



## Notice Inviting e-Tender

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**Supply and Commissioning of Medical equipment for 02 (two) new Government**  
**Medical College & Hospital, Dept. Of Microbiology**  
(Submission of Bid through *online*)

**Bid Reference No.: WBMSCL/NIT-152/2023**

**Dated- 31.03.2023**

### **AMENDMENT-I**

### **REVISED TECHNICAL SPECIFICATION**

<b>Item No.</b>	<b>Item Name</b>	<b>Technical Specification</b>
Item No. 1	Autoclave	<ul style="list-style-type: none"><li>• High Pressure, electrically heated vertical steam sterilizer is used for sterilization of surgical instruments, dressing material, lined, rubber, plastic material by means of saturated steam under pressure of 15 to 20 psi (adjustable). A part from health services it is also used in scientific research institutions and universities.</li><li>• Sturdy double walled construction with boiler made of stainless steel of SS-304 sheet is easy to operate. Outer shell is made of Stainless Steel. Stainless steel Bucket with handle with perforated wall. The boiler and outer shell is provided with air insulation: Lid is made of stainless steel plate and is tightened around by wing nuts. Moulded, joint less gaskets are made of Neoprene rubber: Sterilizer is hydraulically tested up to 40 psi.</li><li>• Fitted with water level arrangements to indicate water position inside the boiler, pressure gauge, Air/steam release cock. Loaded safety Valve which can be set at any selected point from 10 psi. to 20 psi. +- 3 psi. and drain, ISI marked immersion heating element (one 1KW) heats the water and steam to</li></ul>

Item No.	Item Name	Technical Specification
		desired temperature and pressure. <ul style="list-style-type: none"> <li>• Size: Dia X Depth = 400 mm X 600mm</li> <li>• <b>Certification: CE / EC / UK Cert / US FDA / BIS</b></li> </ul>
Item No. 2	Biosafety cabinet Type B2	Vertical laminar flow air to create ISO-Class III (100% exhaust) work area <b>Appropriate ducting should be done at the time of the installation.</b> Single piece wall of SS, preferably SS- 304 Single piece work tray of SS, preferably SS-304. Side walls are surrounded by negative pressure. <b>ULPA</b> filter (efficacy 99.999%. Arrests particles S 0.3micron) – 2 (both down flow and exhaust). UV light arrangement with a UV meter. Pressure gauge (dial type). Size : WxDx H = 1000mm x 600 mm x 650 mm ( approx) Air flow velocity: Inflow 0.5 M/S, Outflow 0.3 M/S 1(). Heavy Duty Castor wheels Particle count should be done at the time of installation <b>Certification: CE / EC / UK Cert / US FDA / BIS</b>
Item No. 3	BOD Incubator	Parameter / feature threshold limit / Range of ambient temperature in ° c : 10 to 35 <b>Capacity: 300 ltr. or more</b> Operating /producible/ achievable temperature range in BOD incubator in ° c : : 0- <b>60</b> Range of temperature sensitivity in ° c : ± 0.1 Range of temperature uniformity in ° c : ± 0.5 Maximum heating rate in ° c/ min: 5 or less minimum heating rate in ° c/ hour: 2 or more Maximum cooling rate in ° c/ min: 5 or less Minimum cooling rate in ° c/ hour: 2 or more Air circulation forced type with fans: 2 or more inner chamber volume in cubic ft: 2 or more Inner chamber shelves: 4 or more Supply voltage/ frequency: 220 v/50 hz Digital temperature controller device ( <b>LED</b> ) Profile with different ramp up ramp down and soak features profile containing more than 8 feed points Independent overheat protection system installed with separate temperature sensor and buzzer alarm, <b>Inner chamber wall with insulated stainless steel (ss 304), BOD outer wall rust and corrosion proof lock and Calibration and operating manual Cfc free refrigeration system.</b> <b>Certification: CE / EC / UK Cert / US FDA / BIS</b>
Item - 4	Co2 Incubator	<ol style="list-style-type: none"> <li>1. Chamber volume should be at least 160 lts with TC CO<sub>2</sub> Sensor</li> <li>2. Relative Humidity (rH): □92% at 37°C</li> <li>3. CO2 management               <ul style="list-style-type: none"> <li>• Range: 1-20% or better</li> <li>• Control: ±0.2% or better</li> </ul> </li> <li>4. Temperature</li> </ol>

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		<ul style="list-style-type: none"> <li>• Range: 4°C above ambient to at least 50°C or better.</li> <li>• Control: ±0.2°C or better</li> <li>• Uniformity: less than ±0.3°C</li> </ul> <ol style="list-style-type: none"> <li>5. Rapid Recovery of all critical parameters as follows: <ul style="list-style-type: none"> <li>• Temperature recovery: in&lt;5 mins</li> <li>• %RH recovery: &lt;10 min</li> <li>• % CO2 recovery: &lt;6 min</li> </ul> </li> <li>6. The incubator should be equipped HEPA air filtration system that achieves ISO class 5 chamber air quality in less than 5 min of door opening and filters entire chamber volume every 60 seconds or less</li> <li>7. Systemic sterilization capability: 180 degree C (12 hours or less) High Temperature Sterilization without user intervention.</li> <li>8. Inbuilt and directly heated water pan with drainage valve in front.</li> <li>9. Pre-Humidification of gases (CO<sub>2</sub>, N<sub>2</sub> etc.) before they reach the cells/culture.</li> <li>10. Temperature probe and gas sensors should be located inside the chamber to allow precise monitoring of conditions as the cells.</li> <li>11. Dual temperature probe for over temperature protection</li> <li>12. Interior chamber: electro-polished stainless steel</li> <li>13. Exterior chamber: powder coated steel with minimum thickness.</li> <li>14. Access port: 40-45 mm diameter <ul style="list-style-type: none"> <li>• Number of shelves: at least 3</li> <li>• Max load per shelve / total load at least 10/30 kg</li> <li>• Input voltage 230-240V, 50/60Hz</li> </ul> </li> <li>15. The CO2 Incubator should feature an alarm to alert user when humidification water refill is required.</li> <li>16. Should have In-chamber fan which gently and evenly distributes clean, humidification air throughout the chamber.</li> <li>17. The unit should incorporate touch screen user interface, a bright and easy to read control module display.</li> <li>18. The unit should have data logging facility and data capture through USB port.</li> <li>19. Warranty: 2 years of comprehensive warranty for the whole system.</li> <li>20. <b>Certification: CE / EC / UK Cert / US FDA / BIS</b></li> </ol>
Item 5	Incubator	<ol style="list-style-type: none"> <li>a) Control: Equipped with Microprocessor controlled with a large digital display.</li> <li>b) Work Chamber Volume: minimum 125 Litres.</li> <li>c) Working temp.: Ambient temp. +5°C to 65°C whereas room temperature is around 20° - 35° C.</li> <li>d) Temp. deviation:±0.2°C.</li> </ol>

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		<p>e) Display: Digital display located on front panel of the equipment.</p> <p>f) Easy to clean: An interchangeable silicon door gasket &amp; removal of shelf supports make thorough cleaning and decontamination of the working chamber easy &amp; safe</p> <p>g) Inner casing: Should be made of corrosion resistant 304 grade stainless steel.</p> <p>h) Shelves (adjustable): Perforated shelves made of corrosion resistant 304 grade stainless steel. Standard supply 3 nos. , inter shelves gap – 6” approx.</p> <p>i) Heat conduction: Gravity convection and air circulation.</p> <p>j) Heater on rear / side / bottom of the equipment.</p> <p>k) Power requirement: 230 V, single phase, 50 Hz.</p> <p>l) After sales service: Prompt &amp; efficient after sales service should be available from Kolkata.</p> <p>m) Quality Certification: ISO certificate of manufacturing unit</p> <p>n) Product should have <b>Digital LED Display</b> calibrated thermometer (temp. range 0°-100°C).</p> <p><b>Certification: CE / EC / UK Cert / US FDA / BIS</b></p>