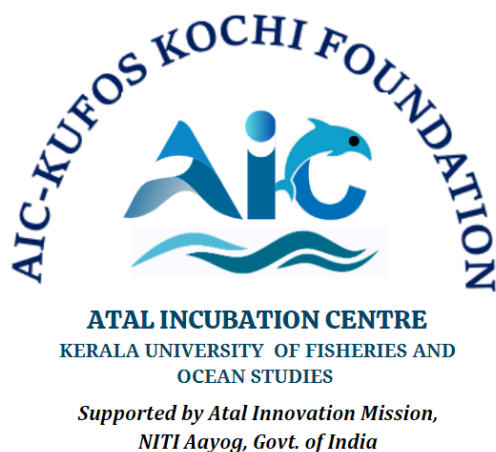


**TENDER DOCUMENT
FOR THE SUPPLY, INSTALLATION AND
DEMONSTRATION OF NUTRITIONAL ANALYTICAL
EQUIPMENTS**



**Atal Incubation Centre- KUFOS
Kerala University of Fisheries and Ocean Studies
Panangad P.O Kochi, Kerala - 682506, India
October, 2026**

INVITATION FOR TENDER

Ref No. AIC-KUFOS/2026/87

23/10/2026

AIC-KUFOS Kochi Foundation, Atal Incubation Centre (AIC-KUFOS), invites sealed/online competitive bids from eligible and qualified manufacturers/authorized suppliers for the Supply, Installation, Testing, Commissioning and Trial Run of the following equipments at the maker space of AIC-KUFOS, Kerala University of Fisheries and Ocean Studies (KUFOS), Kochi.

1. Protein analyzer
2. Fat analyzer
3. Fiber analyzer
4. Muffle furnace
5. Hot air oven

1. SCOPE OF WORK

The successful bidder shall be responsible for:

1. Supply and delivery of the protein analyzer, fat analyzer, fiber analyzer, muffle furnace and hot air oven which includes required accessories.
2. Transportation and installation at the designated laboratory.
3. Testing and commissioning of the equipment.
4. Demonstration and basic operational training to designated personnel.
5. Supply of user manuals, warranty certificate and technical documentation.
6. Providing necessary after-sales service and technical support.

2. TECHNICAL REQUIREMENTS

1. KJELDAHL PROTEIN ANALYSER

Sl. No.	Parameter	Minimum Technical Requirement
A. Digestion System Unit		
1.	Digestion technology	Kjeldahl digestion system using a controlled heating block or equivalent technology for uniform digestion.
2.	Sample capacity	Minimum 6 samples simultaneously or better
3.	Digestion tubes	Compatible digestion tubes with a nominal capacity of at least 300 mL.
4.	Temperature control range	The digestion system shall provide electronically regulated temperature control over a range of 100°C to 400°C or better
5.	Temperature display	Digital display of set and actual temperature.
6.	Temperature repeatability	The temperature setting repeatability shall be approximately $\pm 1^\circ\text{C}$.
7.	Programming	Adjustable/programmable digestion time
8.	Over-temperature protection	Built-in over-temperature protection.
9.	Completion / error alerts	Audible or visual indication of cycle completion and operational errors.
10.	Fume extraction	Exhaust enclosure and suitable fume extraction arrangement, including water-jet pump or equivalent where appropriate.
11.	Fume scrubber	Suitable acid-fume scrubber for treatment/neutralisation of fumes generated during digestion.
12.	Accessories	Compatible digestion tubes, tube rack with bottom support, acid drip tray, tubing and essential installation accessories.
13.	Electrical supply	Compatible with 230 V AC, 50 Hz laboratory supply; bidder shall state power requirement.
B. Automatic Distillation Unit		
14.	Automation	Automatic Kjeldahl steam distillation with automatic alkali dosing and dilution-water addition where required. Automatic tube emptying shall be stated if included.
15.	Steam generator	Built-in steam generator providing a consistent steam supply for distillation.

16.	Alkali dosing	Automatic dosing pump with adjustable volume and calibration facility.
17.	Nitrogen recovery	>99.5%
18.	Reproducibility	+/- 1 %
19.	Display	Digital display of operating parameters and process status.
20.	Construction materials	Corrosion-resistant materials suitable for the reagents used.
21.	Programmable parameters	Adjustable/programmable alkali dosing, reaction time, distillation time and steam output, as applicable.
22.	Process monitoring	Monitoring of relevant operating parameters and process status.
23.	No. of Programmes	Provision to create and store user-defined analytical methods. Bidder shall state the number of stored methods.
24.	Data management	Data storage and export through USB or equivalent. Any Wi-Fi or LIMS connectivity shall be stated separately.
25.	Safety features	Suitable safety sensors/interlocks for tube placement, cooling-water supply, steam-generator liquid level and other relevant operating conditions.
26.	Completion / error alerts	Audible or visual alerts for completion, operational errors and abnormal conditions.
27.	Cooling water	Suitable cooling-water supply arrangement or compatible chiller, as required by the offered system.
28.	Electrical supply	Compatible with 230 V AC, 50 Hz laboratory supply; bidder shall state power requirement.
C. Titration		
29.	Titration type	Separate titration arrangement for quantitative determination of ammonia in the distillate. Bidder shall clearly identify whether the offer is manual or automatic.
30.	Digital burette / titrator	Provide a digital dispensing burette for manual titration or a separate automatic titrator, as specified by the purchaser. State dispensing resolution, accuracy and endpoint detection method.

2. FAT ANALYSER (SOLVENT EXTRACTION)

Sl. No.	Parameter	Minimum Technical Requirement
1.	Function	Quantitative extraction/determination of fat in suitable food, feed and other solid or semi-solid samples.
2.	System type	Semi-automatic extraction system
3.	Sample capacity	Minimum 6 samples per batch or better
4.	Extraction principle	Soxhlet and/or Randall-type solvent extraction, suitable for the intended analytical method.
5.	Sample type	Solid and semi-solid samples.
6.	Sample size	0.1 to 8 gms or better
7.	Measurement range	0.1- 99.9% fat
8.	Solvent recovery	≥75% (higher is preferred)
9.	Sequencing System	Automatic Autosequencing PC Compatible System
10.	Solvent extraction system	Programmable Sample Solvent extraction system for oil/fat extraction with 5 stage extraction - boiling, Condensation, rinsing, solvent recovery and Predrying steps.
11.	Temperature Indication	Touch Screen Display
12.	Temperature Range	Ambient to 280°C.
13.	Temperature Accuracy / Precision	± 1° C
14.	Accessories	Extraction cup, thimbles, adapters, handling tools, and other essential accessories
15.	Safety Features	Inbuilt safety features like auto error indication, auto over temperature protection and auto sensor break protection.
16.	Power failure mod	In event of power resumption, holds previous programmed setting in memory & on power resumption starts from last & set value
17.	Electrical Requirement	230V/50 Hz. AC Mains.

3. FIBRE ANALYSER

Sl. No.	Parameter	Minimum Technical Requirement
1.	Function	System for determination of crude fibre and, where required, acid detergent fibre (ADF) and neutral detergent fibre (NDF) in suitable samples.
2.	System design	Closed, controlled system capable of carrying out the required digestion/extraction, rinsing and filtration steps.
3.	Sample size	≤ 1 gm or better
4.	Measurement range	0.1- 100%
5.	Reproducibility	± 1 %
6.	Reagent addition	Automatic, programmable addition of acid, alkali and rinse water, where supported by the offered system.
7.	Waste handling	Suitable collection, suction, drainage or removal of spent reagents and rinsing solutions.
8.	Sample handling	Automatic lifting or equivalent sample-handling mechanism,
9.	Sequential operation	Programmable sequence for reagent addition, rinsing and extraction/digestion steps.
10.	Heating surface	Chemically resistant heating surface suitable for the reagents used.
11.	Monitoring and alarms	Monitoring of relevant utilities such as cooling water or compressed air, where applicable, with error indication.
12.	Display and control	Digital display and control of relevant process parameters, including time and temperature where applicable.
13.	Cold extraction	Provide additional glassware/accessories for cold extraction if required by the intended methods.
14.	Configuration	Bidder shall clearly identify whether the system is crucible-based or filter-bag-based and list all configuration-specific accessories.
15.	Accessories — crucible-based system	crucibles of specified porosity, crucible stand, holders, reagent tanks and cold-extraction accessories as required for the offered capacity.

16.	Accessories — filter-bag-based system	required filter bags, heat sealer, marker, glass spacers, drip tray, incineration module and quartz crucibles, sample carousel and dosing accessories, as applicable.
17.	Consumables / reference materials	certified reference material and sufficient enzymes/reagents for the number of analyses specified by the purchaser.
18.	Software	Provide analysis/reporting software for crude fibre, ADF and NDF where these methods are offered.
19.	Safety	Over-temperature protection and suitable sensor-failure or abnormal-condition alerts.
20.	Electrical supply	Compatible with 230 V AC, 50 Hz laboratory supply; bidder shall state power requirement.

4. MUFFLE FURNACE

Sl. No.	Parameter	Minimum Technical Requirement
1.	Maximum temperature	1200°C
2.	Continuous Operation temperature (Up to 72 hours or more):	1100°C
3.	Chamber volume	Minimum internal chamber volume of 5 litres.
4.	Chamber geometry	Box/chamber type furnace.
5.	Door type	Front-opening flap or lift door, or equivalent safe-access design.
6.	Heating elements	High-temperature heating elements suitable for the specified operating temperature and replaceable for maintenance.
7.	Heating sides	Heating From two sides by ceramic heating Plates
8.	Thermocouple	S-type
9.	Air Inlet	Adjustable air inlet integrated in door
10.	Insulation	Fiber Insulation: Non-Carcinogenic
11.	Exhaust	Exhaust air outlet in rear wall of furnace

12.	Temperature controller	Digital PID programmable temperature controller with display of set and actual temperatures.
13.	Program capability	Programmable temperature ramps and dwell periods; bidder shall state the number of available segments.
14.	Temperature control accuracy	$\pm 1^{\circ}\text{C}$ or better
15.	Temperature uniformity	$\pm 5^{\circ}\text{C}$ or better within the defined working chamber, with test conditions stated by the bidder.
16.	Data recording	USB data recording or equivalent
17.	Power requirement	Not to exceed 2.4 kW at maximum temperature
18.	Electrical supply	Compatible with the laboratory electrical supply. Any requirement for 110–240 V, 50/60 Hz shall be verified against the installation and rated power.
19.	Safety	Over-temperature protection and a door safety interlock that interrupts heating when the door is open, where appropriate to the design.
20.	Accessories	Protective-gas inlet/outlet, flow meter and shut-off valve only if a protective atmosphere is required; quote separately if applicable.

5. HOT AIR OVEN

Sl. No.	Parameter	Minimum Technical Requirement
1.	Description	Rectangular, electrically heated hot-air oven suitable for laboratory drying.
2.	Application	Suitable for drying geological samples at $105\text{--}110^{\circ}\text{C}$ and drying agate and tungsten-carbide jars/balls, as specified by the purchaser.
3.	Maximum temperature	Maximum rated temperature of 250°C , if required; the intended routine operating temperature shall be stated separately.
4.	Temperature control	Digital temperature controller with display of set and actual temperatures.

5.	Temperature accuracy	Bidder shall state temperature control accuracy; target $\pm 2^{\circ}\text{C}$ or better if required by the application.
6.	Temperature uniformity	Uniformity of $\pm 4^{\circ}\text{C}$ or better at 150°C , if this performance level is required and can be verified.
7.	Heating performance	Bidder shall state heating time to the required operating temperature under defined test conditions. Specify heating/cooling rates only where operationally necessary.
8.	Construction	Heavy-duty frame, durable outer casing, corrosion-resistant inner chamber, adjustable shelves/trays and double-wall construction with suitable thermal insulation.
9.	Air circulation	Uniform natural or forced-air circulation appropriate to the intended drying application.
10.	Cooling arrangement	Provide a cooling arrangement only if required by the intended process; any specified forced-air cooling performance shall be stated by the bidder.
11.	Door assembly	Insulated, securely closing door with suitable gasket and safe access to the chamber.
12.	Safety	Over-temperature protection and suitable electrical protection. Door interlock shall be provided where required by the design and risk assessment.
13.	Power supply	230 V AC, 50 Hz, single phase, subject to the rated power of the offered oven.
14.	Power cord and plug	Power cable and plug rated for the instrument's electrical load and compatible with the laboratory installation.
15.	Accessories	Supply required shelves/trays and, if specified, heat-resistant gloves.

3. TESTING AND COMMISSIONING

1. The equipment shall be installed and tested at the designated location within 30 days from the date of issue of the Purchase Order
2. The bidder shall demonstrate the functioning of the specified systems and features.
3. The equipment shall be handed over only after satisfactory testing and commissioning.

4. Any defects identified during installation or commissioning shall be rectified by the bidder at no additional cost.
5. The supplier shall provide all essential accessories required for the proper operation, of the equipment.

4. ELIGIBILITY CRITERIA

- The bidder shall be the original manufacturer or an authorized dealer/distributor of the quoted equipment. In case of an authorized dealer, a valid authorization certificate from the manufacturer shall be submitted.
- The bidder should have successfully supplied, installed and commissioned at least two similar machines during the last 3 years.
- The bidder shall submit valid copies of:
 - GST Registration Certificate
 - PAN
 - Company/Firm Registration Certificate
 - GST returns/financial documents, if required
 - Manufacturer Authorization Certificate, where applicable
 - Relevant experience/supply orders and completion certificates
- The bidder shall submit a declaration that the firm/manufacturer is not blacklisted or debarred by any Central/State Government Department, Government institution, PSU or statutory body.
- The bidder shall duly fill, sign and stamp the prescribed Annexure I and II and submit the same along with the bid.

5. WARRANTY AND MAINTENANCE

- A minimum two year warranty shall be provided from the date of successful commissioning.
- Warranty shall include free maintenance of the whole equipment supplied including free replacement of parts. The defects, if any, shall be attended to on immediate basis but in no case any defect should prolong for more than 24 hours. The comprehensive warranty includes onsite warranty with parts.
- The warranty on the associated software should cover providing of upgraded version/s, if any, released during the warranty period free of cost.
- Warranty services shall be provided at no additional cost.
- The bidder shall also quote Annual Maintenance Contract (AMC) charges for three (3) years after the expiry of the warranty period.

6. PAYMENT TERMS

- Payment shall be made as per the terms specified in the Purchase Order.

- Payment shall be released after successful delivery, installation, testing and commissioning and submission of required documents.
- Applicable statutory deductions shall be made as per rules

7. PROPOSAL SUBMISSION

Interested eligible bidders are invited to submit their proposals in a sealed cover superscribed “Proposal for Supply, Installation, and Demonstration of Nutritional Analytical Equipments at AIC-KUFOS Kochi Foundation.”

The proposal shall consist of two parts: (i) Technical Proposal and (ii) Financial Proposal.

The Technical Proposal shall include the bidder’s profile, organizational details, relevant experience in the supply, installation and commissioning of similar equipment particularly for research institutions, universities, food processing units, incubation centres or comparable facilities. The technical proposal shall also include detailed technical specifications, make and model, product brochure/datasheet, compliance statement, installation and commissioning methodology, delivery schedule, training and demonstration plan, warranty and maintenance commitments, after-sales service details, and copies of all applicable statutory registrations and certifications.

The Financial Proposal shall provide a comprehensive cost estimate for the complete supply and execution of the work, clearly indicating the cost of the equipments, accessories, transportation, installation, testing, commissioning, demonstration, training, taxes, duties and any other incidental expenses necessary for the successful installation and functioning of the equipment.

The completed proposal shall be submitted to the Chief Executive Officer, AIC-KUFOS Kochi Foundation, Ground Floor, Academic Block, Kerala University of Fisheries and Ocean Studies (KUFOS), Panangad, Kochi – 682506, Kerala, on or before the prescribed due date and time. AIC-KUFOS Kochi Foundation reserves the right to accept or reject any proposal, either wholly or partially, without assigning any reason, and shall not be bound to accept the lowest quotation. Proposals received after the stipulated deadline shall be liable for rejection.

8. TIMELINE

- Tender publication date: 23/10/2026
- Tender closing date : 5/11/2026
- Tender opening date : 6/11/2026

ANNEXURE 1

GENERAL INFORMATION ABOUT THE TENDERER

1	Tender reference No.	
2	Date of submission of tender offer	
3	Details of EMD submitted (if any)	
4	Tender submitted by	
5	Name of Tenderer	
6	Registered address of the firm with GSTIN	
7	Telephone No.	
8	Email	
9	Name of the Principal Supplier (if not self)	
10	Authorization by the principal supplier (Attach details)	
11	Authorized contact person	
12	Designation	
13	Telephone No	
14	Mobile No	
15	Communication Address	
16	Telephone No	
17	Email	
18	Registration No. & Date of Registration	
19	Nature of Business	
20	OEM, Authorized dealer, Direct importer	
21	Key personnel Details (Chairman, CEO, Directors, Managing Partners etc.)	
	Name	
	Designation	
	Communication Address	
	Telephone No	

	Email	
11	Bank Details	
	Bank Account NO.	
	Bank Name & Address	
	Branch Name & IFSC Code	
	Telephone No & Email ID	
12	List of supporting documents submitted along with the tender	
	Any other relevant information	

Date _____ Office Seal _____ Signature of the bidder / Authorised signator _____

Annexure II

Eligibility criteria compliance statement

Sl.No	Criteria	Compliance (Yes/No)	Proof/remarks/deviations
1	Authorization certificate must be attached if the bidder is a dealer		
2	The supplier must have sold at least three numbers of the quoted item in South India in Government/ reputed institutions during last three years		
3	The bidder should not be Debarred/Blacklisted or Banned from any University/Government Institute/PSU and must produce an undertaking to this effect		
4	Purchase Order and performance certificate of the quoted model of equipment from five reputed customers during the last three year period.		
5	Copy of up-to-date GST registration certificate & PAN must be Submitted along with the Technical Bid		