Tender Notice

PONDICHERRY UNIVERSITY
(A Central University)
(R.V.NAGAR, KALAPET, PUDUCHERRY – 605 014)

SCHEDULE OF TERMS & CONDITIONS

PU/MB/EQ/Off/2019-20/ Date: 03.04.2019

Sub: Supply of minor Equipment to Department of Microbiology, Pondicherry University - Reg.

Schedule of Requirements

Sealed tenders are invited under **single bid systems** for supply of minor Equipment to The Coordinator, Department of Microbiology, Pondicherry University. Pudcherry 605014. **The last date for the submission of tender is 22.04.2019 02.30 PM**. The technical details and specifications given below:

List of Minor Equipment

1. Vertical Autoclave
2. Multi-Parameter pH Meter
3. Rotary Incubator
4. Vortex Mixer
5. Water Bath
6. Hot Air Oven
7. Refrigerator
8. Distillation Unit
9. Weighing Balance
10. Bacteriological Incubator
11. Magnetic Stirrer
12. Ice Flaker
13. Microwave Oven
14. Vertical and Horizontal Electrophoresis units
15. Research Microscope

Specifications & Technical Details

1. Vertical Autoclave

- 2.0 kW electric heater
- Effective internal volume: 50 lit
    - Double walled vertical equipment made up of corrosion resistant stainless steel
    - Complies with the strictest international directives and standards
    - Liquid sterilizing, Heating, Warming

- Built in steam exhaust bottle
- Maintenance access to all components for easy servicing
- Fitted with silicon joint- less rubber gasket which helps leak proof closing of the instrument
- Lid equipped with pressure gauge, steam release valve & 2 Safety valves
- Foot lifting arrangement to open lid
- For use for sterilization under working steam pressure upto 15 PSI
- Provides stable temperature
- Durable heating element with long life, resistant to corrosion, and provides high temperature in repeated use.
- Separate Display for pressure and time
- Temperature for Sterilizing: approx. 105~135º C(0.019MPa - 0.212MPa)

Safety Device: lid interlock, over heat & pressure Prevention, open temperature sensor detection & safety valve
Standard Accessories: Perforated Basket, silicon joint less rubber gaskets (two in number)
Additional features: 3 years warrantee, prompt and satisfactory post-sales service.

2. Multi-Parameter pH Meter

- Range pH:-2.00 to 16.00 pH / -2.000 to 16.000 pH
- ORP: ±2000 mV
- Temp: - 20.0 to 120.0°C (- 4.0 to 248.0°F)
- Resolution pH: 0.01 pH / 0.001 pH
- ORP:0.1 mV
- Temp: 0.1°C (0.1°F)
- Accuracy (@20°C/68°F) pH: ±0.01 pH / ±0.002 pH
- ORP: ±0.2 mV up to ±699.9 mV
- Temp: ±0.4°C (±0.7°F) (excluding probe error)
- Relative mV Offset: ± 2000 mV
- pH Calibration: Up to 5 point calibration, (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45)
- pH reading with manual or automatic temperature compensation
- Temperature Calibration :Factory
- PC /Printer Interface: USB port RS 232
- Memory function: 50 samples on demand, 1000 samples timed
- Alarm function, Hold function, Stability indicator, Beep, ATC or MTC, Display LCD 2 rows
- Power Supply: 12 Vdc adapter

3. **Rotary Incubator**

- Temp. Controller: Microprocessor based controller with 0.1ºC resolution
- Temp. Range: 5°C above ambient to 60°C
- Control Accuracy: ± 0.5ºC
- Shaking Speed: 50 - 250 rpm.(Orbital motion)
- Shaking dia: 25mm
- PMDC motor
- RPM Indicator: Digital
- RPM selection: Using Rotary potentiometer
- Provided Digital Timer
- Tray size: 420mm X 420mm
- Inner chamber made of Stainless Steel.
- Outer made of Mild Steel with Powder coated.

- Provided 16 X 250ml OR 16 x 500ml Lotus clamps for conical flasks.
- Air circulation for uniform temperature.
- Magnetic gasket, handle, lock for door.
- Provided viewing window.
- Provided PL lamp
- Power consumption: 230V, Single Phase
- SS meshed tray for incubation.
  Certified -ISO/ISI

4. **Vortex Mixer**

- It should have brushless DC motor for maintenance free long life.
- The orbital diameter should be 4mm.
- Speed range should be 300-4200 RPM.
- It should have 3 way switch touch,standby & continuous with status on LED
- It should have inbuilt counter balance.
- IP 43 protection class.
- Maximum load capacity should be 500 gm
- Digital display & should not weigh more than 3 Kg.
- It should have pulse mode programming feature (set off and on time in seconds).

5. Water Bath

- Unit should be designed for various applications in microbiology, research and industrial laboratories.
- Unit should have tank volume of 6 liters.
- Fe-Const Temperature sensor.
- Unit should have a temp. Range of ambient temperature + 5°C to 99.99°C.
- System should have N-Prime control system with programmable Microprocessor.
- Unit should have highly visible dual display for temp. And time.
- Seamless stainless steel tank for easy cleaning.
- Temperature set and display sensitivity should be 0.1°C.
- Temperature uniformity should be <40°C.
- Temperature stability should be ±0.1°C.
- Timer should be 99.9 hours + hold position.
- Unit should have delayed start timer of 1 min. to 99.9 hours
- Internal material should be of 304 S. steel.
- External material should be epoxy-polyester painted steel.
- Optional stainless lid or Plexiglas (resistance 60°C) lid should be available.
- Internal dimension should not be more than 30-35x 38- cm.
- External dimensions should not be more than 43x 25-30 cm.
- Water bath should conform to EN 61010-1, EN 61000-6-3
- Power consumption should be 230V 50hz

6. **HOT AIR OVEN**

- Double walled camber , Outer chamber fabricated out of mild steel sheet and Inner should be made up of Stainless Steel sheet. Outer duly finished in Powder coating.
- Inter space in between the walls is tightly packed with special grade glass wool.
- Inner chamber size : 30 x 30x 30cm
- Temperature Range : Ambient +5 above to 250 Deg C
- Temperature should be controlled by micro processor based digital temperature controller.

- Front door - Double walled MS door provided with latch handle.
- Heating Elements as Nichrome wire evenly distributed three sides on the chamber.
- Built in control panel accommodating Temperature controller, MCB for On / Off, Blower switch, Heating switch, Main and load indicator lamp accessories is provided at the side or bottom of the chamber.
- No. of trays 2 Nos
- Power Rating 2 Kw
- Power Supply 230 V
- CE Certified

7. Refrigerator

- Capacity : Approx 300 – 360 L
- Temperature Range : 1°C ~ 8°C
- Ambient : 35
- Input Power Watts : 120
- Dimenstion. (Inches) (W x D x H): 19 x 21 x 32
- Certified - UL, CB, CE, CCC, ISO:9001, ISO:14001

8. DISTILLATION UNIT

- The device is designed for production of distilled water.
- Body and main parts are made of high-alloy Stainless Steel AISI 321
- Automatic water level control in evaporation chamber
- Automatic low water shutdown
- Energy and water saving system
- CO2 degassing system
- A separate circuit water feed modification allows separate water feeding for evaporation and cooling
- A double shell protects operating personnel from thermal burns and contact with working elements
- A removable cooler enables distillate cooling. The cooler can be mounted directly to the body of the distiller.
- Demountable design of condensation chambers allows visual inspection of scale formation, easy sediment cleaning, easy maintenance and repair
- Distiller can be combined with a purified water tank into an automatically operating single system
- Automatic shutdown when the water storage tank is full
- The unit can be placed on horizontal surface or can be mounted to a wall. The wall bracket is optional.
- Standard set includes a spare heating element, a spare electrode of the water level sensor, supply water hoses and distillate collection hoses, connecting clamps
- Power connection cable with shockproof plug
- Dist. Water Output Cap.(Approx) 4 L/h
- Electrical requirements 230 V Power consumption: 3.0 kW
- Raw water consumption 30 L/h
- Conductivity of distilled water 2.0-2.2 µs/cm
- Certified CE

9. Weighing Balance

- Capacity : 220 gms
- Readability : 0.001g
- Volts : 12 Vdc
- Repeatability (Std. Deviation) : </=0.001gms
- Linearity : +/-0.002gms
- Response Time (approx.) : 1.0-1.2 secs.
- Ambient Temp. : 5-40 Deg.C
- Temp. coefficient of sensitivity (10-35 Deg.C) : +/-3ppm/ Deg.C
- Pan Size : 100 x 100mm
- Dimensions (approx.) : 170Wx 240D x 75Hmm
- Weight (approx.) : 2.2Kgs.
- Power Req. : AC adapter; 90V-264V, +/-10%, 50/ 60Hz
- Std. accessories : Simple windbreak, Protective in-use cover
- Display : LCD
- Certified CE

10. Bacteriological Incubator

- Inner Chamber W x H x D: 450 x 600 x 450 mm
- No of Shelves : 2, Rating 600 W
- Digital Temperature Indictor-cum-Controller with RTD Sensor
- Bacteriological Incubator is sturdy, double walled with doors, Inner chamber made of Stainless steel.
- Door fitted with Double glass window and heavy stainless steel hinges facilitate inspection of samples without opening the door.
- Transparent glass door let viewing the specimen inside without disturbing chamber temperature.
- The outer body is of thick mild steel sheet with attractively finished in powder coating for durable operation.
- Inner space in between the walls is filled with 2.5" fine glass wool insulation to minimize the heat loss between the walls.
- The temperature is controlled by a capillary thermostat variable from +5 deg above ambient upto 80 deg with a sensitivity of +/- 2 deg C.
- Inner chamber accommodates easily removable stainless steel perforated trays adjustable height, adjustable Air ventilator is provided at the top.
- Supplied complete with trays, air ventilators, pilot lamps indicating Lamps on/off switch, Thermostat, & Cord and plug.
- Suitable to operate on 220 volts , 50 Hz .
- CE Certified

11. Magnetic Stirrer

- Stirring Capacity :5 Ltrs
- Healing Capacity : 500 watts
- External Dlmensions (W x D x H)) mm: 200 x 225 x 185
- Q-20A Stirring Paddle 13x50 mm
- PMDC motor for higher torque even at low speeds
- Better speed regulation even with small volume and low speeds
- Accurate stepless speed control maintains excellent speed stability.
- Digital Speed Indicator for displaying of stirring speed

- Totally enclosed unit
- Designed for use even in corrosive atmosphere

12. **ICE FLAKER**
- **Bodywork:** Stainless steel
- **Cleaning system:** Built-in
- **Production - kg/24h:** 70
- **Bin capacity** - kg: 25
- **Cooling system**: Air
- Low noise
- Stainless Steel body
- Power saving design
- Auto stop and start
- Electronic control board with self diagnostic and malfunction alarms
- 2 years manufacturer warranty on defective components
- Post sales service
- Ice scoop holder positioned in ice-storage bin
- CFC-free Refrigerant

Certified CE

13. Microwave Oven

30L Capacity:
Suitable for large families
Convection: Can be used for baking along with grilling, reheating, defrosting and cooking
Control: Touch Key Pad (Membrane) is sensitive to touch and easy to clean
Child Lock: Ensures complete safety especially for homes with small children
Special features: 101 auto-cook menu options, express cooking, auto reheat and deodorize, weight defrost, steam clean and multi stage cooking

14. Vertical and Horizontal Electrophoresis units

System to run 2 mini gels of approx 8 cm x 7cm simultaneously in less than hour.
Compatible with both precast and hand cast gels.
Upgradable to blotting unit to take care of western blotting.
All accessories like casting stand,casting frames with cam closer for precision alignment and casting, Glass plates, Spacer plates, Sample loading guides, Combs etc must be included.

Number of gels	: 1-2
Cell (tank and lid with power cables)	: 1
10-well combs	: 5
1.0 mm spacer plates (5 plates per box)	: 1
Short plates (5 plates per box)	: 1
Casting stands	: 2
Casting frames	: 4
Total buffer volume for 2 gels,	: 800ml

15. Research Microscope

Compensation trinocular head for INFINITIVE optics.
30° inclined, 360° rotatable.
Sturdy base with supportive rubber feet, 300 x 270 mm.
With low position, coaxial coarse and calibrated fine focus control.
Focusing range 40 mm.
Incorporates tension adjustment and safety autofocus stop unit.

Condenser and light intensity adjustable.
Double layer specimen stage (160 x 140 mm) with exchangeable, ultra-hardened, flexible glass plate with rounded edges for safe handling.
Surface is coated and resistant against chemical fluids and scratches
With right-handed mechanical stage.
Dust cover, blue filter, 2 spare bulbs, immersion oil.
Interpupillary Distance 55 – 75 mm with Anti-Fungus treatment.
Eyepiece WF10x/20 Wide field with reticule, resolution 0.1 mm
Eyepiece WF10x/20 Wide field with reticule, resolution 0.1 mm
ICO INFINITIVE Plan Objectives 40x - 1000x
Quadruple reverse angle nosepiece.
Objective ICO Plan 4x/0.10 W.D. 17,8mm
Objective ICO Plan 10x/0.25 W.D. 17,96
Objective ICO Plan 40x/0.65, spring loaded W.D. 4,5mm
Objective ICO Plan 100x/1.25 oil, spring loaded W.D. 1,81mm
Abbé Bright field condenser n.A.1.25,
with integrated iris diaphragm
Field iris diaphragm, collector system and auxiliary lens for
Koehler illumination
5MP CCD camera with software and sensitive enough
also f.e. for some brighter fluorescent specimens.
Power: USB Bus
Pixel Array: 2592Hx1944V
Sensitivity: 19.2 DN
Pixel size 2.775 µm x 2.775 µm, Signal-to-Noise-Ratio: 61dB
Imaging Area: 7.193mm x 5.395 mm, 8.991mm Diagonal (1/1.8")
Sensor Technology: 1/1.8" Sony CCD, Bit Depth: 12-bit Digitalization & Processing,
12-bit RGB uncompressed output.
Microscope interfacing: C-mount
Enclosure: Die Cast aluminum
Compatibility 32-bit & 64-bit Windows 7/10/Vista/XP
32-bit & 64 bit Mac OS X Snow Leopard/Leopard
CE Certified

TERMS AND CONDITIONS

I. General Information: -

1. Last and time of receipt of the Tenders: 22.04.2019, 2.30 PM

2. Date and Time of opening of Tenders: 22.04.2019, 3.00 PM

3. **Tender Document fee Rs. 500/-**

4. EMD rates: 2.5% of the quoted price by means of a Demand Draft, drawn in favour of the Finance Officer, Pondicherry University, payable at Puducherry separately

5. **Quoting merely the lowest price does not confer any right to any bidder for award of supply order**. The University's Purchase Committee, reserves the right to select the equipment any bid under the grounds of specification compliance, technologically advanced quality, proven performance track record, brand reputation, service backup support, additional warranty, offer of additional / special features, Compatibility with the existing System, Training, etc.

6. The tenders should be addressed to **The Coordinator, Department of Microbiology, Pondicherry University, Puducherry 605 014.**

7. The taxes / duties / discounts, if applicable, are to be explicitly and separately shown in the bid.

8**. Eligibility:**

The firm must have the requisite domain expertise with regard to supply, installation and post-sale service of the items they are quoting.

The firm should have been in existence for at least six years as on the date of this tender and must have executed at least three orders for this kind of equipment during the last three years.

9. Duty Exemption

The University has been granted the benefit of exemption from the payment of the Central Excise Duty and Customs Duty by the Department of Scientific and Industrial Research (DSIR), India, vide their Notification No.10/97 dt. 01-03-1997 and 51/96 dt. 23.07.96 respectively,

10. Warranty:

The material covered under the purchase order, when installed, shall be warranted for the quality, workmanship, trouble free operation and performance for a period of **three years from the date of putting the system into operation** at the Pondicherry University.

If any item covered under warranty fails, the same shall be replaced free of cost including all the applicable charges including shipping cost both ways.

11. A clear statement regarding availability of after-sales service and availability of spare-parts for next 5 to 10 years should be included.

12. A recent customer list (within last five years) with contact details including email address is to be submitted with technical bids / bids as the case may be.

13. All equipment must operate at 230V/50 Hz single phase and / or equivalent three phase electrical power.

14. The University shall not be responsible for any delay / loss or non-receipt of tenders by post / courier service.

Date: 03.04.2019 COORDINATOR