

**M S SWAMINATHAN RESEARCH FOUNDATION JEYPORE KORAPUT**

**TENDER/QUOTATION CALL NOTICE FOR PURCHASE OF LABORATORY EQUIPMENT**

Sealed quotations are invited from intending reputed Agency/company/stockiest/ Supplier of the following laboratory equipment for use of the laboratory. The firm will supply and installed the equipment at M S Swaminathan Research Foundation, Phulbada,Unuri, Jeypore Koraput Odisha. The rate will be valid for 6 month procurement will be made from the supplier who is quoted lowest rate. All the quotation mentioning with PAN and GST registration number should reach the undersigned on or before 30.06.2021 by 05.00 pm. through registered/ speed post only. The sealed cover should be super scribed as Quotation for Laboratory equipment.

Quotation received after the stipulated period will not be accepted. Quotation will be opened on dated 07.07.2021 at 04.00 pm. in presence of bidder in physically/ its representatives or virtually at the chamber of the Director. The specification of the equipments should be mentioned clearly, otherwise the quotation will not consider for bidding. Indent will be issue to the lowest quoted firm/s.

Sl no	Particulars of Equipment/instruments	Specification	Per unit cost including GST after considering the DSIR certificate
1	GPS	Gramin Etrex – 10 Pre loaded handheld software, compactible office software, base map, inbuilt electronic compass, paperless Geocatching, RAM 1GB, Display 2 – 2.5 Inch, resolution 128x160 Pixles.	
2	Autoclave (Vertical)	Internal Tank Capacity 175 Liter Load 6.00 KW Chamber dimension 22” x 36” No. of Drums & Sizes - 3 (12” x 15”) Working Pressure 1.2 kgf/cm sq.g (15 psi - 17 psi) (Can be Upgraded up to 30 PSI) Sterilizing Temperature 121°C to 134°C (150°C -	

		<p>Optional)  Heat Average <math>\leq \pm 1^{\circ}\text{C}</math>  Sterilization Time 25 to 30 Minutes  Digital Timer 0 to 99 min  Construction Double / Triple wall &amp; SS GMP construction  Outer Chamber Mild Steel (304 stainless Steel – Optional)  Inner Chamber 304 SS (316 / 316L grades Stainless Steel – Optional)  Insulation Glass Wool  Waste Container Stainless Steel  Door / Lid Foot lifted with safety and interlock device  Door Locking type Radial Type (Wing Nut Optional)  Water Filling &amp; Removal Manual  Safety Features Radial locking, safety valve, low water detector and pressure interlock  Power Supply AC 220 Volts ,50 Hz  Optional accessories - PID controller  - Low / High water cut-off device  - Digital alarm  - Temperature chart recorder  - Dot Matrix Printer  - RS 232 / USB PC Connection Port  - NABL certification  - Stainless Steel wire mesh carrier  - Dressing drum  - Sterilization indicator tape  - Autoclave bags  - PLC control system  - IQ / OQ / PQ Documentation</p>	
3	Balance – Physical		
4	BOD Incubator	Working Temp. : $5^{\circ}\text{C}$ to $60^{\circ}\text{C}$ or $10^{\circ}\text{C}$ to $60^{\circ}\text{C}$ when lights are	

		<p>ON.  Temp. Accuracy : <math>\pm 1^{\circ}\text{C}</math>  Temp. Readability : <math>0.1^{\circ}\text{C}</math>  Tray : 16 Flask of 250 ml flask  Spare Tray for desired size of flasks (Pls suffix T for cat. no.)  Spare Shelf (Pls suffix S for cat. no.)  Power supply : 220 V, 50 Hz, Single Phase AC  Supply</p> <ol style="list-style-type: none"> <li>1. Feather touch controller, plate mounted on the door. (no Separate panel)</li> <li>2. Digital Display L.E.D + L.C.D. Both</li> <li>3. Continues display of set temperature, attained temperature, time, day, date, etc</li> <li>4. As soon as the set temperature is attained, timer start automatically &amp; raise the alarm after the set time is over (Fully automatic).</li> <li>5. Indication LED of Door Open (Optional)</li> <li>6. Battery operated controller with indication of power failure (optional)</li> </ol>	
5	Weighing machine	<p>Capacity : 82g/220 g  Readability : 0.1 mg  Linearity : <math>\pm 0.3\text{ mg}</math>  Repeatability : 0,1 mg (Rt 50g), 0,13 mg (50g &lt; Rt 220g)  Sensitivity drift : 1 ppm/<math>^{\circ}\text{C}</math> in temperature <math>+10^{\circ} \div +40^{\circ}\text{C}</math>  Pan size : <math>\phi 85\text{ mm}</math> or above  Adjustment/calibration : automatic internal calibration  Working temperature : <math>+10^{\circ} - +40^{\circ}\text{C}</math>  Stabilization time : 3.5 s  Interface : <math>2 \times \text{RS } 232</math>, USB-A, USB-B, WiFi – option  Certification : CE, GLP  Compliance, ISO 9001, OIML</p>	

		ALIBI Memory : up to 100000 Display : Backlit LCD Display Warranty : 1 year	
6	Hot air oven	Temperature Range 5°C above ambient to 300°C maximum Test space volume 125 Litres Temperature Accuracy $\pm 2^\circ\text{C}$ Temperature Uniformity $\pm 1^\circ\text{C}$ Controls PID Controller/Manual Rte of Heating 1,2,3,4,5 Temp Display LED Display Sensor PT-100 Heating Element As per Standard Safety device Over temperature protection, Electric leakage breaker Temperature safety as per DIN 12880 Class 3.1 Exterior Chamber MS powder coated Interior Chamber 304 stainless steel Insulation Mineral Wool Doors Solid doors w/ silicone rubber gasket & lock Shelves 2 – 3 Stainless steel shelves (Removable) Air Circulation Forced air circulation Power Supply 220 Volts	
7	Laminar flow chamber- bio safety cabinet	1 Inner/ Working Area Dimension (Minimum) 950 mmL X 650 mmD X 650 mm H 2 External Dimension (Including Wheel) [maximum] 1250 mmL X 850 mmD X 1600 mm H 3 Material of construction i) Inner working Area ii) Outer Body iii) Thickness of SS304 Steel 4 Air Velocity & Air flow i) 100-110 FPM at 6" from the face of filter. ii) Air flow should be	

		<p>vertical</p> <p>5 Body Finish Matt</p> <p>6 Front Door Frameless sliding glass door of toughened glass Thickness: 6mm at least</p> <p>7 Side Glass 5 mm thickness toughened glass</p> <p>8 Maximum weight to kept at working table 55-60kgs,</p> <p>9 HEPA Filter Grill Material SS 304 duly perforated and polished.</p> <p>10 Stage of Filtration i) Pre-filters = 5microns with 95% efficiency (washable HDPE Media in SS 304 frame) ii) HEPA Filter = 0.3microns with 99.997% efficiency (microbial treated media)</p> <p>11 Cleanliness Class ISO Standard</p> <p>12 Design &amp; Classification i) Visibility from all 3 sides ii) Side Loading Pre-filters can be easily removed for cleaning iii) Complete work area should be SS 304 including HEPA grill</p> <p>13 Storage SS Drawers to be provided</p> <p>14 Foot Rest To be provided</p> <p>15 Electrical Socket in the unit 3 Nos,</p> <p>16 Switches and Speed Controller Indicator type on/off for light and UV and rotary switch for motor</p> <p>17 UV Light 1.5 ft length with digital UV hour meter</p> <p>18 Light i) LED Light- 2 Nos ii) Intensity should be &gt; 600 lux</p> <p>20 Power Supply i) Single Phase 230V, 50 Hz Power supply. ii) All services should be from side of the unit</p>	
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8	Microscope	<p>Stage Mechanical Stage 3.5" x 3.5" (88 mm x 88 mm)</p> <p>Digital Camera 5 MP ½.5" CMOS; 10x Magnification in lieu of an Eyepiece</p> <p>LCD Monitor 4.3" (109 mm) with 4x Digital Zoom — High definition touch digital TFT display</p> <p>Resolution — 480 x 272 pixels</p> <p>Focuser Dual — Coarse/Fine</p> <p>Objectives Achromatic, glass type — 4x, 10x 20x, 40x and 60x</p> <p>You can use optional objective lenses up to 60x but not lower than 4x — DIN35 RMS thread size WJ 4/5" x 1/36"</p> <p>Memory 4GB SD Card (approximately 1,100+ snapshots @ 5mp)</p> <p>Snapshots in JPEG format and 3GP files for Video</p> <p>LCD Rotation 180° – 90° left /</p>	

		<p>90° right  Filter Wheel Red/Green/Blue/1 mm hole/3 mm hole/6 mm hole (default)  Nosepiece Quad with click stop  Illuminators Built-in electric — both are LED 6 Volt and 6 Watt  Condenser N.A. 0.65  AC Adapter Input Universal 100 to 240 Volt 50/60HZ  Batteries User supplied 4AA — approx. 3 hour usage  Weight/Dimensions 67 oz/1.9 Kg  7.0” (178 mm) x 5.5” (140 mm) x 13.0” (330 mm)</p>	
9	Refrigerator	<p>Double door, Capacity (Litre) 255  Star Rating 4 Star  Cooling Technology 4 Way Cooling  Refrigerant Ecofriendly  Refrigerant  Temperature Control I-Micom  Compressor Smart Inverter  Compressor  Smart Inverter 3.0 Yes  Smart Diagnosis™ System Yes  AUTO SMART CONNECT™  Yes  Works without stabilizer 100V-290V LVS  EXTERIOR  Handle Type Pocket  Door Finish High Gloss Finish  Color Titanium  FREEZER COMPARTMENT  F Door Basket (Full) 2  Ice Tray Twist Ice Tray  Ice Bank Yes  REFRIGERATOR  COMPARTMENT  Chiller Zone Pull out tray  Anti-Bacteria Gasket Yes  Humidity Controller Yes  Ever Fresh Zone Yes  LED Top LED</p>	

		<p>Shelf Type Toughened Glass</p> <p><b>DIMENSIONS</b></p> <p>Height (mm) 1570</p> <p>Width (mm) 555</p> <p>Depth (mm) 620</p> <p>1) 255 ltr, frost free refrigerator with auto smart connect technology, smart inverter compressor</p> <p>2) Multi air Flow Cooling</p> <p>3) Pull out tray</p> <p>4) Moist balance crisper</p> <p>5) Top LED</p> <p>6) Ever fresh Zone</p> <p>7) Double Twist Ice Tray</p> <p>8) 100 V – 290 V LVS</p>	
10	pH meter	<p>The direct reading Laboratory pH meter (Digital) operable at 230V +/- 10V A.C., 50 Hz power supply with necessary cable connections and other standard accessories required for smooth operation.</p> <p>Measuring Range Resolution Accuracy</p> <p>pH Range 0 to 14 pH (Min.)</p> <p>0.001 pH ± 0.002 pH</p> <p>mV -1000.0 - 1000.0 (Min.) 0.1</p> <p>pH ± 0.2</p> <p>Rel. mV -1000.0 - 1000.0 (Min.)</p> <p>0.1 pH ± 0.2</p> <p>Temperature MTC -10.0 - 100.0 °C (Min.) 0.1 °C ± 0.1 °C</p> <p>Temperature ATC -5.0 - 100.0 °C (Min.) 0.1 °C ± 0.1 °C</p> <p>Temperature Compensation : It should have both Automatic and Manual temperature compensation</p> <p>Display : It should have Thin Film Transistor (TFT) display of more than 4 inch color (Blue/Red/Green/Yellow) display for better vision of readings with clear and well</p>	



		<p>arranged icons of parameters like pH, Temperature, mV, date &amp; Time etc.</p> <p>Ingress protection level : It should be IP54 complied protection level.</p> <p>Power requirements : It should be operable with 9 -12V/10W DC adapter.</p> <p>Storage of instrument : It should be able to stored in temperature of 5 to 40 °C and Relative humidity of 5 to 80% (non-condensing)</p> <p>GLP compliance : It should be GLP complied .</p> <p>It should have Membrane keypad , preferably Polyethylene terephthalate (PET))</p> <p>To improve the reproducibility, it should allow to choose from at least three endpoint criteria according to our requirements.</p> <p>The Electrode holder should move in a perfectly vertical way, making it easy to place the sensor in the perfect position i.e. vertically in the measurement beaker.</p> <p>It should have Temperature sensor input.</p> <p>It should be able to show the quality of last calibration on its screen.</p>	
11	Micro wave oven	<p>General Requirement : The microwave oven shall be simple in operation and with turnable. Capable in microwave cooking and defrosting.</p> <p>2. Supply voltage : 220 volts, 50Hz. single phase A.C.</p> <p>3. Power Consumption : 1300W approx.</p> <p>4. Microwave Power : 700W - 850W</p>	

		<p>5. Oven Capacity : 20 litre - 25 litre</p> <p>6. Microwave Frequency : 2450 MHz</p> <p>7. Control : Soft/one touch control</p> <p>8. Timer : 60 minutes - 90 minutes</p> <p>9. Exterior Dimensions : 520mm(W) x 360mm(H) x 450mm(D) approx.</p> <p>10. Oven Dimensions : 330mm(W) x 220mm(H) x 330mm(D) approx.</p> <p>11. Safety : The equipment shall be bonded to earth effectively in accordance with the I.E.E. Wiring Regulations. Sufficient Safety Interlocks to prevent leakage of microwave.</p> <p>12. Accessories : Shall be supplied with a glass/ceramic tray.</p>	
12	Rotary shaker with temperature control	<p>Plat form size: 36×36''</p> <p>Max volume 36 litres</p> <p>Max no. of clamps 2000 ml-15; 1000ml- 36; 500ml-49; 250- ml 64; 100 ml-100</p> <p>4'' large LCD display</p> <p>Universalplatform with rounded corners tp accommodate interchangeable clamps of assorted sizes</p> <p>Brushless induction motor with VFD peed control</p> <p>Elegant plastic front</p> <p>Variable speen 20-300 RPM</p> <p>Shaking amplitude40 mm</p> <p>Auto start after power resumption</p>	
13	Storage rack	Stainless steel with wheel; 5-6 shelves; capacity 50-100kg;	
14	Mixie (Grinder)	<p>Automatic shut-off</p> <p>Yes; Non-slip feet</p> <p>Yes; Speed setting</p> <p>3 and pulse; Power indicator</p>	

		<p>Yes;Product warranty 24 months from the date of purchase</p> <p>Technical specifications:  Power 750 W; Voltage 230 V; Motor rating 30 minute(s); Capacity chutney jar 0.5 L  Capacity wet grinding jar 1.5 L Capacity multi-purpose jar; 1.25 L  Blender volume capacity liquid 1.5 L</p>	
15	Final product sieves (stainless steel)	<p>Stainless steel frame &amp; perforated plate / wire mesh for high stability, corrosion resistance</p> <ul style="list-style-type: none"> <li>⊗ Long lifetime and high reliability for all sieving tasks</li> <li>⊗ Smooth frame surface to eliminate cross-contamination &amp; simplify sieve cleaning</li> <li>⊗ Very high tension of woven wire mesh even after extended use</li> <li>⊗ Compatibility with comparable test sieves of other manufacturers</li> <li>⊗ Compatibility with sieve shakers of all major manufacturers</li> <li>⊗ Rigorous optical inspection &amp; quality control guarantees norm compliance</li> <li>⊗ Full traceability &amp; documentation of inspections</li> </ul> <p>Nominal Sieve Opening: 30 μm to 6,3 mm  Weave Type: Plain  Sieve Depth (H1): 32 or 50 mm</p>	
16	Trolley	<p>No. of wheel-4  Load capacity- 50-100 kg  Max height 4ft  Three shelves  Corrosion resistant  Cart size 2ft×4ft</p>	

17	Poly bag sealer (semi automatic)	Model CSM -1500 R. Capacity 10-30 BAG/MIN. Temp Range 200-300 C. Material Plastic. Sealing Speed 30-50 BAG /MIN	
18	Fire extinguisher	CO <sub>2</sub> type Fire Extinguisher of 4.5Kgs. Capacity, made from brand new seamless cylinder, as per IS: 7285 and CCE approved, fitted with hose and horn and Squeeze Grip Valve with initial Charge of CO <sub>2</sub> Gas conforming to IS 15222 and Extinguisher as per BIS:15683:2006 specification with ISI Mark along with mounting Bracket and PESO certificate for cylinders.	

NB: Authority reserves the right to accept or reject any or all tender without assigning any reason thereof.

Sd/- Director, MSSRF, Jeypore