plastic Boxes For Cotton | | | 20 |

| SR NO | ITEMS | MAKE | SIZE | QUANTITY |
|---|---|---|---|---|
| *C* | *MISCELLANEOUS ITEMS* | | | |
| 1 | Copper sulphate powder | | | 5 |
| 2 | Litmus paper strips | | | 10 |
| 3 | Sphygmomanometer - Aneroid | | | 10 |
| | Sphygmomanometer - Automatic | | | 5 |
| | | | | |
| 4 | Lancets (sterile/ autoclavable) | | | 10000 |
| 5 | Disposable syringe | Dispovan or Becton Dickenson (BD) | 5ml | 100 |
| | | | 10ml | 100 |
| 6 | Leucoplast | | | 200 |
| 7 | Tissue paper roll | | | 100 |
| 8 | Blotting sheets | | | 1000 |
| 9 | Washing brush | | | 10 |
| 10 | Sodium hypochlorite | | 5 litre can | 20 |
| 11 | Distilled water | | 5 litre can | 20 |
| 12 | Donor weighing scale | | | 10 |
| 13 | Blood bag weighing scale | | | 20 |
| 14 | Trays | | Big | 10 |
| 15 | Blood tube mixer/ roller | | | 1 |
| 16 | Stop watch/ timer for ELISA | | | 5 |
| 17 | Hand gloves | | 6/6.5/7/7/5 | 50 piece each |
| 18 | Rh view box | | | 3 |
| 19 | Needle destroyer | | | 3 |
| 20 | Leishman stain | | | 5 |

**A) Following should be read along with the above mentioned Technical Specification for Glassware:**

**1. *GLASSWARE DETAILS*:**

**Glassware Quality:**
All glassware items are made from borosilicate 3.3 low expansion glass tube.

**Salient Features of Glassware Items :**
- Uniform wall thickness
- Accuracy in calibration, as per Certificates – A or B types as required
- Thermal shock resistant
- Enhanced Mechanical Strength
- Chemically resistant to attack from acids organic solvent.

**Certifications :**
Principal Manufacturer should have valid NABL, CE, GMP, ISO 9001 and ISO 13000 quality Certificates.