

**KERALA AGRICULTURAL UNIVERSITY**

**College of Agriculture, Vellayani**

**Thiruvananthapuram-695 522**

**Phone: 0471-2388002, 2381829**

**SP (1)/9028/2021**

**Dated 14.11.2022**

**LIMITED TENDER NOTICE**

Sealed competitive tenders are invited from the firms for the supply of **Analytical Equipments** to the department of Organic Agriculture, College of Agriculture, Vellayani as per the specifications and terms & conditions detailed below.

<b>Sl. No.</b>	<b>Specification</b>	<b>Quantity</b>												
<b>1</b>	<p><b><u>Flame photometer</u></b></p> <p>Micro controller based Flame photometer with auto ignition</p> <p>Instrument should have :</p> <ul style="list-style-type: none"><li>• Determination up-to Three elements with single aspiration.</li><li>• Calibration standard up-to five point.</li><li>• Auto Ignition and Auto Gas cut-off.</li><li>• Gas leak sensor</li><li>• Separate login for Administrator and Guest.</li><li>• Results of a measurement taken earlier can be recalled and displayed ( Max. Results storage : 500)</li><li>• Graphics LCD readout (240×128 Dot) LCD readout.</li><li>• Online reading facility</li></ul> <p>Sensitivity of calibration</p> <table border="1"><thead><tr><th>Elements</th><th>Minimum(ppm)</th><th>Maximum(ppm)</th></tr></thead><tbody><tr><td>Na</td><td>0.2</td><td>100</td></tr><tr><td>K</td><td>0.1</td><td>100</td></tr><tr><td>Ca</td><td>3</td><td>300</td></tr></tbody></table> <ul style="list-style-type: none"><li>• Curve fitting accuracy : +2% on full scale</li><li>• Filters Na, K, Ca</li><li>• Sample volume : Approx. 3 ml</li><li>• Aspiration Time : five element analysis within 20 second on single Aspiration.</li><li>• Accessories : Glass beaker 10 Number, Compressor, Gas valve, Instruction manual.</li></ul>	Elements	Minimum(ppm)	Maximum(ppm)	Na	0.2	100	K	0.1	100	Ca	3	300	<b>1 No.</b>
Elements	Minimum(ppm)	Maximum(ppm)												
Na	0.2	100												
K	0.1	100												
Ca	3	300												

<p><b>2</b></p>	<p><b><u>Visible spectrophotometer</u></b></p> <p>Specifications for Visible spectrophotometer with wavelength display :-</p> <p>Wavelength Range : 320 to 990 nm  Wavelength Accuracy : <math>\pm 2</math>nm  Wavelength Resolution : 1 nm  Wavelength Display : Digital  Bandwidth : 5 nm  Photometric Range : -0.3 to <math>\pm 2.5</math> Abs  Photometric Resolution : 0.1% T  Photometric accuracy at 1 Abs : <math>\pm 0.005</math> Abs  Photometric readout : 4 digit LED Display  Sample Holder : 2 Position manual sample holder  Detector : Silicon Photodiode</p> <p><u>Measuring Mode</u> :  Absorbance, % Transmittance and Concentration</p> <p><u>Accessories</u>  1 Pair glass cuvette, instruction manual</p>	<p><b>1 No.</b></p>
<p><b>3</b></p>	<p><b><u>Micro controller based Conductivity Meter with cells and Temp. Probe.</u></b></p> <p><b><u>Conductivity</u></b> :</p> <p>Range : 0.1 <math>\mu</math>S to 100ms (6 decadic ranges)  Resolution : 0.001 <math>\mu</math>S  Accuracy : <math>\pm 1\%</math> of F.S. <math>\pm 1</math> Digit</p> <p><b>Temperature</b></p> <p>Range : 0<sup>0</sup> C to 100<sup>0</sup> C (Auto/Manual)  Resolution : 0.1<sup>0</sup> C  Accuracy : <math>\pm 0.2^0</math> C <math>\pm 1</math> Digit</p> <p><b>Cell constant</b> : Acceptable from 0.1 to 5.0  <b>Auto Temp. Compensation</b> : 0<sup>0</sup> C to 100<sup>0</sup> C with PT 100 sensor  <b>Display</b> : 7 Digits, 7 Segment LEDs  (3 digits for TEMP/TEMPCO  4 digits for Conductivity/TDS)  with Automatic decimal point selection.</p> <p><b>Accessories</b> : i) Conductivity cell (2 nos)  ii) Temperature probe (PT-100 Sensor)  iii) Stand &amp; Clamp</p>	<p><b>2 Nos.</b></p>

<b>4</b>	<p><b><u>Microcontroller based Ph meter with 3 point calibration</u></b></p> <p><b>pH :</b></p> <p>Range : 0 to 14 pH  Resolution : 0.01pH  Stability : 0.01 pH per hour  Relative Accuracy : <math>\pm 0.02</math> pH <math>\pm 1</math> Digit  Slope : 85% to 115%  Standard Buffers : 7.000, 4.000, 9.183 ph  Buffer Deviation : <math>\pm 0.5</math>ph</p> <p><b>mV</b></p> <p>Range : 0 to <math>\pm 1999.9</math>mV  Resolution : 0.1mV  Accuracy : <math>\pm 1</math>mV <math>\pm 1</math> Digit</p> <p><b>Temperature</b></p> <p>Compensation : Auto/Manual  Range : 0 to 99.9°C  Resolution : 0.1°C  Accuracy : <math>\pm 0.5</math>°C <math>\pm 1</math> Digit  Display : 7 segment 7 digit led</p>	<b>2 Nos.</b>
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Cost of tender forms

Particulars	Cost (Rs.)
Supplies costing above Rs.1,00,000/- to Rs. 10 lakh	0.2 % of the quoted amount rounded to the nearest multiple of Rs.100/-subject to a minimum of Rs.400/- and maximum of Rs.1500/- + GST@12% (extra)
Supplies costing above Rs.10 lakh	0.15 % of the quoted amount rounded to the nearest multiple of Rs.100/-subject to a maximum of Rs.25000/- +GST12@% (extra)

**Last date & time of receipt of tender : 05-12-2022 1PM**

**Date & time of opening of tender : 05-12-2022 3PM**

**Terms and conditions:**

1. The envelope containing the tender should be super scribed as “**Supply of Analytical Equipments**” and should be addressed to the **Dean of Faculty**, College of Agriculture, Vellayani, Thiruvananthapuram-695 522.
2. Each tender should be accompanied by Earnest Money Deposit (EMD) of 1% of the cost of the quoted items (subject to minimum of Rs.1500/-) by way of two crossed Demand Drafts separately for tender fee and EMD drawn in favour of the **Dean of Faculty, College of Agriculture, Vellayani payable at State Bank of India, Vellayani** Late and incomplete tenders and tenders without EMD, tender fee and agreement will not be accepted. Firms who are exempted from the payment of EMD should furnish a copy of the currently valid certificates from Stores Purchase Department, Govt. of Kerala.
3. The tender should be accompanied by an agreement in Kerala Stamp Paper worth **Rs.200/-** and format can be downloaded from the above website. Withdrawal of tender after its acceptance or failure to supply the items or not according to the specifications will entail cancellation of the tender.
4. The successful tenderer should execute an agreement in Kerala stamp paper worth **Rs.200/-** and furnish a **Security Deposit of 5%** of the cost of items quoted in the form of Term Deposit /Bank Guarantee/Demand Draft drawn in favour of the **Dean of Faculty, College of Agriculture, Vellayani** payable at the State Bank of India, Vellayani when directed from this office. The format of the agreement can be downloaded from the above website.
5. The number of items to be purchased may vary subject to the availability of fund.
6. The item should be delivered at the site and the rate quoted for the item should be inclusive of all charges, taxes, loading and unloading charges, if any, and should be valid for one-year w.e.f. the date of issue of supply order.
7. Tenders will be opened in the presence of the tenderers who may be present at that time.
8. If the date of opening the tender happens to be a holiday due to unexpected circumstances like bandh, hartal etc., quotations will be opened on the next working day at the same place and time.
9. The Dean of Faculty, College of Agriculture, Vellayani has the right to accept or reject any or all of the offers without assigning any reason. The decision of the undersigned in finalizing the tenders will be the final and binding.
10. The supply order will be placed immediately on the confirmation of the tender and availability of funds.
11. The period of warranty for the items should be stated separately.
12. Tenders insisting payment in advance either full or part are liable for rejection.
13. On acceptance, the supply order will be placed and invoice should be addressed to the Dean of Faculty, College of Agriculture, Vellayani after the construction of structure.

14. The items should be supplied within 15 days from the date of receipt of supply order and no extension of date is allowed for supply.
15. Payment as per the invoice will be made only after supply of the items as per specifications and tenderer is liable to rectify/replace the defective articles/work immediately on receipt of intimation. TDS on GST @ 2% will be deducted on payment made to the supplier, where the total value of supply under individual contract in excess of 2.5 lakhs.
16. The EMD/Security Deposits furnished will be forfeited in case the contract is not fulfilled as per the terms and conditions mentioned in the tender notice and agreement.
17. All the rules and regulations applicable to Government tenders will be applicable to this tender also.

**Sd/-**  
**DEAN OF FACULTY**