KANNUR UNIVERSITY
(PMU D SECTION)

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ANRF/ANRF II - 3/1664/2026 29.01.2026

NOTICE INVITING E-TENDER

The Registrar, Kannur University invites E-tender(s) in Two Bid System (Two cover) for the supply, Installation, Testing and Commissioning **Gas Chromatography MS MS with Pyrolyzer** at **Department of Chemistry** Swami Anandatheertha Campus, Payyanur, Kannur University under ANRF Pair Project from original equipment manufacturers (OEMs) or authorized distributers/dealers as per the technical specifications and schedule given below. The rate quoted should be inclusive of all taxes, installation charges and other charges. The Registrar, Kannur University reserves the right to accept or reject the tenders without assigning any reason thereof. The list of equipment/accessories proposed to be purchased, including its quantity and specifications are furnished in the schedule of items given below. Since this is an e-tender, only those bidders who have enrolled in the http://etenders.kerala.gov.in portal with their own Digital Signature Certificate (DSC) can participate in the tender. E-Tender document and other details can be obtained from the above e-portal.

TENDER SCHEDULE

Tender ID	2026_KnrU_830949
Name of work	Supply, installation, testing and commissioning of **Gas Chromatography MS MS with Pyrolyzer (Quantity 1)**
Last date for receipt of Tender	**20.02.2026** , 11.00 AM
Date and time of opening tender	**21.02.2026**, 3.00 PM.
EMD	Rs: **1,03,840/-**
Tender fee	Rs: **15,600/-**{excl. GST}
All the MSMEs with Udyog Aadhar Registration working within the state of Kerala will be exempted from the payment of Tender Fee and EMD. Under MSME category, only Manufactures for Goods and Service Providers for Services are eligible for EMD/Tender fee exemption	
Place of supply and installation	**Department of Chemistry** Swami Anandatheertha Campus, Payyanur, Kannur University

or further details logon to http://etenders.kerala.gov.in.

Specifications for GCMSMS WITH PYROLYZER

Core specifications:

- Hyphenated Gas Chromatography and Triple Quadrupole Mass Spectrometry Detector for food safety and related applications.
- The complete system should come with modular accessories of injectors and detectors, changeable and upgradable by user.
- The entire part of Gas Chromatograph with auto sampling and detectors must be of same original equipment manufacturer (OEM).
- The GC must provide easy accessibility to the GC instrument control, health check, consumable management, and other parameters like associated with it.
- The pressure and flows must be independently controlled for all injectors and detectors through software.
- The GC must be able to house and operate with three detectors simultaneously, including a mass spectrometer. This can be a future field upgradable feature.

GC Oven:

- Operating temperature upto 450 °C.
- must allow for programmable temperatures including > 28/30-ramps/plateaus
- the maximum heating rate should be 125 °C/min or better
- Oven cooling must be in less than 5 minutes.
- Retention time repeatability < 0.008% or <0.0008 min or better
- The GC Oven must have an integrated light for easy access and user operations.
- The electronic pneumatic controls must be integral part of injector and detector modules and must not be installed into the oven mainframe.

Inlets/injectors:

The injector must provide a gas saving mode which reduces the split flow to a user-defined flow rate after a user-defined time.

Split/Splitless injector (Qty 1)with helium saver mode

- must be user-swappable in less than 3 minutes without requiring a field-service engineer or any special tools.
- The injector must be able to operate with capillary and wide bore (50 µm to 530 µm internal diameter) columns as well as packed columns.
- It must be possible to set the split ratio of the SSL injector between 0 and 12000.
- It should have 1000 kpa digitally controlled carrier gas with gas saver and septum purge
- It should be **provided** with Helium Saver module; wherein it should use Helium as carrier only during data acquisition and Nitrogen as split gas and purge gas flow throughout the data acquisition mode as well as during standby mode without any manual intervention

Autoinjector/Autosampler (Qty 1):

- The AS should have 150 vials capacity or more for 2ml liquid vials.

- The AS should be able to access both the injector ports without any manual intervention
- It should be able to inject from 0.1 to 100µL and should be able to do large volume injections
- It should be able to offer 2-layer injection mode: layers and air gaps with user definable volumes (i.e., sandwich injection, internal standard, or in-needle derivatization)

Software:

32/64 Bit Advanced Chromatographic integration software. Software should be user friendly & simple for data handling with feature like easy-to-use report publisher, online help and answer wizard, GLP & audit trail and fully compatible with Windows. Software should be compliant to GLP, GMP.

Ion Source

- The mass spectrometer must offer a wireless EI ion source made of solid, non-coated, inert material. The connections should be tool free and wire free for easy operations and user-friendliness.
- The ion source must be heated by a block heater up to 350 °C
- There should be dual filament assembly for EI and spare dual filaments should also be quoted.
- The electron energy must be user-definable, adjustable from 0 to 150 eV.
- GC transfer line must have a settable temperature limit of up to 400 °C, for ideal transfer of components from GC to MS.
- An off-axis ion guide must be provided after the ion source and before the analysing quadrupole
- The system should be capable of locking the vacuum, i.e., the removal of complete ion source and GC capillary column without venting the system. This will be an important criterion to enhance productivity in complex food safety applications.

Quadrupole Mass Analyzer

- The mass range must be 1.2 –1100 amu (u).
- The resolution must be ≤ 1.0 amu over the entire mass range
- The quadrupole analyzer must support fast scanning at 20,000 u/sec.
- The quadrupole rods must be made of inert, non-coated, and must be cleanable. Quadrupole must be metallic/quartz monolith quadruple robust enough to allow cleaning of any contaminates or quadrupole with pre-Quad rod to prevent containment to enter.
- The acquisition rate for SRM transitions must allow for measurement of more than 800 SRM per second.
- The minimum SRM dwell time must not be greater than 0.5 ms
- Installation Specifications **- both the specifications to be demonstrated during installation**, and shouldn't be a reference specification

Electron Ionization MRM/SRM

- 1 µL of 100 fg/µL octafluoronaphthalene (OFN) should produce the following minimum signal-to-noise for the transition from m/z 272 to m/z 222 S/N: 20000:1 or better

nstrument Detection Limit-

- 1fg or less OFN derived at the 99% confidence level from area precision of eight sequential injections of 1 µL,of 1 fg/µL OFN, acquired in EI SRM/MRM mode

Collision Cell

- The collision cell must use high-speed optics for maximum ion transmission.
- The collision energy must be adjustable in the range of 0 – 60 eV in user-programmable increments of 1 eV.
- The collision cell must support minimum SRM dwell time of 500 µs.
- The collision cell must have the capability to run with argon collision and SRM installation specifications run using this gas

Detection System

- The detection system must utilize digital electronic noise discrimination and a new generation discrete dynode electron multiplier.
- The detection system must provide electronic dynamic range greater than nine orders of magnitude (>10^7).

Vacuum System

- The vacuum system must use an air-cooled high vacuum pump (>300L/s) and include control and safety interlocks integrated into the GC-MS system
- The vacuum system must include 3.3 m^3/hr rotary-vane oil fore-pump.

Instrument Control

- The instrument control must have the ability to acquire data in centroid, profile or nominal modes.
- The instrument control must support the following scan modes:

a. MS Mode: full scan (FS), SIM and FS/SIM simultaneous within a single sample injection,
b. MS/MS Mode: full scan (FS), SRM and FS/SRM simultaneous within a single sample injection
c. Product ion scan
d. Precursor ion scan
e. Constant neutral loss scan

- The instrument control must have the ability to alternate between Full Scan MS and SRM/SIM target analysis on successive scans.
- The instrument control must include an automated SRM method development tool, which allows for automated, user-selectable criteria-guided SRM method development.

Software:

- 32/64 Bit Advanced Chromatographic integration software. Software should be user friendly & simple for data handling with feature like easy-to-use report publisher, online help and answer wizard, GLP & audit trail and fully compatible with latest Windows.

- A single software should control and acquire data for all the modules including headspace and MS. The system should be provided with latest & licensed original copy of NIST library.
- Relevant database related to food applications to be quoted.
- Fully automated data acquiring & processing software with original CD should be quoted with catalogue number.
- It should have easy automatic method development feature

Pyrolyzer

Max Temperature: 1000 °C or higher 2] Temperature Programmability:Yes, Temperature programmability with minimum 4 steps 3] Temperature Accuracy: ±0.1°C or better 4] Reproducibility of pyrogram: ≤2% (RSD) for polystyrene 5] Sample tube: Quartz/SS 6] GC Mount : Directly or through transfer line (If it is through transfer line max. Temperature of the transfer line should be mentioned) 7] Should be capable of Pyrolysis (PY), Evolved Gas Analysis (EGA) & Multi-step pyrolysis 8] Library: Built in polymer pyrolysis library for standard polymers should be provided

Following consumables/additional utilities need to be provided

- 1 column each- polar, mid polar and non polar, application specification columns
- Graphite/Vespel ferrule for 0.25mm ID Column Qty 2
- Graphite/Vespel ferrule for 0.32mm ID Column Qty 2
- Graphite ferrule for 0.1mm to 0.32mm ID Column Qty 2
- Graphite/Vespel ferrule for 0.53mm ID Column Qty 2
- Injector Septa - Qty 100
- Capillary Column nut for S/SL Injector – each Qty 2
- 10ul Liquid Auto Sampler Syringe – Qty 5
- 2ml size vial with cap & septa – Qty 200
- Vacuum Pump Oil 1 ltrs – Qty 2
- Filament – Qty 2
- Liner sealing ring for S/SL– each Qty 5
- Split & Splitless Liner for S/SL– each Qty 5
- Inlet seal for Split & Splitless mode- each Qty 5
- Capillary column cutter – Qty 1
- Calibration compound FC-43 – Qty-1
- Replacement Filter – 1
- Aluminium Oxide – 1
- Ferrule for MS – 1
- System bundled Branded PC i5, 18 GB RAM, 1 TB HDD, Optical mouse, 24” LCD/LED – 1 No.
- NIST 2023 library.
- Gas cylinders for Hydrogen, Argon, Zero Air, Nitrogen – 1 No each, Dual stage regulators – 1 No. for each gas
- Wall mount Gas purification and control system for gases
- A branded UPS System (minimum 10KVA,with one hour back up) with input/output phases as per the requirements of GCMSMS must be provided.

- **The vendor should provide list of at least 10 installation of similar system in Indian Universities/ Colleges / IITS/NITs/IISER and other government research laboratories with their contact details in last 3 years**
- **The vendor should have proper qualified engineer/s located near to our place for prompt and efficient after sales services for the next at least 10 years.**
- **Quoted item should be the latest model with the availability of all the parts and required accessories for at least 10 years**
- **Warranty of the equipment :3 Years**

Terms and Conditions

1. The tender should be submitted in two cover system (Technical bid & Financial bid).
2. Prices shall be quoted in Indian Currency only.
3. **Tender fee and EMD should be remitted through SBI MOPS as indicated in the e-Tender website. All payments including EMD should be made through online but 18% GST of Tender fee should be remitted to GST Department directly. The bidder shall be solely responsible for the payment of GST. The University holds no responsibility or liability in this matter.**

Item	Tender Fee (₹)		EMD (₹)
	Fee	18% GST	
Gas Chromatography MS MS with Pyrolyzer	15,600/-	2808/-	1,03,840/-

4. **All the MSMEs with Udyog Aadhar Registration or any other body specified by the Ministry of Micro, Small and Medium Enterprises working within the state of Kerala will be exempted from the payment of Tender Fee and EMD. Under MSME category, only Manufactures for Goods and Service Providers for Services are eligible for EMD/Tender fee exemption.**
5. The bidders shall keep their rate firm for a period of **120 days**.
6. The successful bidder shall, before signing the agreement and within the period specified in the letter of acceptance of his tender, deposit a sum equivalent to 5 **% of the value of the contract** by way of Demand Draft drawn in favour of the Finance Officer, Kannur University payable at SBI Kannur Branch or Kannur Branch of other Nationalized or Scheduled bank, **as security** for the satisfactory fulfilment of the contract.
7. The total rate tendered should be inclusive of all taxes and other charges.
8. All bid/tender documents are to be submitted online only and in the designated cover(s)/envelope(s) on the website. Tenders/bids shall be accepted only through online mode on the website and no manual submission of the same shall be entertained.
9. Profile of Bidder as per Annexure1 shall be provided.
10. The earnest money of the unsuccessful bidders will be returned through ONLINE Transaction and the EMD of successful bidders will be discharged upon the bidder executing the contract and

furnishing the security deposit that will have to be deposited for the satisfactory fulfilment of the contract.

11. The bid shall contain detailed technical specifications, Brochures and pamphlets of all items quoted.
12. All the claimed specifications (make, model, year of manufacture, warranty etc) should be mentioned in the Brochure or Catalogue of the equipment
13. The installation, commissioning and the initial operation will be the responsibility of the supplier.
14. In case of under performance during the warranty period, the item should be replaced and the period of warranty will recommence from the date of replacement.
15. The payment will be made after completion of supply, installation and commissioning.
16. The bidder shall undertake to supply materials according to the standard sample and /or specifications.
17. No representation for enhancement of rates once accepted will be considered.
18. The bidder shall quote their rate in the standard BOQ provided indicating the break up details.
19. The supplier shall ensure the quality of the stores supplied.
20. The provisions of Kerala Stores Purchase Manual are applicable to this Tender and further proceedings.
21. The University reserves all rights to accept or reject any or all the tenders without assigning any reason whatsoever at its discretion.
22. The bids shall be opened online at Kannur University on the date mentioned in Invitation Bid. If the date fixed for opening happens to be a holiday/due to net failure, tender will be opened at the next working day at the same time.
23. The bidder should have the responsibility to attend the first level service if any complaint report.
24. The final acceptance of the tenders rests entirely with the University who do not bind themselves to accept the lowest or any tender. But the bidders on their part should be prepared to carry out such portion of the supplies included in their tenders as may be allotted to them.
25. Communication of acceptance of the tender normally constitutes a concluded contract. Nevertheless, the successful bidder shall also execute an agreement for the due fulfilment of the contract within the period to be specified in the letter of acceptance. In cases where a successful bidder, after having made partial supplies fails to fulfil the contracts in full, all or any of the materials not supplied may at the discretion of the Registrar, be purchased by means of another tender/quotation or by negotiation or from the next higher bidder who had offered to supply already and the loss, if any, caused to the University shall thereby together with such sums as may be fixed by the University towards damages be recovered from the defaulting bidder.

DOCUMENTS TO BE SCANNED AND UPLOADED

1. Bidder Profile (As per format mentioned in Annexure1)
2. Scanned copy of valid registration certificate (GST) & PAN Card
3. Scanned copy of relevant Brochure of the equipment including make & model and copy of its certifications like ISO certification.
4. Copy of payment receipt of tender fee and EMD
5. Address details of active/ functioning Service Centres in Kerala or nearby regions

6. Details of previous installations in India within last 5 years.
7. Valid authorization certificate from OEM (in case of resellers)
8. Warranty details

Sd/-
Prof. (Dr.) Joby K Jose
Registrar

ANNEXURE 1
BIDDER PROFILE

Sl.No	**Particulars**	
Details of bidder(Firm/Company)		
1	Name	
2	address	
3	Telephone & Mob	
4	Email & website	
Details of Authorized Person		
5	Name	
6	Address	
7	Telephone & Email	
Information about the company		
8	Status of Company (Public Ltd./Pvt.Ltd)	
9	Details of Registration of Firm (Provide Ref.)	
10	Number of Professionals	
11	Location and address of offices (in India & overseas)	
12	Service Tax Registration Number	
13	Income Tax Registration Number (PAN)	
14	GST Registration Number	

Signature of the Bidder