



KERALA AGRICULTURAL UNIVERSITY
FARMING SYSTEMS RESEARCH STATION
SADANANDAPURAM, KOTTARAKARA

No.FS(3)846/21

Date: 14 .12.2021

TENDER NOTICE

Sealed competitive tenders are invited for the supply of the following equipments required for the project ‘ Stationwise funding – Strengthening research at FSRS, Sadanandapuram’ (Specification attached)

Sl. No.	Equipment	Quantity required (No.)	Cost of tender form (Rs.)
1	Double distillation unit with auto cut off	1	0.2% of the cost of tender rounded to the nearest multiple of 100, subject to a minimum of 400/- and maximum 1500/- + GST as applicable
2.	Digital water bath	1	
3.	Vertical Laminar Airflow Chamber	1	
4.	Hot Air Oven	1	
5	pH/EC/TDS/Salinity Meter (PETS)	1	

1. Double distillation unit with auto cutoff

Specifications:

- Water Out Put : 1.5LPH
- Dimensions (WxDxH)mm : 650 x 255 x 460

2. Vertical laminar air flow chamber

Specifications:

- Cleanliness ISO Class 5 as per ISO 14644-1
- Direction of Flow Vertical
- Particle Retention 0.3 Micron & Above
- Noise Level 60 decibel on “A” scale ± 5
- Velocity 90 Feet / Minute ± 20
- Worktable By IS 304 Grade Stainless Steel surface
- Front door by 5 mm thick Polycarbonate – Sliding Type
- U V lamp Make – PHILIPS
- Illumination LED Light Fitting
- Pressure (ΔP) Inclined Manometer 0 –25 mm range
- Other accessories 5/15 Amp power point, Gas inlet & Castor Wheels
- Power Supply 230V, Single phase, 50 Hz

Ultra HEPA Filter:

- Media Ultra clean glass fiber paper – imported
- Type ULPA Filter, Separator less
- Retention < 0.12 Micron
- Efficiency 99.999% / Grade: H13 rating

PRE Filter:

- Media Synthetic, non-woven polyester fibers

- Casing GI with PU coated/ SS frame
- Retention 5 Micron & above
- Efficiency 95 %

Material of Construction:

Option: 1 The Cabinet made from Galvanized Iron 18 SWG sheet metal with polyurethane paint coated finish

Option: 2 The Complete Cabinet in IS 304 grade SS construction with satin Finish

Blower Assembly:

Outer rotor type blower system, which consists of Dynamically & statically balanced aluminium centrifugal Impeller driven by a single phase motor, enclosed in an PU coated GI casing directly connected to the filter chamber

UV / Door integration:

Apart from an independent control switch, the closing / opening operation of front door is integrated with the UV on / off. The UV will automatically switch “off” when the front doors opened; likewise, the UV will switch “on” automatically when the door is closed. This will avoid accidental exposure of UV rays to the users’ as UV rays are harmful to the skin.

3. Hot air oven

Specifications:

- Temperature range : 50°C to 250°C
- Temperature Accuracy : ± 1°C
- Temperature Controller : Digital Microprocessor
- Heating : Side Heated
- Air Circulation : Blower
- Inner Chamber : SS 304, 0.6 mm Thick
- Outer Chamber : SS 304, 1mm Thick
- Door Gasket : Silicone
- Trays : Perforated SS Tray, Adjustable
- Supply : 220-230 volts AC
- Internal Dia. : 350 x 350 x 350
- Capacity : 42 L

4. pH/EC/TDS/ Salinity Meter (PETS)

Specifications :

mV

- Range : 0 to ± 1999 mV
- Resolution : 1mV
- Repeatability : ±1mV ±1 digit

pH

- Range : 0 to 14.00 pH
- Resolution : 0.01 pH
- Repeatability : ± 0.01 pH ±1 digit

Deviation of buffer pH Value

- Acceptance for calibration : ± 0.5 pH Approx
- Stability : 0.01 pH/Hrs.

EC/TDS

- AC Voltage source : 100Hz or 1KHz Automatically selected according to the conductivity range and cell constant use.

Conductivity

- Range : 0.2 μ S to 200mS.(6 decadic ranges)
- Accuracy : $\pm 1\%$ of F.S. ± 1 digit
- Resolution : 0.01 μ S in lower range

TDS

- Range : 0.2ppm to 200ppt (6 decadic ranges)
- Accuracy : $\pm 1\%$ of F.S. ± 1 digit
- Cell Constant : Acceptance from 0.1 to 5.0
- **EC temp.co-efficient** : 0.00% to 9.99%, user selectable
- **TDS Factor** : 0.1 to 0.99, user selectable (at 2.0% Tempco)

Salinity

- Range : 0.1 to 40 ppt (>Sea water)
- Accuracy : $\pm 2\%$ of FS ± 1 Digit
- **Cell Constant** : 1.0
- **Temperature** : Automatic Compensation
- **Auto Temp. Compensation** : 0°C to 99.9°C with PT 100 Sensor
- **Manual Temp. Compensation** : 0°C to 99.9°C, user selectable
- **Batch ID No.** : 1 to 10 user selectable
- **Sample ID No.** : 1 to 50, user selectable
- **Data Backup** : Max 500 (10*50) as per Batch No. & Sample No.
- **Display** : 240*128 Monochrome LCD
- **Calibration Backup** : Integrated circuit is provided to store calibrated data, even when the power is off.
- **RTC** : Date & Time
- **Printer Port** : Centronics Printer interface
- **RS 232** : optional
- **Power** : 230V AC $\pm 10\%$, 50Hz

Accessories : pH Combined Electrode

Glass Conductivity cell 1.0CC $\pm 10\%$

Glass Conductivity cell 0.1 C.C. $\pm 10\%$

Temperature probe (PT 100 Sensor)

Clamp/ stand

Terms and conditions

- Tender forms can be downloaded from KAU website (www.kau.edu/tenders) .Cost of the tender form is 0.2% of the cost of tender rounded to the nearest multiple of 100, subject to a minimum of 400/- and maximum 1500/- + GST as applicable.

- Rates quoted should be valid for a minimum period of 3 months from the date of opening the tender.
- Tenders not stipulating period of firmness of rates and with price variation clause and/or subject to prior sale condition are liable to be rejected.
- The equipment should be delivered and installed at the expenses of the successful bidder.
- Rate quoted should be inclusive of all charges such as packing, forwarding, freight, loading/unloading/handling or installation charges and Government duties leviable, if any.
- The supplier has to make his own arrangement for the ordinary / special tools, machinery, and other consumables required for successful completion of installation and testing.
- Documents to be submitted:
 - The firms or companies quoting the price should submit the brochure for the model from the manufacturer for the quoted model and the supporting document should be submitted. It should be available online or through web link.
 - Company Data sheets, Brochures & other documents such as relevant technical literatures, drawings, pamphlets containing all the relevant technical specifications of the equipment duly signed by the bidder on each page.
 - Tender form: Each and every pages of the tender form should be attested after reading the conditions provided.
 - Users list of the equipment are to be enclosed while submitting the tender.
 - Copy of up-to-date GST registration certificate & PAN of the bidder
 - Supporting document regarding service support.
 - Authorization certificate if the bidder is a dealer.
 - EMD @ 1% of the quoted amount should be submitted as separate DD drawn in favour of **Professor and Head, Farming Systems Research Station, Kerala Agricultural University, Sadanandapuram, "payable at State Bank of India, Pulamon Junction Branch, Kottarakara, Kollam** along with an agreement executed in Kerala stamp paper worth Rs. 100/- should be enclosed with the tender. Valid EMD exemption certificate from the Store Purchase Department, Govt. of Kerala, if the firm is exempted from payment of EMD. The format of the agreement can be downloaded from the above website given in item 1.
 - Undertaking to the effect that the bidder is not Debarred/ Blacklisted or Banned from any University/ Government Institute / PSU.
 - Purchase Order and performance certificate of the quoted model of Equipment from three reputed customers, preferably University/ Government Institute / PSU
- The tender form, along with the cost as mentioned above may be drawn by DD in favour of **“Professor and Head, Farming Systems Research Station, Kerala Agricultural University, Sadanandapuram, "payable at State Bank of India, Pulamon Junction Branch, Kottarakara, Kollam** should be enclosed. .
- The tender along with relevant documents should be sent to **"Professor and Head, Farming Systems Research Station, Kerala Agricultural University, Sadanandapuram, Pin: 691531"** in sealed envelope by registered post/speed post before the date and time of opening of technical bid. Otherwise tender will be strictly rejected without any notice.
 - The sealed envelope containing the hard copy should bear the superscription **"Tender on Supply of Equipments to FSRS, Sadanandapuram"**

- The tender notice number, name of the equipment for which the rate is quoted and date of opening of tender should also be mentioned on the top of the envelope.
 - Late tenders will not be accepted.
- In case, the article is sent by railway; the railway receipt should be sent separately, and not along with the tender since the tender will be opened only on the appointed day and demurrage will have to be paid if the railway parcels are not cleared in time.
- As per DSIR registration, the University is eligible for relaxation in GST as per Notification No.45/2017 Central Tax (Rate) dated 14.11.17 & Notification No.47/2017 Integrated Tax (Rate) dated 14.11.17. Necessary documents for availing GST exemption will be provided to the successful bidder.
- **Quoting of equipment:** Only the best model fitting the specification must be quoted.
 - Vendors if quoted for lower end model while the same manufacturer is having better model meeting the above tender specifications, the technical committee shall take decision to disqualify.
 - The products should be nationally / internationally branded and ISI/ CE certified.
 - The bids should be sent only for equipment model available in the market and supplied to a number of customers. Tenders with market standing with proven quality and durability only will be entertained.
- **Service:** The firms or companies quoting the price should have service personals or centers or service support based in Kerala should have quote from manufacturer for the quoted model.
- The supplier has to make his own arrangement for the ordinary / special tools, machinery, and other consumables required for successful completion of installation and testing.
- The maximum period required for delivery and installation of the article should be within **two weeks** from the date of receipt of purchase order.
- Details of availability of the spares for the entire instrument for a period of at least 10 years after the model of equipment supplied has been phased out and for frequently required spares should be specified.
- If any license or permit is required, tenderers must specify in their tender and also state the authority to whom application is to be made.
- The equipment should be delivered at the **“Professor and Head , FSRS Sadanandapuram, Sadanandapuram.P.O, Kottarakkara – 691 531”** at your own expenses and any packing, forwarding, freight, loading/unloading/handling or installation charges will be met by the firm.
- Details required for e-payment (Details of bank account having core banking facility and email address of the bidder) shall be furnished along with the tender.
 - Payments will be made only after the supply is actually verified and taken to stock.
- **Warranty & AMC:** The equipments should have a minimum of two year of manufacturer warranty and three year of AMC from the date of complete installation and not from the date of delivery. **The rate quoted should be inclusive of 2 year warranty and 3 year AMC.**
 - Details of warranty from manufacturer, extended warranty if any, rate for extended warranty, rate for annual maintenance cost after warranty period etc., should be mentioned in the hard copy of bid document.

- If the Supplier, having been notified, fails to remedy the defect(s) within one to two weeks time, then warranty will be extended to the extent of instrument lying idle without repair.
- All parts of the instrument, accessories, and supporting instruments should be covered under the warranty.
- Tenders not accompanied by these details will be rejected.
- Professor and Head, Farming Systems Research Station, Sadanandapuram shall have no obligation to convey reason for rejection of any bid. It shall be open for Professor and Head, Farming Systems Research Station, Sadanandapuram to reject even the lowest bidder in the interest of the University and no reason need be given therefore.
- On receipt of purchase order from this office, the tenderer should furnish a security deposit of 5% of the cost of the equipments quoted in the form of term deposit / bank guarantee / demand draft in favour of “**Professor and Head, Farming Systems Research Station, Sadanandapuram**” payable at **State Bank of India, Pulamon Junction Branch, Kottarakara, Kollam (IFSC Code: SBIN0070272)**.
- Withdrawal from the tender after it is accepted or failure to supply within a specified time or according to specifications will entail cancellation of the order.
- The equipments should be delivered and installed at “Farming Systems Research Station, Kerala Agricultural University, Sadanandapuram, Kottarakara, Kollam-691531” at your own expenses and any packing, forwarding, freight, loading/ unloading/ handling/ or installation charges will be met by the firm.
- All subsequent Government orders connected to tenders and any revision in the rate so taxes would also be applicable to this tender'
- In addition to these all other General conditions annexed in the Store Purchase Manual of Government of Kerala are also applicable to this tender.

The tender should reach this office on or before **2.30 pm on 29 -12-2021** and will be opened at **3.00 pm** on the same day in the presence of such of the tenderers or their authorized representatives. The tenders received after the stipulated date and time will not be accepted in any circumstances. All terms and conditions prescribed for Government tenders as amended from time to time are applicable in this case also. The under signed has the right to accept or reject any or all tenders without assigning any reason thereof.

Further details can be had from the under signed during the office hours between 10.00 am and 5.00 pm (**9447595912**) and also through KAU web site.

Sd/-

Professor and Head

To: Notice Board/ KAU website.

Administrative Assistant