



Notice Inviting E-Tender

For and on behalf of the Secretary, ICAR, the Director, ICAR-NIASM, Baramati invites e-tenders for **Purchase of Lab and field equipment** through the website www.eprocure.gov.in under two bid systems from reputed firms.

Sd/-

I/c. Senior Administrative Officer

Signature of the Bidder
(with firm seal)

Important Notes:

1. Tender Documents can be downloaded from ICAR-NIASM website www.niam.res.in or from Central Public Procurement Portal www.eprocure.gov.in. Bidders should enroll / register in the e-procurement module of Central Public Procurement Portal through the website: www.eprocure.gov.in. Bidders should also possess a valid DSC for online submission of bids.
2. Bids received on e-tendering portal only will be considered. Bids in any other form sent through sealed cover/email/post/fax etc. will be rejected.
3. ICAR-NIASM, Baramati reserves the right to accept / reject any /all tenders in part /full without assigning any reason thereof.
4. ICAR- NIASM will not be responsible for any delay in enrollment/registration as bidder or submitting/uploading the offer on e-tender portal. Hence, bidders are advised to register in etendering website www.eprocure.gov.in and enroll their Digital Signature Certificate and upload their quotation well in advance.
5. Any changes/corrigendum/ extension of opening date in respect of this tender shall be issued through websites only and no press notification will be issued in this regard. Bidders are therefore requested to regularly visit our website for updates.

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INVITATION FOR BIDS

E-tenders are invited by the Director, ICAR-National Institute of Abiotic Stress Management, Malegaon kh, Baramati for an on behalf of Secretary, ICAR for the supply of following equipments from manufacturers/firms/authorized dealers of Indian/foreign manufacturers **on FOB, CIF and CIP basis for Imported equipments and FOR basis for Indian Make equipments.**

Sr. No	Name of Equipment	Quantity
1.	Water Distillation Unit	1
2.	Denaturing Gradient gel Electrophoresis	1
3.	Plant Canopy Analyzer	2
4.	Cabinet Dryer	1
5.	Hot Air Oven	1
6.	Soil & Plant Grinder	1
7.	Sonicator	1
8.	Wet Sieve sets (Yoder Apparatus)	1
9.	Hot Air Oven	1
10.	UV-VIS Spectrophotometer	1
11.	Sprayer-Tractor Operated (Mounted Blower)	1
12.	Automated Blood Analyser	1
13.	Viscosity Meter	1
14.	Vacuum Concentrator	1
15.	DSLR Camera	1
16.	Urea Briquetting Machine	2
17.	SPAD Chlorophyll Meter	1

INSTRUCTION TO THE TENDERERS

The Tender shall be submitted in accordance with these instructions and any tender not confirming the instructions as under is liable to be rejected. These instructions shall form the part of the tender and contract.

1. For Online Bid Submission, as per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL:<http://eprocure.gov.in/eprocure/app>). The bidders are required to submit soft copies of their bids electronically on the CPP Portal using valid Digital Signature Certificates. More information useful for submitting online bids on the CPP Portal may be obtained at www.eprocure.gov.in/eprocure/app.
2. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL:<http://eprocure.gov.in/eprocure/app>) by clicking on the link "Click here to Enroll". Enrolment on the CPP Portal is free of charge.
3. The manufacturers/authorized distributors/dealers shall upload a self-declaration on their letterhead as PDF file in Cover-I of e-tender, along with the tender documents, confirming that they are regular in manufacturing/supplying of the item.

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4. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF formats. Bid documents may be scanned with 100 dpi with black and white option.
5. The Technical Bids will be opened as per schedule given on portal. The date & time for opening of Financial Bids will be notified on the portal. The bidders may regularly check the portal regarding the date of opening of financial bid.
6. While submitting the tender, if any of the prescribed conditions are not fulfilled or are incomplete in any form, the tender is liable to be rejected. If any Tenderer stipulates any condition of his own, such conditional tender is liable to be rejected.
7. Director, ICAR-NIASM, reserves the right to reject any tender/bid wholly or partly without assigning any reason.
8. All the tender documents & Price Bid to be uploaded as per this tender are to be digitally signed by the bidder.

Other terms and conditions:

1. Validity of tenders should be 180 days from the date of opening of the tenders.
2. All the tenderers should give an undertaking that they would render after sales service of the equipment/machine and will supply all spares/consumable for at least 5 years from the date of installation of the same.
3. Full bidding/tender document attached herewith must be signed by bidder.
4. Warranty/guarantee period of the equipment/machine should invariably be specified separately as per specifications of equipment.
5. Technical literature/brochure (Original copy), etc. of the equipment/machinery offered by the firm and list of customers/user with their detailed addresses including telephone no./e-mail ID to whom such machine has been sold/supplied **in last three years** in India should be sent along with the tender form.
6. The firm qualifying technical specification may be asked to demonstrate the performance/working of the quoted model of the equipment/machinery, if needed.
7. The tenderers should quote their rates of imported equipments/machine on **FOB, CIF and CIP basis**. If tender quotes some parts made in India, their rates should be quoted in Indian Rupees.
8. Indian Agency Commission (IAC) may be quoted as certain percentage (say 5% to 10%) of the price of imported component of goods & quoted on CIP (Mumbai) basis.
9. Price schedule must be properly filled in for each equipment based on its Foreign/Indian components/parts & related service, otherwise bid may be rejected.
10. The inferior supply not meeting the prescribed Technical Specifications will be rejected at no cost to this centre.
11. No CDEC will be issued to the firm who quoted the item in Indian Rupees.

12. Qualification Criteria:

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- i. No Blacklisted firm any Govt. department/organization
- ii. Copies of satisfactory Performance certificate for minimum last 2 years for minimum 2 units of equipment in India from 2 different reputed end-users.
- iii. Three purchase orders received during last 3 years for similar items with copies of purchase orders.
- iv. Minimum Annual turnover Rs.50.00 lakh during each of Last 3 years along with copies of financial statement.

13. Delivery Schedule:

- i. Within 90 days from the date of opening of clear and acceptable Letter of Credit for imported goods/components.
- ii. Within 60 days from date of issuing of purchase order for Indian goods/components.

14. Terms of Delivery and Destination:

- i. C.I.P. (Destination: Mumbai) and FOB for port of shipment (price may be quoted for F.O.B. and C.I.P. for imported goods/components).
- ii. F.O.R. for NIASM, Baramati for Indian goods.

15. A valid certificate of authorization in the format enclosed with the tender from the Principal firm must be enclosed by the Indian agents/firms quoting rates on behalf of their Principal. ***One agent cannot represent two suppliers.***

16. In case of imported equipment, Principal firm should give guarantee for after sales service of their equipment through their agent/authorized dealer located in India.

17. If the Indian agent is changed, it would be responsibility of the Principal firm to ensure to intimate the NISAM office about their changed agent in India and ensure after sale service through him.

18. If handling of the equipment requires training of the lab technician/scientist, the same will have to be provided in India either at the Institute or their Indian establishment, as the case may be, free of cost.

19. The tenders received late will be rejected. Check list (attached with tender document) should be filled & signed by the tenderer.

20. Other terms and conditions, if any, will be supplied along with the tender forms.

21. The Director, NIASM, Baramati reserves right to accept/reject any or all the tenders without assigning any reasons.

22. Firms registered under NSIC are exempted from the payment of tender fee and EMD.

23. Any tender not accompanied by Earnest Money will be straight way rejected.

24. Performance Security:

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- i. Within thirty (30) days, the successful tenderer shall furnish to the purchaser the Security Deposit equivalent to 10% of the purchase value.
- ii. The Security Deposit shall be in one of the following forms: (a) Bank Guarantee, issued by a reputed bank or a FDR/Demand Draft payable to "ICAR Unit NIASM, Baramati".
- iii. Failure of the successful Tenderer/bidder to sign the contract and/or furnish the Security Deposit shall constitute sufficient grounds for the annulment of the award and forfeiture of the Earnest Money, in which event the Purchaser may make the award to the next lowest evaluated Tenderer or call for new tenders.
- iv. The Security Deposit will be discharged by the purchaser and returned to the Supplier following the date of completion of the Supplier's performance obligations under the contract, including any warranty obligations after receiving agreement letter.

25. Incidental Services:

- i. The supplier may be required to provide any or all of the following services, including additional services, as specified in Technical Specifications:
- ii. Performance or supervision of on-site installation, etc. of the system. b) Furnishing of tools required for assembly and/or maintenance of the System.
- iii. Furnishing of detailed operations and maintenance manual for each appropriate unit of system.

26. Transportation:

The transportation costs etc. to transport the equipment to the consignee's place shall be borne by the tenderer.

27. Dispute Resolution Mechanism: If any dispute or difference arises between the purchaser and the supplier relating to any matter connected with the contract, the parties shall make every effort to resolve the same amicably by mutual discussions. However, if the parties fail to resolve the dispute or difference by such mutual discussion within 30 days, either the purchaser or the supplier may give notice to the other party of its intention to refer the same to arbitration. The arbitration shall commence thereafter. The arbitration shall be conducted by a sole arbitrator, who will be appointed by the Secretary, ICAR and the procedure to be followed in this respect will be as per the Indian Arbitration and Conciliation Act, 1996. The venue of the arbitration shall be the place from where the contract is issued.

28. You are also required to fulfil the following conditions and furnish the details as indicated in subsequent paragraphs.

- a) At the time of awarding the contract/order, the purchaser reserves the right to increase or decrease the quantity of goods, without any change in the unit price or other terms & conditions.
- b) Please indicate if you are currently registered with any Govt. organization and if registered, furnish all relevant details.
- c) Please states whether business dealings with you presently stand banned by any Government organization and if so, furnish relevant details.
- d) A supplier/ manufacturer shall not submit more than one quotation for the same set of goods.
- e) The supplier shall at all times indemnify the purchaser, at no cost to the purchaser, against all third party claims of infringement of patent, trademark or

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industrial design rights arising from the use of the goods or any part thereof, with respect to the goods quoted by the supplier in its offer.

- f) The quotation (s) as well as the contract shall be written in Hindi/English language.
 - g) The contract shall be governed by the laws of India and interpreted in accordance with such laws.
 - h) The Director, NIASM, Baramati reserves the right to reject any tender in part or full without assigning any reason thereof.
29. Contract: The technically qualified vendor who is awarded the order will have to submit acceptance letter within 15 days of issue of order and will supply material within the stipulated time given in purchase order as per the quoted specifications.

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Check list for Tenderer

The tenderer is requested to kindly submit the check list alongwith the tender failing which tender will not be consider.

Sl. No.	Documents should attached	Remarks
1	Technical Literature/Broacher	
2	Minimum turn over 50.00 lakhs during last 3 years	
3	Certificate of authorization (Manufacturers)	
4	List of Customers	
5	Bid Security/EMD	
6	Questionnaire filled in all respect	
7	Bid form and Price Schedule	
8	Technical Bid	
9	Warranty Obligation (as per specifications)	
10	Certificate of Regd., Taxes & duties	
11	Bid Validity (minimum 180 days)	
12	Under taking after sale service	
13	Under taking of Black Listing	
14	Technical specifications Compliance Statement	

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Online Bid Submission Details

Online Bid Submission:

The Online bids (complete in all respect) must be uploaded online in Two Covers as explained below:-

COVER - I (Following documents to be provided as PDF file)			
Sl. No.	Documents	Content	File types
1		Scan copy of Sales Tax/VAT Registration/ PAN	.PDF
2		Scan copy of Tender Fee and Earnest Money Deposit by way of Demand Draft	.PDF
3		Scan copy of certificate for EMD exemption, if claiming.	.PDF
4		Self-declaration in letter-head that they are regular in manufacturing/supplying of the item	.PDF
5		Details of supplies of similar item to other organization(s), if any	.PDF
6		Scan copy of Authorization letter	.PDF
7		Scan copy of Annual turnover	
8		Undertaking regarding after sale repair upto 5 years	
9		Technical literature/brochure (Original copy) etc of the equipment/machinery offered by the firm	
10		certifiacte of No Blacklisted firm any Govt department/organization	
11		scan copy of checklist	
	COVER - II		
1	Financial Bid	Price bid (BOQ) to be filled in Excel format	.XLS

All the documents and BOQ has to be digitally signed by the bidder.

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Annexure- I: Technical Specifications

Item No 1: Water Distillation Unit

Specification:

Should be able to produce Type II and Type I grade water. Two sets of additional cartridges/ultra filtration unit should also be provided in spare.

1. System should have following features to produce Type II grade water:

- **Pre-treatment module:** Activated Granulated Carbon or pre-filter 1 mm filter.
- Conductivity Measurement of Type II water.
- Production rate at least 12 Litre/hour into the tank. Produced water conductivity 0.060 to 0.2 μ S/cm and bacterial load should be reduced to more than 99%.
- Two additional Cartridges should be provided

2. System should have following features to produce Type I grade water:

- Conductivity measurement for Type I Water
- Production rate at least 1.5 litre/min. Produced water conductivity 0.055 to 0.2 μ S/cm and bacterial count < 1 cfu/ml and endotoxin level < 0.001 EU/ml. Produced water should be DNase, and RNase free.

All accessories should also be quoted separately

CE/ CUL or equivalent certification is must be specific for quoted model

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Item No 2: Denaturing Gradient gel Electrophoresis**Specification:**

System	Should be vertical gel based system and must be supplied with all accessories for performing mutation detection using CDGE, TTGE, DGGE, SSCP.
	System should include all the accessories such as gradient former, spacers, standard & cooling tanks, sandwich clamps, pressure clamp, comb gasket, compatible heavy duty Power pack, holder, and control reagents etc. to perform different techniques of CDGE, DGGE and SSCP.
	System should be supplied with Gradient Delivery System and also be equipped with temperature control options as per the demand of Detection technique like TGGE, SSCP & DGGE.
	Provision to cast gel of varying size 6" X 6" to 4" X 3" or better
	Temperature control system should be latest PID Type with less than $\pm 0.5^{\circ}$ C variation within the gel area, actual temperature should be in the range of 45° C – 70° C or better.
	Electrical lead should be flexible, platinum electrode , lid should be of polycarbonate
	System should be equipped with stirrer for buffer recirculation. Firm should also provide list of accessories required separately
Power supply	Power Pack Unit should have DC voltage limit up to 500V and DC power limit of 50 and should have provision to run four units at a time.
Software	System should include software to predict the melting profile of any DNA up to the size of 2000 bases and to analyze the DGGE, CDGE, & TTGE profile. Software should be able to predict melting behavior of the DNA and primer placement and GC Clamping. Software should customized for Post Electrophoresis Band Pattern Matching, lane clustering via dendrograms, Automatic detection of lanes and bands and background subtraction, Image manipulation tools and Lane templates, Analysis protocols for batch processing, Molecular weight calibration, Quantity calibration, normalization, Profile deconvolution, Rf calibration, Band picking & Band pattern matching, Classification and identification tool.
Accessories	Spare Gel casting glass plates (10), spacer 0.75, 1.0, 1.5 mm (3 each), and comb (1,16, 20, 32 well) (3 each) etc. should also supply
	System should offer specialized technique specific kits that includes optimized reagents and control reagents for DGGE, CDGE, TTGE, and SSCP.
Warranty	A warranty of minimum One year from date of installation

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Item No 3: Plant Canopy Analyzer

Specification:

System should works under any sky condition and is suitable for any size canopy (crops, grasses, horticulture trees), should have Built-in GPS and should

Memory: 128 MB or more for data storage (Must have capacity to store more than 1 lakh data)

Operating range: 10 to 50 °C: 0 – 95% RH

Data recording: Must give rapid result, Should measure LAI non-destructively, Automatic/manual data logging

System: should calculate and display instantaneous LAI, Should able to measure LAI/ canopy cover at any time during day time, and should measures light from multiple zenith angles. System should also give real time data of PAR

Correction Scattering effects, transmittance or reflectance that affect readings should be corrected by system/ software

Communications: USB (as mass storage device); RS-232.

Power: Sufficient to whole day recording without interrupt.

Warranty: Minimum one year

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Item No 4: Cabinet Dryer

Specification:

1. Drying of grain, fruits and vegetables in batch operation
2. Dryer should have stainless steel drying trays/shelves (20- 40 no.)
3. Temperature (0 to 100°C) and air flow/velocity controller
4. Humidity ranged 15-95%. But RH controller is optional
5. Provision of digital display
6. Separate data logger for storing and storing data
7. Warranty and free service 24-36 months after installation of equipment

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Item No 5: Hot Air Oven

Specification:

1. Interior internal volume: 750 litres or more.
2. Interior and exterior body of oven should be made of good quality corrosion resistant stainless steel materials.
3. Temperature range: operating from 10 °C above ambient temperature to 200 °C or above.
4. The inside temperature must be uniform at all the places in the oven
5. The unit should be fitted with at least 4 no. of adjustable stainless steel shelves.
6. Loading capacity of each shelf should be at least 20 kg.
7. The oven should be fitted with a fan with adjustable speed.
8. Air slider provision to eject the humidity formed inside the chamber.
9. Digital controller cum indicator for temperature setting
10. Digital temperature control with display and auto on - off at a fix set of time
11. The system should have the facility which ensures that the hold time does not start unless the desired set temperature is reached inside the chamber.
12. Visual alarm indicator alerts users of abnormal conditions if the chamber temperature exceeds the point by 5°C.
13. The Oven should have auto off system if inside temperature exceeds the set point by 5°C.
14. A standard factory calibration certificate should be provided.
15. It should be operating at electricity supply of 230 VAC and 50 Hz.
16. Voltage stabilizer with a capacity 5.0 KVA.
17. The necessary operation manual should be provided along with the equipment.

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Item No 6: Soil & Plant Grinder**Specification:**

1. Grinder should be suitable for reduction of size of air dried soil and plant samples of 25 mm or greater size
2. Final fineness should be in the range of 120-8,000 micron size with variable/adjustable sizes
3. Rotor speed: min. 1500-4500 RPM
4. The grinding parts should be made of hardened steel/ stainless steel materials
5. Power requirement 220 - 240 V / 50-60 Hz
6. All the standard accessories should be listed and included in the offer separately
7. Separate quotes should also be provided for each additional accessories like sieves, if applicable
8. A standard factory calibration certificate of particle size should be provided.
9. The firm shall submit necessary catalogues and product data sheets along with the offer.
10. The manufacturer should have a management system certified to ISO 9001 and CE certificate
11. Warranty: minimum 1 year after installation

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Item No 7: Sonicator

Specification:

1. Equipment should be suitable to clean test sieves of Ø 200 x 50 mm/ 8"x 2" with maximum frequency at 35 kHz.
2. Instrument should have bath capacity of min 40 litres & above
3. Tank dimensions should be more than (>) approx. 495 x 290 x 290 mm
4. Instrument should be suitable to clean minimum 5 test sieves of Ø 200 x 50 mm/ 8" x 2" at a time
5. Timer setting should be available
6. Suitable basket & lid to be provided
7. Power requirement 220 – 240 V / 50 – 60 Hz
8. A standard factory calibration certificate should be provided.
9. The firm shall submit necessary catalogues and product data sheets along with the offer.
10. The manufacturer should have a management system certified to ISO 9001.
11. Warranty: minimum 1 year

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Item No 8: Wet Sieve sets (Yoder Apparatus)

Specification:

1. Yoder type motor driven sieve shaker is for carrying out wet sieve analysis of soils material.
2. It should comprise of sets of nested sieves suspended from a bar which is oscillated by shaft crank driven by an electric motor moving at approximately 30 oscillations per min. The nested sets of sieves should move up and down through a vertical distance of about 3/5 cm submerged in a drum adequate capacity.
3. The drum should have an outlet to drain out the water.
4. It should consist of water reservoir (drum) and appropriate holder with manual adjustment for sieve to take up 7 sieves.
5. Three sets of sieves each having 20-25 cm diameter and 4-8 cm height with sieve opening of 5.0, 2.0, 1.0, 0.5, 0.25, 0.1 mm and 0.01 mm diameter. The sieves should be able to stack in descending order in the holder.
6. The shaker should be by ¼ HP motor through a belt drive.
7. Electrically operated. Suitable to operate on 220 to 230 volts in single phase A.C.
8. Automatic digital ON/OFF timer.

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Item No 9: Hot Air Oven**Specification:**

Hot air oven is needed for routine drying of plant samples and sterilization of glassware at high temperature (250-300 °C) with following specifications

1. The oven should ensure fast, uniform drying of glass wares and other laboratory materials.
2. It should have temperature range: Ambient + 5 °C to 300°C
3. Capacity/Size: Minimum 250 litres to Maximum :300 Litres
4. The oven should ensure uniform circulation even under full load with the help of Air heaters and the Air circulating fan for temperature uniformity inside the chamber and Homogeneous temperature conditions throughout loaded material
5. Safety features: It should have over temperature protection
6. It must have warranty period of at least 36 months w.e.f date of installation
7. A suitable voltage stabilizer should be supplied to control the power fluctuations during the operation
8. The vendor should provide a specification compliance sheet clearly mentioning for the deviations if any
9. The vendor should submit the entire technical document related to the equipment or model quoted for cross confirmation of specification compliance sheet provided by the vendor
10. The vendor should provide the user list to enquire about the performance of the equipment
11. Vendor should ensure the CE certification for the quoted model to ensure the quality of the product

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Item No 10: UV-VIS Spectrophotometer**Specification:**

That can measure the concentration and purity of nucleic acids, tissue sample, protein samples and the density of bacterial cell cultures at a broad range of sample volumes. It should measure enzyme kinetics.

1. It should be pre-programmed with a range of standard methods for the convenient quantification of proteins, nucleic acids, and bacterial cell cultures.
2. In addition, there has to be the flexibility to design and store methods. Double beam optical system.
3. Wavelength range 190- to 1100 nm.
4. Spectral bandwidth 1 nm.
5. Wavelength accuracy 0.1 to 0.5 nm or better.
6. Wavelength reproducibility ± 0.05 to 0.1 nm.
7. Light source of Xenon lamp/ halogen-deuterium/tungsten lamp.
8. Detector: silicon photodiode/Photo Diode array detector/PMT.
9. Power requirements 100–240 V, 50/60 Hz.
10. Quartz cuvettes (5 sets of 0.5 ml and 3 ml each) and glass cuvette (5 sets of 0.5 ml and 3 ml each) to be supplied.
11. Spectrophotometer to be controlled by an external PC with latest configuration computer along with printer.
12. Warranty: At least 3 years warranty from the date of installation.
13. Photometric range -3 to +3 Abs
14. CE certification/IEC 61010 compliance/certificate of analysis is should be specific for quoted model

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Item No 11: Sprayer-Tractor Operated (Mounted Blower)

Specification:

Tractor operated mounted blower

2. High resistant heavy duty plastic tank 200-300Lt
3. Stainless steel fan assembly min. 600mm dia.
4. High speed gear box, hydraulic tank mixing and pressure regulator
5. Anti-drip sprays nozzles (min. 12 Nos.)
6. Heavy duty diaphragm or equivalent ceramic plunger pump with all accessories

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Item No 12: Automated Blood Analyser

Specification:

Convenient and safe to use: Fully automatic integrated self-cleaning system for minimum maintenance. Cyanide free reagents to avoid environmental risks.

1. Compact size requiring small bench space. Large colour display.
2. High reliability and accuracy: Independent counting system for each species to ensure high accuracy
3. Fully integrated calibration and quality control programs for at least following parameters: WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT.
4. Multispecies additional parameters for other species also.
5. Histograms for WBC, RBC and PLT.
6. Principles should include electrical impedance method for counting or other advance methods.
7. Sample Volume: minimum.
8. Throughput: High.
9. Display: Colour LCD/LED display
10. Input /Output: RS232 X 2, 1parallel printer, 1 keyboard and their interface.
11. Printer: With various printout formats along with printer.
12. Operating environment: Temperature: 150 C-400 C
13. Power Requirement: 100-250V ~ 50/60 Hz
14. The machine should accompany UPS (for at least 1 hr) in case of power interruptions.
15. There should be a warranty period of two years for repair and maintenance from the date of installation.

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Item No 13: Viscosity Meter**Specification:**

A viscosity meter is required for viscosity measurement of viscosity of samples including biological at various shear rates. The equipment should have following options

1. It should be able to measure viscosity of sample less than 1 mL
2. The equipment should be able to measure the viscosity of samples both at low and high temperature *i.e.* below 0°C to 100 °C or better range
3. It should be compatible with highly corrosive samples
4. It should be supplied with appropriate software for automated determination of molar mass, intrinsic viscosity, relative viscosity and other polymer-specific parameters
5. The speed range: Minimum 5rpm and Maximum 1000rpm or better to determine the viscosity of samples at variable rpm
6. Viscosity range should be : Minimum 0.2 poise and Maximum 10000 poise or better
7. The shear rate should be: Minimum 10 Sec⁻¹ and Maximum to 10000 or better
8. It should be supplied with the set of necessary accessories e.g. spindles/piston, etc.
9. It should have CE or equivalent certification
10. The vendor should ensure at least 36 months warranty w.e. f date of installation
11. The vendor should provide a specification compliance sheet clearly mentioning for the deviations if any
12. The vendor should submit the entire technical document related to the equipment or model quoted for cross confirmation of specification compliance sheet provided by the vendor.
13. The vendor should provide the user list to enquire about the performance of the equipment

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Item No 14: Vacuum Concentrator**Specification:**

1. A Vacuum concentrator should be able to fast, efficient and moderate vacuum concentration of biological and DNA/RNA, nucleotides, proteins, liquid or wet samples is required. The system should have facility for vacuum concentration at low temperature should be available.
2. The system should be a complete with integrated solvent resistant, maintenance and oil free pump and condensation trap.
3. System and pump should be made of noncorrosive material and should be highly resistant for mineral acids and organic solvents
4. System should have at least three operational modes for Aqueous, Alcohol and Highly Volatile solvents.
5. System should possess at least four temperature selections (room temperature, 30 °C, 45° C, and 60 °C) to allow safe and efficient concentration of biological samples and additionally 40C for concentrating the samples at low temperature is required.
6. System should support Centrifugation and Desiccator function
7. It should have a rotational Speed at least 1,400 rpm or more.
8. System should have imbalance detection function
9. System should support multiple lab ware formats including 0.2 ml, 0.5ml, 1.5ml, 2 ml, 15ml falcon tubes, 50 ml falcon tubes, 96 well PCR plates, MTP and Deep well plates with different rotors. All the required rotors to fix all above mentioned wares should be supplied.
10. System should be able to concentrate samples volume up to 300 ml or more.
11. All the rotors and adapters to be supplied must be autoclavable.
12. Vacuum generated should be a minimum of 20 hPa (20 mbar) or more
13. System should have an emission condenser to purify outlet air.
14. The system should be supplied with a suitable cold trap
15. Rotor for 1.5/2ml with 48 positions and 0.2 ml, 0.5ml, 1.5 ml, 2 ml, 15ml falcon tubes, 50 ml falcon tubes, 96 well PCR plates, MTP and Deep well plates 15 ml and 50 ml falcon tubes should be supplied.
16. The vendor should submit the entire technical document related to the equipment or model quoted for cross confirmation of specification compliance sheet provided by the vendor.
17. The vendor should ensure at least three year warranty
18. The vendor should provide the user list to enquire about the performance of the equipment
19. Vendor should ensure the CE certification for the quoted model to ensure the quality of the product
20. Supply of all the required tool kits (spanner for changing and tightening of rotors) is compulsory

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Item No 15: DSLR Camera**Specification:**

A high end DSLR camera is needed for quality picture for documentation of microbial culture and experiment observations with following features.

1. It should have resolution at least 36 mega pixels or higher
2. A good quality vibration reduction lens for better image capture should be quoted as optional item
3. It should have custom picture control facility covering maximum diverse modes of imaging
4. It should have at least two card slots for backup and storage of data
5. It should be compatible with divers type of lenses
6. It should have inbuilt flash and additional compatible flash may be supplied as an optional accessories
7. It should have inbuilt display of minimum 8 cm or above
8. It should have inbuilt USB port (USB 3.0 or better along with the connector)
9. It should supplied with one additional rechargeable battery for emergency backup
10. It should have inbuilt GPS sensing ability or an external high-end compatible GPS sensing Unit should be supplied
11. Camera should be supplied with a good quality dust protective cover, Battery Charger with either an AC wall adapter or power cable of a type and shape that is compatible to India, USB Cable Clip, and HDMI Cable Clip, USB Cable and other necessary accessories and software CD etc.
12. A tripod stand for holding the camera should be quoted as an optional item
13. All necessary accessories should be supplied with the camera
14. Vendor should ensure at least 2 year onsite warranty w e f date of installation.
15. All the technical documents should be supplied with technical bid

**Signature of the Bidder
(with firm seal)**

Item No 16: Urea Briquetting Machine

Specification:

1. Capacity: 200 to 300 kg briquettes/hrs
2. Size and shape: Uniformity in size and shape of the briquette.
3. Power source: (1) 5-7 hp electric motor (2) can operate with power tiller.
4. Weight: 300 to 400 kg.

**Signature of the Bidder
(with firm seal)**

Item No 17: SPAD Chlorophyll Meter

Specification:

1. Equipment should be suitable for the measurement of chlorophyll content or greenness of plant leaves.
2. Measurement area: 2mm X 2mm or more.
3. It should be suitable for leaves having thickness of 0.8-1.0 mm or greater range.
4. Accuracy: $\pm 3\%$ within 0-100 SPAD units.
5. Display: LCD panel with minimum 3-digit measurement value.
6. Display range: 0-100 SPAD units or better.
7. Operating temperature: 30 to 50 0C or greater range.
8. with warring buzzer or alternative warning indicator.
9. A standard factory calibration certificate should be provided.
10. The firm shall submit necessary catalogues and product data sheets along with the offer.
11. Equipment should be provided with all the standard accessories, optional quote for accessories may be provided if required.
12. Warranty: minimum 2 years.
13. Optional: data logger facility to store at least 3000 measurements.

**Signature of the Bidder
(with firm seal)**

Questionnaire

BIDDERS SHOULD FURNISH SPECIFIC ANSWERS TO ALL THE QUESTIONS GIVEN BELLOW. IN CASE A QUESTION DOES NOT APPLY TO ABIDDER, THE SAME MAY PLEASE NOTE THAT IF THE ANSWERS SO FURNISHED ARE NOT CLEAR AND/OR ARE EVASIVE, THE BID WILL BELIEABLE TO BE IGNORED.

1. Bid No..... date for bid opening on

2. Offer is open for acceptance:

3. Brand of goods offered:

4. Name & address of manufacturer:

5. Station of Manufacturer:

6. What is your permanent Income Tax A/C/ N. (PAN No.)

7. Confirm whether you have attached your

Latest/current ITCC or certified photocopy

thereof.

8. Status:

a) Are you currently registered with the Directorate General of supplies & Disposals (DGS&D) for the items(s) quoted? If so, Indicate the date up to which you are registered and whether there is any monetary limit on your registration.

b) Are you a small scale unit currently? Registered with the National Small Industries Corporation (NSIC) under Single Point Registration Scheme for the Items (s) quoted? If so, indicate the date up to which you are registered and whether there is any monetary limit on your registration.

c) If you are not registered either with NSIC or DGS&D, please state whether you are

**Signature of the Bidder
(with firm seal)**

ANNEXURE I to Tender Document No.4-6/16-17

currently registered with Directorate of industries of the State Government concerned. If so, indicate the date up to which you are registered and whether there is any monetary limit on your registration.

d) Are you registered under the Indian Companies Act. 1956 or any other Act.? Please attach certified copy (copies) of the Relevant registration certificate (s) in Confirmation to your above answer(s).

9. Please indicate:-

Whether you are:

- i) Manufacture of the goods quoted; or
- ii) Manufacture's authorized agent for those goods.

10. State whether business dealings with you have been Currently banned by any Ministry/Dept. of Central Govt. or any State Govt.

Signature of Witness

Name & address of Witness

Full name, designation &
Address of the person signing above
For and on behalf of M/s

(Name and address of the bidding firm)

Signature of the Bidder
(with firm seal)

Annexure- II

Price -Bid

Please submit as per BOQ in the CPP Portal

**Signature of the Bidder
(with firm seal)**