Notice Inviting e-Tender

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Procurement of Medical Items for the Blood Centres at Hospitals and Medical Colleges of Govt. of West Bengal
(Submission of Bid through *online*)

Bid Reference No.: WBMSCL/NIT-193/2024	**Dated-11.03.2024**

Amendment-II

REVISED TECHNICAL SPECIFICATION
ITEM-15

REFRIGERATED CENTRIFUGE (CRYO CENTRIFUGE)

Purpose: For separation of blood components like packed cells, platelet rich plasma, platelet concentrate, Plasma, Cryoprecipitate etc.

1. TECHNICAL CHARACTERISTICS:

1.1. Refrigerant Centrifuge with CFC free refrigerant.

1.1.1. Construction:

- Microprocessor controlled system to make operation automatic {displaying RPM and RCF (at least 700-5000g) and acceleration & deceleration & temperature}.
- **Programmable memory**: Memory with tamper proof facility.
- **Stainless steel chamber**: Should be of easy to clean, corrosion resistant type.
  The chamber preferably should come with provision of both drain and condensed water collection container.

The chamber should be supplied with Removable plastic cups (2 sets of 12 plastic cups) to hold single/double/triple/quadruple/quintuple (soft filter) blood bags with partition in every bucket.

- Insert with hook adapter to spin buffy coat or small volume of blood and balancing weights for inserts. Must be equipped with automatic lid lock system which means the lid cannot be opened manually and / or by any internal force during operation to prevent accidental incident.
- Speed variation: Microprocessor controlled rotor speed to within 10 rpm of set value.
- Adjustable acceleration and deceleration profiles & digital display must be available.
- Microprocessor controlled chamber temperature within ±1 deg C of set temperature regardless of the centrifuge speed.
- Programmable time: 0-99 minutes or more with minimum resolution of 1 minute.
- Digital display of temperature, speed and time with full resolution.
- There should be Motor imbalance detection system and the Centrifuge should immediately shut down if such imbalance is detected. Should incorporate alarms for imbalance detection, lid interlock, over temperature, rotor over speed.
- Temperature should reach 4 deg C with full load (accuracy ±0.5 deg C)
- Emergency lid lock open facility in case of power failure

1.2. **Capacity:** Swing bucket blood bank rotor: With metal buckets, 6 x 2000mL, with or without wind shielded, Suitable adaptors for 12 blood bags of 350mL & 450mL with soft filter, at-least 4 set of volume and weight compensate for maintenance of quality of the components.

1.3. **Settings:** Manual

1.4. **User's Interface:** Manual

1.5. **Software and/or standard of communication:** required for the documentation purposes

1.6. Spillage Management Protocol should be supplied with the machine

PHYSICAL CHARACTERISTICS:

1.7. **Noise (in dBA):** Noise factor should not exceed 60 decibels

2. **ENERGY SOURCE (electricity, UPS, solar gas, water, CO_2....):**

2.1. **Power Requirements:** Input voltage single phase / three phase along with a servo voltage stabilizer of appropriate

rating with input voltage of 110 to 280 V / 200 to 400 V, 50 Hz and output voltage 220 V ±10 and high low voltage auto cut.

3. **ACCESSORIES, SPARE PARTS, CONSUMABLES:**

3.1. **Accessories & spare parts:** Complete with comprehensive set of spare parts. Volume & weight compensate accessories should be provided in adequate quantity to run full capacity.

4. **ENVIRONMENTAL & DEPARTMENTAL CONSIDERATIONS):**

4.1. **Atmosphere / Ambiance (air conditioning, humidity, dust…):** Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%

4.2. Additional requirement: All Items should specify design qualifications, installation qualifications, operational qualification and performance qualifications; validation and calibration reports should have traceability towards applicable national/ international standards. Performance, efficiency, other factors such as distortions etc as applicable be also furnished. Complete construction details in respect of manual specification, thickness, finish etc are to be furnished.

4.3. Facility to remove the blood bags during power failure / emergency.

4.4. Provision for calibration window during intra-operative phase.

5. **STANDARDS & SAFETY:**

5.1. **Product Certification:**

5.2. European CE (4 digit notified body)/ US FDA / BIS certified

5.3. All the bidders or vendors to submit a validation / QC / process control data related to the components prepared on the quoted model at the time of bid submission.

i) FFP: PT, APTT, Fibrinogen

ii) Platelet concentrates: Platelet count / yield, WBC count, RBC count, Hct. (Both in PRP / PC & Buffy coat)

iii) Conc. RBC: Hct, Hb, Product volume, WBC count.

6. **WARRANTY & MAINTENANCE:**

6.1. **Warranty:** 2 years

**Note Applicable for item no. 1 to 22:

1. **Installation Quality (IQ), Operational Quality (OQ), Performance Quality (PQ) certificate to be submitted during installation of the machine.**

2. **3rd party calibration certification should be also be provided during installation**