



KERALA AGRICULTURAL UNIVERSITY
Regional Agricultural Research Station (SZ), Vellayani
Thiruvananthapuram - 695 522, Kerala
E-mail : adrvellayani@kau.in, Phone No.0471 2383239



No. RARS/SZ(5)/4886(J)/2021

Dated: 09/02/2022

E-TENDER NOTICE

E- Tenders are invited for the supply and installation of following Laboratory Instruments for Regional Agricultural Research Station (Southern Zone), College of Agriculture, Vellayani, as per the technical specifications and the terms and conditions mentioned below.

List of Equipment

Sl. No.	Equipment	Qty.
1	Wide-Field Portable Digital Microscope	1
2	Leaf area meter	1
3	Handheld Spectrometer	1
4	Ice flaking machine	1
5	Double Distillation unit	2
6	Pc Based UV Vis Double Beam Spectrophotometer	1

Detailed Specifications

Sl. No.	Instrument	Qty.
1	<p><u>Wide-field portable digital microscope</u></p> <p>Magnification : x150 Field of view : 2mm fixed width Working distance : 2.5mm from lens to sample Illumination : Adjustable top and bottom illumination Sample stage : Glass Connectivity : Display on Smart phone, tablet or computer through WiFi with supporting software</p> <p>Image format : 5MP (2592 x 1944 pixels); JPEG; colour Video format : MPEG-4; colour; up to 1296 x 972; 10 fps Folded Dimensions : 160mm x 101mm x 32mm Operating Dimensions : 160mm x 101mm x 107mm Weight : Below 1 Kg with neoprene case Power supply: Integrated Li-ion rechargeable battery with USB charger</p> <p>Software with branded laptop with i5 10th generation processor, 512 GB SSD, ITB HDD, 8GB RAM graphics integrated</p> <p>Warranty : 2 years onsite</p>	1 No.

2	<p><u>Leaf area meter</u></p> <p>Rapid automated measurement of leaf area, healthy and damaged leaf area Conveyor belt option for processing more leaves per hour The LED top-lights with adjustable brightness Throughput (leaves/hour) -800 Resolution -2056 x 1542 pixels Minimum object size - 1 pixel Maximum sample area - 250 x 290 mm (conveyor) 250 x >1000 mm (long leaf mode)</p> <p>Accuracy Area measurements – + 4 % typical Diseased / healthy area – contrast dependent Long leaf mode - + 5 % typical</p> <p>Calibration static measurements - against a ruler conveyor measurements - against a target of known area Colour depth - works in 24 bit colour space (16 million colours) Image file formats- .jpg, .bmp and .tif</p> <p>Operating system & drivers Windows 7,8 and 10 (32 and 64 bit)</p> <p>Warranty : 2 years onsite</p>	1 No.
3	<p><u>Handheld Spectrometer</u></p> <p>Detector : Instrument should have CMOS Linear Image Sensor Wavelength Range : 390 to 770 nm Wavelength Data Increment : within 1 nm Spectral Bandwidth : Approximately 12 nm (half-bandwidth) Measurement Range : 80 to 140,000 lx (lux), 0.5 to 900 W/m2 (irradiance), 1 to 2,900 $\mu\text{mol s}^{-1} \text{m}^{-2}$ (PPFD) Illuminance Accuracy : $>\pm 6\%$ Illuminance Repeatability (2σ) : 0.2% Color Accuracy : $x y \pm 0.0025$ Integration Time Range : between 2 to 2100 ms Display : Instrument should have at least 3.5-inch, 320 x 420 Resistive Touch LCD Battery Life : minimum of 5 hours typical with continuous operation Power Requirement : Adapter, 2500 mAh (3.7 V rechargeable lithium-ion battery included) Data Output Interface Should include following interface :- 16 GB SD Card, included (SD2.0, SDHC, up to 32GB) 8 GB WiFi SD Card, included (compatible with iOS and Android) Mini USB Port (USB 2.0) Data Output Format : both xls & jpg Storage Capacity : min 68,000 files (for 8GB SD Card)</p>	1 No.

	<p>Operating Temperature Range: 0 to 35 °C Operating Humidity Range : 0% to 70% RH (non-condensing)</p> <p>Should provide the spectral distribution across this range and measure a variety of additional parameters including The Photosynthetically Active Radiation (PAR), peak wavelength and dominant wavelength. <u>Should include both desktop and mobile software for further flexibility in collecting and viewing data.</u></p> <p>Warranty : 2 years onsite</p>	
4	<p><u>Ice flaking machine (1 no.)</u> For use in research labs producing granular flakes with a storage capacity 5kg , producing 20 kg in 24 h, working in 230 V, power (input)- 320 W, Stainless steel body, auto stop and start when there is no power or water supply, low noise , dimension of 387x465x687mm. Warranty : 2 years onsite</p>	1 No.
5	<p><u>Double Distillation unit</u> Quartz double distillation unit with quartz boiler, quartz condenser and built in quartz heater, vertical panel mounted supplied with auto cut off system (water off and power off) with audio alarm. Capacity: 2 litres per hour Warranty : 2 years onsite</p>	2 Nos.
6	<p><u>Pc Based Uv-Vis Double Beam Spectrophotometer .</u></p> <p>Optics : Double beam Operation : Pc Control Wavelength Range : 200 – 1100 nm Accuracy : ±0.5nm Resolution : 0.1nm Bandwidth : 2 nm Photometric Range : 2.5Abs Photometric Accuracy : ±.005Abs at 1 Abs Stray light : ≤ 0.05%T at 220nm and 370nm Photometric repeatability: ± 0.002 abs at 1 Abs</p> <p><u>Sample Holder</u> Five position automatic Positioning 10mm cuvette holder for sample and one for reference</p> <p><u>Source</u> Tungsten –Halogen lamp Deuterium Lamp</p> <p><u>Operating mode</u> Single wavelength, multi wavelength, scan (With multiscan facility), Time scan (Kinetics)</p> <p><u>Measuring Mode:</u> Absorbance, Transmittance, Concentration, Multicomponent analysis Instrument should have the facility for self-diagnosis, Baselinecalibration, Wavelength calibration, cell optimization (GLP/GMP)</p> <p><u>Accessories</u> Computer (brended) with licensed windows 10, intel i3 processor 1 pair Quartz cuvette 1 pair Glass cuvette</p>	1 No.

Instructions to the bidders

- Bid documents including the Bill of Quantities (BoQ) can be downloaded free of cost from the e- Government Procurement (e-GP) Website www.etenders.kerala.gov.in.
- All bid documents are to be submitted online only and in the designated cover(s)/envelope(s) on above website.
- Price Bid shall be submitted only through online.
 - Rates quoted, should be valid up to 31/03/2022.
 - 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.
- **Payment of fee:** Tender submission fee & EMD shall be remitted online during the time of tender submission.
- **Scanned Documents to be submitted online:**
 - 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.**
 - Duly filled and signed preliminary agreement of the bid executed in Kerala stamp paper worth Rs.200/-.
 - Bids received online without the scanned copy of preliminary agreement will not be considered.
 - Users list of the equipment, if any.
 - Copy of up-to-date GST registration certificate & PAN of the bidder
 - Supporting document regarding service support
 - Authorization certificate from the manufacturer, if the bidder is a dealer.
 - Valid EMD exemption certificate from the Store Purchase Department, Govt. of Kerala, if the firm is exempted from payment of EMD.
 - 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, if any.

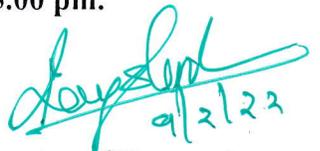
- As per DSIR registration, the University is eligible for relaxation in GST as per Notification No.45/2017 Central Tax (Rate) dated 14.11.17 & Notification No.47/2017 Integrated Tax (Rate) dated 14.11.17. Necessary documents for availing GST exemption will be provided to the successful bidder.
- **Quoting 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 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, proven quality and durability only will be entertained.
- **Service:** The firms or companies bidder should ensure on-site service support for the equipment.
- The maximum period required for delivery and installation of the article should be mentioned.
- Availability of the spares for the entire instrument for a period of at least 10 years should be ensured.
- If any license or permit is required, Bidders must specify in their tender and also state the authority to which application is to be made.
- Details required for e-payment (Details of bank account having core banking facility and e-mail 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: Two years on-site warranty.**
 - Details of extended warranty if any, rate for extended warranty, rate for annual maintenance cost after warranty period etc. should be mentioned in the bid document.
 - If the Supplier, having been notified, fails to rectify the defect(s) within one to two weeks' time, the 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.
- Bidders not accompanied by these details will be rejected.
- Associate Director of Research, RARS (SZ), College of Agriculture, Vellayani shall have no obligation to convey reason for rejection of any bid. It shall be open for Associate Director of Research, Vellayani to reject even the lowest bidder in the interest of the University and no reason need be given thereof.
- The undersigned shall not be responsible for any failure, malfunction or breakdown of the electronic system while downloading or uploading the documents by the Bidder during the e-procurement process.

- On receipt of purchase order, the supplier shall execute an agreement in Kerala stamp paper worth Rs.200/- at own cost and furnish a Performance Security of 5% of the cost. The format of the agreement can be downloaded from the above website.
- 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 and attract legal procedures as per the agreement.
- All subsequent Government orders connected to tenders and any revision in the rates of 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.

Tender details	
Tender inviting Authority	The Associate Director of Research, RARS(SZ), College of Agriculture, Vellayani
Location of supply and installation	REGIONAL AGRICULTURAL RESEARCH STATION (SZ) College of Agriculture, Vellayani, Thiruvananthapuram – 695 522
Date of Publication of Tender	09/02/2022 5.00 pm
Last Date and Time of Receipt of Tenders	28/02/2022 5.00 pm
Date and Time of Opening of Bid	01/03/2022 2.30 pm If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be done on the next working day at same time.
Earnest money deposit (EMD)	20750/-
Tender submission fee	3658/- (inclusive of GST)
Validity Period of Bid	Up to 31/03/2022
Period of supply and installation	Within two weeks from date of purchase order
Mode of submission of Bid	Online through the website www.etenders.kerala.gov.in only
Performance Security	5% of the quoted amount
Submission of performance security	Within 21 days from date of issue of purchase order

Further details on the tender process can be had from the office of Associate Director of Research, RARS(SZ), Vellayani during the office hours between **10.00 am and 5.00 pm**.




Associate Director of Research
 ASSOCIATE DIRECTOR
 RARS (SZ)
 COLLEGE OF AGRICULTURE, VELLAYANI
 THIRUVANANTHAPURAM - 695 522