

Kerala Agricultural University

Krishi Vigyan Kendra, Kannur

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No. KVK/519-2022

Dtd. 25.03.2023

TENDER NOTICE

Sealed competitive tenders are invited by the undersigned for the supply of following items under SHM project “**Establishing a Mass Production Unit for Bio control Agents**” as per the specifications and terms & conditions detailed below:

Last date & Time for receipt of tender: 31.03.2023, 3.00 PM

Date & Time of opening tender: 31.03.2023, 3.00 PM

Tender Cost: 0.2% of cost of tender rounded to the nearest multiple of

100 subject to a minimum of Rs. 400/- and maximum of Rs. 1500/-+GST 12%

Sl. No	ITEMS	SPECIFICATIONS	QTY
1.	Fermentor with CE certification	<p>Capacity: Total Volume – 100 litres, Working Volume- 80 Ltrs</p> <p>Material : Fermentor should be made up of triple wall, inner tank made of 3mm thick 316 grade stainless steel sheet and insulated with 20swg 304 grade SS sheet Flange will be made of 6mm 316 grade SS plate and bolted with silicon gasket.</p> <p>Stirring Systems:- The agitation will be carried out by 316 grade SS shaft with propeller type 316 grade SS blades fitted from the bottom.</p> <p>Steam Generator –double walled, inner tank made of 5mm thick SS plate and lid will be made of 8mm SS plate, flange will be made of 8mm MS plate with neoprene Gasket.</p> <p>The following provisions should be made at the lid: Steam releasing valve, Steam cock, safety valve, Pressue gauge and pressure control switch, Steam Outlet Valve</p> <p>The following provisions will be mad in the body of the Generator: Water inlets, Water outlet, water level indicator and industrial heaters. Inner tank should be insulated with glasswool and covered with SS sheet and Supported with MS Channel structure.</p> <p>Power supply:440 V, 50 Hz 3 phase</p> <p>Air Compressor With a capacity of 45 Ltr, maximum pressure 10kg/CM2 Regulator working pressure 7 kg/cms2. The compressor should be suitable too work on 230/VAC single phase.</p>	1

		<p>Air Filter: Air filter primary construction same as dehumidifier but in the place of silica gel, glasswool will be placed. Must be have digital temperature controller features.</p> <p>De- Humidifier: Made of stainless steel pipe filled with silica gel, provisions will be made of air inlet, water outlet at the bottom. Approximate size will be 4” dia X 15” length.</p> <p>Approximate height : 5.5 Feet</p> <p>Certifications: 1. CE certified 2. ISO 13485: 2003 (Medical devices) 3.ISO 9001: 2015</p> <p>Approximate height : 5.5 Feet</p> <p>Warranty: 2 Years onsite warranty with periodic preventive inspection every 6 months during the warranty period.</p> <p>Manufacturer must be having the service centre at Kerala, Service centre address with Valid contact number must be provided.</p> <p>Should be provided manufacturer authorization Certificate.</p>	
2.	VERTICAL AUTOCLAVE with CE Mark	<p>Electrically operated vertical Autoclave</p> <p>Capacity : 100 ltrs or more</p> <p>Size : size 400x250 mm</p> <p>Material : Stainless steel 304 grade</p> <p>Power: 230 V, 50 Hz, Single phase</p> <p>Double walled and SS GMP Construction Inside and Pedal Lifting Arrangement, Door Locking: Radial type</p> <p>Water filling: Manual, Superior Quality Immersion heating having Automatic Ejection Device</p> <p>Included with Pressure Gauge, Steam Release cock and Safety Valve</p> <p>Operating pressure must be 15 PSI or better</p> <p>Operating Temperature must be 121°C</p> <p>Display: LCD display for temperature and pressure monitoring, Must be having Auto purging, auto exhaust and time control cycle system.</p> <p>Safety features: Radial lock, Safety valve, Over pressure cut off of system, Water low level cut off with alarm, Digital Microprocessor based Temperature Indicator cum controller, Water level cut off device, Pressure cut off switch, Radial lock, Safety Valve</p> <p>Certifications: CE certified, ISO 13485: 2003 (Medical devices) & ISO 9001: 2015</p> <p>Rating: 4 KW</p> <p>Warranty: 2 Years warranty with periodic preventive inspection every 6 months during the warranty period.</p> <p>Manufacturer must be having service centre at Kerala, Service centre address with valid contact number to be furnished.</p>	2
3.	Bio safety cabinet (Type A2) with NSF certification	<p>Capacity : 100 ltrs or more, Size : size 400x250 mm</p> <p>Material : Stainless steel 304 grade,</p> <p>Power: less than 200 watts</p> <p>Certifications:NSF certified with listing on NSF website</p> <p>The Bio Safety Cabinet must include dual DC motors.</p> <p>The Bio safety cabinet should incorporate HEPA filter of the class H 14 EN 22 or better and having minimum efficiency of 99.995% at 0.3 µm particle size.</p> <p>Approximate Dimension Exterior 1500 H x 1300 W x 800 D; Interior 800 H 1200 W x 500 D</p> <p>Ventilation System Exhaust and Inflow air volume approx 300-350 CFM</p>	1

		<p>Heat Emissions at 25°C should be approx 0.2 KW or lesser.</p> <p>The cabinet Should be provided with Microprocessor controller and large LED display for inflow and down flow air velocity and hours of operation, Audible and visual Alarms for HEPA filter failure, blower failure, airflow speed failure, Incorrect window position.</p> <p>BSC must incorporate an LED Indicator to indicate filter loading and should provide visual and audible alarm to indicate excessive HEPA filters loading.</p> <p>The cabinet should be provided with adjustable Height Stand, UV Light and one set of detachable arms rest and one / two electrical outlet. Instrument will have Caster wheel for easy movement.</p> <p>The Bio safety cabinet should have dual side wall with negatively pressurized interstitial space.</p> <p>warranty : 3 Years warranty with periodic preventive inspection every 6 months during the warranty period.</p> <p>Manufacturer must be having service facility at Kerala, Service centre address to be furnished.</p> <p>Vendor must be provided Manufacturer Authorization Certificate.</p>	
4	<p>BOD Incubator with CE certification</p>	<p>Capacity : 140-150 Ltrs</p> <p>Size :</p> <p>Dimensions Internal: 513 x 702 x 441 mm.</p> <p>Dimensions External: 600 x 850 x 600 mm.</p> <p>Storage Space: 3 metal grids + 1 bottom grid.</p> <p>Shelf loading Capacity: 45 kg or more</p> <p>Temperature Tolerance will be ± 1 °C, specified for a stirred 500 ml water sample. For BOD ($T=20$ °C ± 0.5 °C).</p> <p>Outer door must be a glass door.</p> <p>BOD incubator must be having internal power sockets for the use of external device inside the cabinet.</p> <p>BOD Incubator must be suitable for placing BOD Analyzer and Ideal for BOD determination at 20 °C.</p> <p>Interior Light: LED light strip.</p> <p>Temperature Range will be + 2 °C to + 40 °C, steps of 0,1 °C.</p> <p>Power:</p> <p>Power Supply 220 - 240 V / 50 Hz.</p> <p>Power Consumption should be 161 kWh/ 24h or less</p> <p>Climate Class: SN, + 10 °C to + 32 °C.</p> <p>Coolant: R600a.</p> <p>Certifications: CE certified</p> <p>Warranty: 2 Years warranty with periodic preventive inspection every 6 months during the warranty period.</p> <p>Manufacturer must be having the service centre at Kerala; Service centre address with valid contact number must be provided.</p>	1
5	<p>Hot air oven with CE certification</p>	<p>Capacity : 90 Ltrs or More</p> <p>Size : size 45x45x45</p> <p>Temperature range: 50°C to 250°C</p> <p>Control accuracy: ± 1 °C</p> <p>Uniformity: ± 2.0 at 100.0°C</p> <p>Digital PID temperature controller with timer</p>	1

		<p>Material : Stainless steel Power: : 220V, Single phase, 50 Hz, AC supply Display : Digital LED Display Certifications: CE certified, ISO 13485: 2003 (Medical devices) & ISO 9001: 2015, Should be provided IQ/OQ/PQ Certification. Vendor should be provided Manufacture authorization certificate.</p> <p>Warranty: 2 Years warranty with periodic preventive inspection every 6 months during the warranty period. Manufacturer must be having the service centre at Kerala; Service centre address with valid contact number must be provided.</p>	
6	Vertical Laminar Air Flow with CE certification	<p>Size : 4'X2' Material : Stainless Steel 304 Grade 1.2 mm Thickness(Table Top) Power: : 220/230V 50Hz AC supply HEPA Filter Grill should be SS 304 grills duly perforated and polished Noise Level must be Less than 60 Db at 1 Meter from the face of the filter Designed as per US Federal Standard 209E Double filtered air blows at the Laminar flow at a velocity of 90ft/Min ± 20%. Must be having the provision of access port for DOP test.</p> <p>Certifications: CE certified, ISO 13485: 2003 (Medical devices) & ISO 9001: 2015, Should be provided IQ/OQ/PQ Certification. Vendor should be provided specific Manufacturer Authorization Certificate Warranty: 2 Years with periodic preventive inspection every 6 months during the warranty period. Vendor should be provided Specific Manufacturer Authorization Certificate. Manufacturer must be having the service centre at Kerala; Service centre address with valid contact number must be provided.</p>	2
7	Moisture Balance	<p>Capacity : Maximum Capacity: 60g, Minimum Capacity: 0.02g, Minimum readability: 0.001g, 0.01/0.1%, Repeatability: 0.15% (2g), 0.05% (5g), 0.02% (10g) Drying Heater: Straight type halogen heater Size : Pan size: 95mm dia Dimension: (W×D×H) mm 202 × 336 × 157, Weight: 4kg or Below Power: 400W Temperature range: 50-200°C (1°C increments) Setting: (There is a time restriction when exceeding 180°C.) Display: LCD with backlight Operational temperature and humidity range: 5 to 40°C, 85%RH or lower Timer setting: 1-120 minutes or continuous (max 12 hours), Interface: RS-232C (9-pin connector) I/O port, USB port Measurement conditions data memory:10 Data memory: 100 Vendor should be provided specific Manufacturer Authorization Certificate Warranty: 2 Years with periodic preventive inspection every 6 months during the warranty period. Manufacturer must be having the service centre at Kerala; Service centre address with valid contact number must be provided.</p>	1

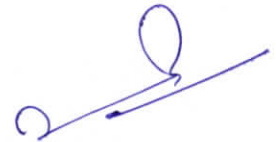
<p>Trinocular Microscope with image Analyzer with CE certification</p>	<ul style="list-style-type: none"> • Stand: Infinity optical system, C shaped, Stable and Modular base corrosion resistant painted and heat resistant pads. • Viewing Head: Trinocular sidetop tube, inclined 30 degree to 360 degree rotatable, Antifungal treated. • Eyepiece: WF10X/22mm paired with eye guards. • Nosepiece: Quadruple inward tilt revolving nosepiece ball bearing • Objectives: 4X,10X,40X,100X oil immersion. • Stage: Mechanical single rectangular stage , Area:210mm,140mm • Moving range: 70mm (X),65mm(Y) with graduated scales and verniers. • Focusing: Coaxial coarse and fine focusing mechanism with stopper to protect slides. • Condenser: Abbe Condenser N.A:1.25 with iris diaphragm and filter holder moving up and down. • Illuminator: Built in Kochler illumination, Bright white LED, Brightness adjustable • Power input: 110 V to 240V,50Hz • Certifications: CE and ISO 9001:2015 <p>DIGITAL MODULE:</p> <ul style="list-style-type: none"> • Sensor & Size(mm) 5.1M/MT9P001(C) 1/2.5"(5.7x4.28), Pixel(μm): 2.2 x 2.2 • G Sensitivity Dynamic Range SN Ratio 0.53 V/lux-sec, 66.5dB, 40.5dB • FPS/Resolution: 5@2592x1944,18@1280x960, 60@640x480, Binning :1x1,2x2,4x4 • Exposure : 0.294ms~2000ms • Spectral Range :380-650nm (with IR-cut Filter • White Balance : ROI White Balance/ Manual Temp Tint Adjustment/NA for 135000 Monochromatic • Capture/Control API :Native C/C++, C#/VB.NET, DirectShow, Twain and Labview • Power Supply : DC 5V over PC USB Port • Certifications: CE and ISO 9001:2015 • Standard C-Mount camera with Aptina CMOS sensor With hardware resolution among 3.0M to 14M. • Integrated zinc aluminum alloy housing • USB2.0 interface ensuring high frame rate • Ultra-Fine color engine with perfect color reproduction capability With advanced video & image processing application. • Providing Windows/Linux/Mac OS multiple platforms SDK. • Native C/C++, C#/VB.NET, DirectShow, Twain Control API. • Vendor should be provided specific Manufacturer Authorization Certificate • Warranty: 2 Years with periodic preventive inspection every 6 months during the warranty period. • Manufacturer must be having the service centre at Kerala; Service centre address with valid contact number must be provided. 	<p>1</p>
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Terms and Conditions

1. The tender should be submitted in the prescribed forms which can be downloaded from the website: www.kau.in/tenders.
2. The envelope containing the tender should be superscribed Tender for the “ **Purchase of equipments for establishing a mass production unit for bio control agents** ” at KVK, Kannur”and should be addressed to the Programme Coordinator, KrishiVigyan Kendra Kannur, Kanhirangad P. O., Thaliparamba, Kannur Kerala – 670142.
3. Each tender should be accompanied by an Earnest Money Deposit (EMD) of 1% of the total cost of the quoted items (subject to minimum of Rs.1,500/-) and Tender Cost as mentioned above by way of Demand Drafts separately drawn in favor of the Programme Coordinator, KVK Kannur payable at the State Bank of India, Taliparamba (IFSC Code SBIN0001000) along with the Tender Agreement. Late and incomplete tenders and tender without EMD and agreement will not be accepted.
4. The successful tenderer should execute an agreement in Kerala Stamp paper worth Rs.200 (Rupees Two Hundred only) at the time of supply of items and furnish a security deposit of 5% of the equipment quoted in the form of term deposit/bank guarantee/demand draft drawn in favour of Programme Coordinator, KVK Kannur payable at the State Bank of India, Taliparamba (IFSC Code SBIN0001000). Firms who are exempted from payment of EMD should furnish copy of the currently valid certificate from the Store Purchase Department, Govt. of Kerala. The format can be downloaded from the above website.
5. The cost of the items should be inclusive of all taxes for the supply and installation at the site.
6. The exact specifications, details of make, model, name of manufacturer, warranty details etc. of the items must be clearly specified. Copies of the detailed technical literature and illustrated brochures of the units quoted are to be included along with the offer. Details of maintenance service contract offer after expiry of normal warranty, spare parts availability and after-sales-service facilities available should be indicated.
7. Offers shall be made CIF Cochin by airfreight for imported instruments and F.O.R. destination for indigenous items. For imported items, charges for insuring up to final inland destination against all risks including total loss for CIF value plus 10% should be included in the

insurance charge. Prices inclusive of ST and other taxes and installation charges may be indicated separately wherever applicable.

8. The decision of the undersigned in finalizing the tenders shall be final and binding.
9. If any Bandh/Strike/any unexpected holidays occur on the date of opening of tender, the tender will be opened at the same time on the next working day.
10. On acceptance the supply order will be placed and supply and installation should be completed within 15 days from the date of receipt of supply order. The invoice in duplicate should be addressed to the Programme Coordinator, KVK Kannur. The payment will be effected only after satisfactory supply, installation of the items/works at the site, in good condition and necessary demonstration by authorized service personnel. The Programme Coordinator, KVK Kannur reserves the right to remove the defaulted name from the list of suppliers permanently or for a specific period.
11. Tenders insisting payment in advance either full or part for releasing the documents through bank are liable for rejection.
12. List of users giving the exact address of the contract persons and the model number of the units available at these locations, have to be provided. Evidence of exclusive/authorized distributorship from foreign principals should be provided along with the offers for overseas products.
13. 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.
14. The Programme Coordinator, KVK Kannur has the right to accept or reject any or all of the offers without assigning any reason.
15. All the rules and regulation applicable to Government Tenders will be applicable to this tender also.
16. Bank account credentials (Name & branch, Account No. and IFSC Code) to be furnished in the invoice for effecting payment.



PROGRAMME COORDINATOR

**Programme Co-ordinator
K.V.K. Kannur**

Copy to:

1. Notice Board
2. KAU Website

