



REGIONAL AGRICULTURAL RESEARCH STATION
Kerala Agricultural University
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No. D3-6293/2023

Dated: 30.11.2023

TENDER NOTICE

Sealed tenders on competitive basis are invited for the supply of Automatic Nitrogen/Protein Estimation System as per the following terms and conditions detailed below.

Automatic Nitrogen/Protein Estimation System (It consists of two parts : Six place Pc compatible Macro Block Digestion System and Automatic Nitrogen Distillation System)

A. Automatic Macro Block Digestion System

- Six place 250 ml capacity PC Compatible Block Digestion System with all essential accessories
- TFT graphic touch Screen Display with wireless mouse
- Should have 2 ports in the motherboard one for PC connectivity another for direct connection to Remote Mouse/ Memory stick for data storage
- Integrated auto –sequencing time/temperature domain of >50 programs and >10 sequencing steps
- Temperature Controller should be isolated separately in a control tower to protect electronics from digestion heat zone and acid reaction zone, with separate access door for electronic control tower unit.
- Inbuilt add-on safety standby PID Controller for Heater & block protection apart from main microprocessor controller.
- Inbuilt Software enables multi user login feature in touch screen display with password protection for different user level for Administrator, supervisor and End user.
- Temperature Control Range: Room temperature to 450° C, Temperature Accuracy : $\neq 0.5^{\circ}$ C
- Transmitter and remote receiver dongle.
- All essential accessories to be given.
- Safe removal of acid fumer.

B. Automatic Macro Block Digestion System

- **Auto sequencing Microprocessor based PC Compatible Distillation System** with in-built software with 50 Predifinable User Storage Auto Sequence Programmes.
- Automatic sequencing with auto Intelligent run of programmable steps which include Automatic Dilution, Auto KMNO₄ addition, Automatic Alkali Addition, Automatic Steam injection, Process over indication with alarm with delay time features, Automatic Titration Connectivity feature for future up gradation with complete automatic safety

features

- Microbri`lliant distillate control with adjustable sensor
- Digital LCD Display
- Door mounted suction module of waste residue
- Auto sensing of "NO WATER" condition in condenser & steam generator with alarm & signal to alert user.
- Enables Automatic monitoring and measuring of high temperature in distillate with sensor for auto warning signal and safety alarm to alert user to control distillate temperature. Temperature displayed digitally.
- Auto reagent Level Sensor with Alarm for Reagents, Stainless steel non corrosive steam Generator
- Automatic water level monitoring & Perilstatic pump for reagents addition
- The control panel unit along with inbuilt temperature controller, timer, mother board and SMPS should be isolated in separate compartment to protect electronics from wet chemistry & acid/alkali process area for longevity and safety of all electronic components. Nitrogen level : 0.1 to 200 mg Nitrogen (Min/Max Detection Limit)
- Nitrogen Reproducibility : $\neq 0.1\%$ RSD, Nitrogen Recovery : $> 99.5\%$
- The Instrument shall strictly confirm to the specification with relevant brochure & Photograph with images.
- The company should have proof of at least 25 installations of long term users using equipments for more than a period of 10-15 years showing longevity of operations
- The bidders must show online demonstration of the quoted system during technical evaluation of the bids. This is an essential requirement.

Scrubber System : Three stage acid neutralization scrubber.

Terms and condition:-

1. Tender should be submitted in the prescribed form which can be downloaded from the web link www.rarsptb.kau.in/tenders. The cost of tender form is Rs. 800/- + 18% GST (ie. Total amount of Rs. 944/-) which will be accepted by way of Demand Draft drawn in favour of "Associate Director of Research, Regional Agricultural Research Station, Pattambi" payable at State Bank of India, Pattambi and should be send separately along with the tender
2. The tender should be accompanied by an agreement in Kerala stamp paper worth Rs. 200/- (Rupees Two Hundred only) ,the format of which can be downloaded from the above website. Withdrawal of tenders after its acceptance or failure to supply the items or not according to the specification will entail cancellation of tender.
3. EMD amount of Rs. 4000/- should be remitted along with the tender cost of Rs. 944/- by two separate Demand Drafts drawn in favour of Associate Director of Research, Regional Agricultural Research Station, Pattambi payable at State Bank of India, Pattambi. No other Demand Draft will be entertained.

4. The sealed cover containing the tender should be super scribed as “Tender for the supply Automatic Nitrogen/Protein Estimation System,as per tender notice No. D3-6293/2023 dtd 30 .11.2023
5. Tenders will be accepted up to 2 pm on 15.12.2023. Tenders received after the stipulated time will not be accepted.
6. Tenders will be opened at 2.30 pm on the same day at the presence of those bidders who are present at that time.
7. The bidder of the accepted tender should enter into an agreement with the Associate Director of Research, Regional Agricultural Research Station, Pattambi on Kerala stamp paper worth Rs. 200/-. The format of the agreement is available in the web link www.rarsptb.kau.in/tenders. He should also submit a security deposit equal to 5% of the cost of above mentioned items in the form of Term Deposit/Bank Guarantee/Demand Draft drawn in favour of Associate Director of Research, Pattambi payable at State Bank of India, Pattambi.
8. Rate and warranty/ guarantee of the each item should be quoted separately.
9. The item should be supplied in accordance with the supply order issued from this office and installed accordingly.
10. Payment of cost of the materials will be made by invoice cum cheque basis.
11. Any failure on the part of supplier in the fulfillment of contractual obligations will result in the forfeiture of EMD/Security Deposit.
12. All other technical and commercial terms and conditions as per the code rules in force in Kerala State will be applicable in this case also.

Special Conditions.

1. Tenders insisting payment in advance either full or in part for releasing the documents through bank are liable to be rejected.
2. The undersigned reserves the authority to accept or reject any or all of the offers for the above mentioned items without assigning any reason whatsoever.
3. The decision of the undersigned in finalizing the tenders shall be final and binding.

Sd/-
Associate Director of Research

To: Notice Board-Office, Farm, Sales counter, Mini Civil Station, KAU Website
Copy to: Dr. Thulasi V, Associate Professor.

// Approved for issue //


Section Officer