



No. E3/375/2022

Date: 08/02/2022

TENDER NOTICE

Sealed tenders are invited for the purchase of equipments as per the terms and conditions listed below. The specifications of equipments are shown as annexure (list attached separately).

Group 1

1. Pre programmed Double Beam UV VIS Spectrophotometer

Group 2

1. Analytical Balance
2. Micro Pipettes
3. Acid Varispenser
4. Double Distillation Unit
5. Water Bath

Group 3

1. UPS
2. Printer & Scanner

Terms and conditions

1. Tender should be submitted seperately for each group of items in the prescribed forms which can be downloaded from the website www.kau.edu/tenders. The cost of tender form is as detailed below

Cost of tender forms

Particulars	Original (Rs.)	Duplicate (Rs.)
Supplies costing Rs. 50,000/- or less	<u>Rs.300+GST@12%</u>	<u>Rs.150+ GST@12%</u>
Supplies costing above Rs.50,000 and upto Rs.10 lakhs	0.2% of the quoted amount rounded to the nearest multiple of 100, subject to a minimum of Rs. 400 and maximum of Rs. 1500+ GST@12%	50% of the cost of the original, upper rounded to the nearest multiple of Rs.100+ GST@12%

2. The tender should be accompanied by an agreement in Kerala Stamp Paper worth Rs.200/- (Rupees two hundred only) and format can be downloaded from the above website.
3. Each tender should be accompanied an Earnest Money Dedposit (EMD) @ 1% of the total rupee equivalent to the cost of the quoted items (subject to minimum of Rs. 1500/-) by way of **Demand Drafts** drawn in favour of **The Associate Director, Regional Agricultural Research Station, Kumarakom, Kottayam dist., Kerala, PIN 686566** payable at the State Bank of India, Kumarakom (Branch Code 70116). Late and incomplete tenders and tenders without EMD, tender fee and agreement will not be accepted. Firms who are exempted from payment of EMD should furnish copy of the currently valid certificate from the store Purchase Department, Govt. of kerala.
4. The sealed cover containing the tender should be superscribed "**Tender for the supply of equipments, Group No.....**" should be mentioned clearly and addressed to the **Associate Director, Regional Agricultural Research Station, Kumarakom, Kottayam dist., kerala PIN 686566** as per the tender notice number **E3/375/2022**.
5. The tenders can be submitted upto **11.00 a.m. on 23/02/2022**. The tenders received after the stipulated time will not be considered under any circumstances.
6. The tenders will be opened at **11.30 a.m on the same day** in the presence of those bidders who are present at that time.
7. The rate of the item should be clearly mentioned with specification. Warrenty details should be clearly stated.
8. The rate quoted for each item should be inclusive of all charges including installation and taxes if any and should be valid up to 31.03.2022.
9. Period of firmness of quoted rates / prices should be clearly stated in the offer.
10. We(Institutions under KAU) are exempted (regd.with DSIR) from payment of customs and excise duty for our procurments and hence prices quoted should be exclusive of these.
11. The exact specifications, details of make, model, name of manufacturer, warranty details etc., of the item must be clearly specified. Seperate bids (Technical and Financial) should be enclosed along with the tender.
12. The bidder of accepted tender should enter into an agreement with the The Associate Director of Research, Regional Agricultural Research Station, Kumarakom on Kerala Stamp Paper worth Rs.200/-. The format of the agreement is available in the website www.kau.in The security deposit is 5 % of the cost of quoted equipmets and the EMD of the accepted bidders will be adjusted to security deposit which will be refunded after the expiry of contract/ warrenty.
13. The supply should be effected with in two weeks from the date of receipt supply order.
14. The equipment should be packed well with necessary caution slip and also be insured against damage in transit at the own expenses of the tenderer.
15. The payment as per the invoice will be made only on receipt of the articles in good condition as per specifications and satisfactory installation.
16. Tenderor is liable to replace the defective articles immediately on receipt of intimation.

17. Any failure on the part of supplier in the fulfillment of contractual obligations will result in the forfeiture of EMD / Security Deposit .
18. If any Bandh /strike/ any unexpected holidays occurs on the date of opening of tender, the tender will be opened at the same time on the next working day.
19. The decision of the undersigned in finalizing the tenders shall be final and binding.
20. All the rules and regulation applicable to Government Tenders will be applicable to this tender also.
21. Bidders should be provided the specified Manufacture's Authorization Certificate at the time of participation.
22. Prices quoted should be valid upto one year.

Special Conditions

- Tenders insisting payment in advance either full or part for releasing the documents through bank are liable for rejection.
- The leaflets / brochures containing technical features on the different models of the items quoted should be attached with the tender.
- In the case of electrically operated equipment the circuite diagram will have to be supplied.
- In the case of equipment wherever necessary the supplier should arrange to install and demonstrate the equipment initially without any additional charges.
- Operation manual and guaranty card of the equipments wherever required should be supplied along with the equipments.
- Supplier should attach the client list for the equipments/ machinery along with their performance certificate , spare parts availability and service facilities at or nearest to the concerned station.
- Details of maintenance service contract offered after the expiry of normal warranty and after sales service facilities available should be indicated.
- Evidence of exclusive/ authorized distributorship from foreign principles should be provided along with the offers for overseas products.
- Preference will be given to articles having ISI mark if all other conditions are satisfactory.
- Enquiries if any may be mailed to rarskum@kau.in.

(Sd/-)
ASSOCIATE DIRECTOR

To:

Firms / www.kau.in

Copy to

Dr.Sailajakumari.M.S, Assistant Professor(SS&AC)

Pre- Programmed Double Beam UV VIS Spectrophotometer

7" High resolution Touch Screen LCD Color Graphical Display. Built – In Windows based PC Control. More than 200 Pre – Programmed Water Analyses Method for direct measurement of samples. (Pre – Programs are compatible with Multi Reagent manufactures)

- Wave Length Range – 190 to 1100 nm
- Accuracy - $\pm 0.5\text{nm}$
- Resolution - 0.1nm
- Automatic Wavelength Calibration Programmable wave length for Lamp Change over.
- Repeatability - $\pm 0.2\text{nm}$, $\pm 0.002\text{Abs}$
- Photometric Range: + 3.3 Abs to -3.3 Abs
- Accuracy - $\pm 0.005\text{ Abs}$
- Readability – 0.01 % T, 0.0001Abs
- Stability - $\pm 0.003\text{ Abs/hr}$
- Stray Light - $<0.05\% \text{ T}$ at 220nm with NaI 10g/L
- Monochromator - Concave Holographic Grating with 1200 lines/mm
- Spectral BW – 1.8nm
- Ports – 3 USB ports, can be used for printer, Keyboard, pen drive and mouse
- TCP/IP Port & PC Connectivity Port
- Light Source – Deuterium Lamp (D2) & Tungsten (W) Halogen Lamp
- Detector – High sensitivity Silicon Photodiode.
- Data Storage – More than 1000 data sets
- Data Processing – Aqua Analysis, Spectrum, Concentration, e- Factor, Enzyme Kinetic, Overlay, Time Scan, Discrete, Wavelength, Ratiometric, Peak Picking, Spectra Zooming, Smoothing, Data Saving & Retrieval, Auto Zero Facility, Overlay and printing
- Pre-Programmed and Customized/ User programming methods in the software for Water Analysis
- Sample Compartment: Fixed Multiple Cell holders for Reference & Sample accommodating 10 to 50 mm Path length Cuvettes and 16/24 Round Vials
- Accessories supplied with instrument – 10mm path length Quartz & Glass Cuvettes – 1 Pair each, Built in Spectra treats software

- Reagent supply: Tablet reagents (a pack of 100) for the elements of Fluoride, Nitrate, Iron & Chloride along with Instrument.
- Warranty – 2 Year

SPECIFICATION FOR BALANCE

S. no	Product Description
1.	<p>Capacity : 120 g Calibration : Internal Readability : 0.001 gm Repeatability (+/-) : 0.001 gm Linearity (+/-) : 0.002 gm Response time : 2-3 sec Pan size (mm) : 110 Ø Units of measurement : g, mg, ct, GN, mo, oz, dwt, mom, Bat, MS Display : Alpha Numeric Backlite LCD Display</p> <p>The Mono-Tech : Balance should have MONO- TECH technology sensor based on electromagnetic force compensation to match the highest international standards. Perfect Self Auto Calibration (PASC) – When the ambient temperature changes by a specific value or once a defined time interval has elapsed, it performs Internal calibration. Overload Protection : Capacity tracker built into display for easily monitoring possible overloads. Leveling : Balance should have adjustable feet for maintaining / providing uniform level. GLP Built-in clock should make all documents ISO/GMP/GLP Compliance Easy Data Transfer Interface RS 232C Optional USB (Windows direct Communication) Statistics : Statistic of data stored in the scale including details such as number of readings, min value, max value, standard deviation, difference and coefficient of variance should be available Anti Theft Device : Should equip with a lug or anti-theft device</p>

SPECIFICATION FOR MICROPIPETTE

S. no	Product Description
2.	<p>Micro pipette with high Accuracy</p> <p><u>Features</u></p> <ul style="list-style-type: none"> • Advanced Volume Gearing (AVG): Should have self- supportive modular volume adjustment mechanism enhancing both accuracy and precision of the instrument. The advanced precision click volume adjustment should enable up to 50 clicks per revolution. • Should have separate mechanism from the pipette hull, which considerably increases its durability. Isolated adjustment mechanism thermally from the pipette hull, to eliminate the possible effects of hand warmth. • Large and Clear Display: • A fine adjustment ruler to enhance the superior precision and accuracy of the pipette. • Double-Action Pipetting Hat: A revolutionary double-action pipetting hat with a rotating upper part should enable a smooth and steady pipetting action, simultaneously preventing any accidental volume alterations. In addition, the lower volume adjustment wheel should remain light to control and offers an excellent grip.
	Range 1-10 μ l Micro pipette
	Range : 20-200 μ l Micro pipette
	Range : 10-100 μ l Micro pipette
	Range : 100-1000 μ l Micro pipette

SPECIFICATION FOR DISPENSER

S. no	Product Description
3.	<p>Acid Dispenser for use with Aggressive reagents like concentrated acids (e.g.H₃PO₄), bases (e.g. NaOH, KOH), many organic solvents, distilled water, saline solutions</p> <p>Volume : 5 - 50 mL</p> <p>Dispensing step : 1 mL,</p> <p>Rel. systematic error 1 % : $\pm 5\%$, $\pm 1\%$, $\pm 0.5\%$</p> <p>Abs. systematic error 1 μL : $\pm 250\ \mu$L</p> <p>Rel. random error 1 % : $\pm 1\%$, $\pm 0.2\%$, $\pm 0.1\%$</p> <p>Abs. random error 1 μL : $\pm 50\ \mu$L</p> <p><u>features :</u></p> <ul style="list-style-type: none"> • Should have the discharge valve with safety ball closes and avoids fluid leakage when discharge tube is not mounted. • Should have standard GL 45 thread on all sizes fits most common bottle threads. • The screw able air vent cap for easy assembly of optional drying tube to protect sensitive reagent against humidity or CO₂. <p>Operating limits on media properties : Temperature: +15 °C to +40 °C Steam pressure: max. 600 mbar Viscosity: max. 500 mm²/s Density: max 2.2 g/cm³</p> <p>Autoclaving : Dispenser should be completely autoclavable at 121 °C (2 bar)</p>

Calibration : Should be calibrated and adjusted in order to support compliance with ISO 9001 and GLP requirements.
 Safety : Should have the valve block can be rotated 360 °. The bottle can be placed in different positions so that the label always faces the user for safety.
 Chemical resistance : Dispenser should be used with a variety of liquids including corrosive and inflammable liquids.

SPECIFICATION FOR DISTILLATION UNIT

S. no	Product Description
4.	<p>Double Distillation Unit Output : 2ltr/hr – Double Distillate Quality: Pyrogen Free pH : 6.0 - 7.0 Conductivity : 0.8-1.0mS/cm Power : 220/240V, 50/60Hz, Single Phase, 2x1500W, Silica Heater</p> <p>Cooling Water Req : 2 - 4ltr/min Min. Pressure : 3 p.s.i. Dimensions (lxbxh) : 2x(250x180x450) Approx. Weight : 16kg Approx.</p> <p>The all new Easy still Mark 2000 distillation units give high quality distilled water with an output of 2ltr/hr, having a power input of 1500 Watts for Single Distillation. Easy Still's unique features are, a highly efficient borosilicate condenser, a well designed boiler fitted with a silica heater and screw thread connectors, making it an ideal, efficient and economical equipment to obtain pure distilled water for use in general laboratories and in numerous other end uses.</p> <p><u>Features:</u> Silica Heater helps in easy cleaning of the boiler. The scaling formed can easily be rinsed and no damage is caused to the boiler.</p> <p><u>Efficient Condenser:</u> The distilled output is cool ensured by a highly efficient borosilicate coiled condenser. The temperature of the distillate is around 25°C -45°C.</p> <p><u>Screw Thread Connectors:</u> All plumbing connections to the equipment including that to the silica heater are made via Screw thread connectors with silicon rubber 'O' ring, which helps in easy installation and avoids the danger of glassware breakages during assembly.</p> <p><u>Powder Coated Stand:</u> The stand is powder coated for long rust free operation.</p> <p><u>Easy and Safe to use:</u> Drain nozzle is provided for easy cleaning and maintenance. Fuse is provided for safety in case of voltage fluctuations and short circuit.</p> <p><u>Unique Features:</u> Note: The XL model has an additional Pressure Temperature Switch (PTS) for safety of the boiler. The unit switched off if water level in the boiler falls below the heater.</p> <p><u>Compact Design to accommodate both the units on a Single Panel applications:</u> Ideal for General Laboratory use capable of producing pyrogen free water.</p>

Note : Warranty one year from the date of supply.

SPECIFICATION FOR WATER BATH

S. no	Product Description
5.	<p>Bath : 5 ltrs Stirred Water Bath Inner Dimensions (WxDxH): 300 x 150 x 150mm Accuracy at 37°C : ± 0.1°C Gross Dimension / Weight : 550 x 460 x 370 mm / 8.4 kg Temp. Range : Ambient +5 to 90°C Heater : 500W</p> <p>Constant Temperature Baths are provided with customized microprocessor based controller for an interrupted long run usage & safety. These Laboratory Water Bath have a seamless tank & provide high control accuracy as well as uniformity. These Stirred Water Baths are offered with various optional accessories providing total flexibility for laboratory usage.</p> <p><u>Applications:</u></p> <ul style="list-style-type: none"> • Ideal for constant temperature applications in Refractometry, Polarimetry, Rotational Viscometry, in biotechnology laboratory for development of culture applications and general laboratory work. • Ideal for critical applications requiring a high degree of temperature accuracy and uniformity. <p><u>Advantages:</u></p> <ul style="list-style-type: none"> • Stirring achieved by an efficient, continuously rated, self cooling motor with SS shaft and propeller of anti-corrosive material. <p><u>Features :</u></p> <ul style="list-style-type: none"> • Independent over-temperature self resetting safety cut-off with alarm. • Full SS GMP construction Seamless inner tank • PID Temperature Controller with Soak tank and end of cycle alarm. • Uniformity: ± 0.1°C at 37°C. • Resolution: 0.1°C.

Note : Warranty one year from the date of supply.

SI No	Specifications 5KVA ONLINE UPS
01	<p>BIS CERTIFIED 5 KVA/120VDC UPS with Online Double Conversion, High Frequency IGBT, DSP and Dual microprocessor controlled system, Capacity -5 KVA with INBUILT Isolation Transformer, Nominal input voltage – 170 - 270 VAC, Single Phase Input Single Phase output and dedicated Earth, Input power factor –0.99, Input current Distortion – I-THD-<=5%, Output power – 5 k VA/4000W, Output power factor – 0.8 Lagging or better, Nominal output voltage – 230 V AC Single phase, Output voltage regulation- +/-1%, Bypass Facility. Nominal output frequency – 50 Hz, +/-0.05%, Output crest factor capacity – 3:1, , UPS efficiency - >93%, Ventilation – Forced – Air cooled, LED/LCD Display for –Mains on, Inverter on, Battery Low, Over Load, Load Percentage, Common Alarm, - Battery low Pre-alarm, Trip, Output short circuit protection, Output over/under voltage, Battery over temperature alarm,</p> <p>Battery -10 no's of 12V/100AH CPRI Certified Tower Tubular Battery with battery stand</p> <p>Mandatory CERTIFICATION - ISO9001-2015 ,ISO14001 -2015,OHSAS 18001 : 2007, CE Certification AND BIS Certification,</p> <p>The UPS Manufacturer have have Minimum 10 Years' Experience in the field of Manufacturing and service inside Kerala and Local Service Centre at Kottayam District with Land Phone Facility and ' annual Turnover not less than 30 Cr.(Attach Proof for the same)</p> <p>Warranty – UPS 1 YEAR,Battery -3 Years</p>

SI No.	Specification
01	<p>Inkjet printer with scan and copy facilities. Other features: Borderless 4R printing with an ultra high yield of 7500 coloured and 4500 black and white pages.</p>

(Sd/-)
ASSOCIATE DIRECTOR