

To whom it may concern

This is a Request for a quote (RFQ) from domestic (India-based) manufacturers or their authorized Indian distributor for the procurement of a **Gas Chromatography system with Flame Ionization Detector (FID)** at the Centre for Sustainable Technologies (CST), Indian Institute of Science, Bangalore.

All interested vendors shall submit a response demonstrating their capabilities to produce the requested equipment to the primary point of contact listed below.

The deadline for submission of bids is 24 Nov 2022 (5 PM IST). Proposals should arrive at the Department Office, Room No. 405, Centre for Sustainable Technologies, Indian Institute of Science, Bangalore, Karnataka 560012, India.

Direct all questions concerning the acquisition to **Dr. Navneet Kumar Gupta** by email only at: nkgupta@iisc.ac.in

General Terms and Conditions

1. Quote should come only from the Original Global Equipment Manufacturer (OEM) or their authorized Indian distributor.
2. The bid should be submitted in the two-cover system, i.e., technical bid and commercial bid separately in sealed covers. The technical bid should contain all commercial terms and conditions, except the price.
3. The technical bid must contain a point-by-point technical compliance document. The technical proposal should contain a compliance table that should describe your compliance in a "yes" or "no" response against each of the items in the table listed in this RFQ. If the response is "no", the second column should state the extent of the deviation. The third column should state the reason for the deviation if any. The fourth column can be used to compare your tool with that of your competitors or provide details as requested in the technical requirement table below.
4. Price of every line item in the commercial bid should be quoted along with the total quoted price for the instrument to be operational (installed and ready to use) in our facility. Please quote the price of each optional line item separately.
5. The vendor should have qualified technical service personnel for the equipment based in India (preferably in Bangalore).
6. The lead time for the delivery of the equipment should not be more than 3 months from the date of receipt of our purchase order. It should be clearly mentioned in the technical and commercial bids.
7. All quotations must be valid for at least 90 days at the time of submission.
8. List of customers and references: The Bidder should have supplied similar equipment in Central Universities preferably in centrally Funded Technical Institutes (IITs, IISc, IISERs, NITs). Please provide the details and contact information.
9. The Bidder must NOT be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect should be provided.
10. Items in addition to that listed in the technical table that you would like to bring to our attention, such as data sheets, technical plots, etc. can be listed at the end of the compliance table.
11. Vendors are encouraged to highlight the advantage of their tools over comparable tools from the competitors.

12. If needed, a meeting for any technical clarifications can be scheduled with the undersigned by sending an email.
13. The Institute reserves the right to accept or reject any bid or to annul the bidding process and reject all bids, at any time prior to the award of the contract without thereby incurring any liability of the affected bidder or bidders.
14. After the award of the purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order.
15. The vendor should have a good track record of having previously supplied a minimum of 5 GCs in IISc Bangalore and a minimum of 50 GCs in the Karnataka region and should be able to provide End User Certificates from at least five users.
16. If the goods are found to be defective, they have to be replaced or rectified at the cost of the supplier within 30 days from the date of receipt of written communication from us.

Service, Training, and Warranty

1. The vendor must have local dedicated Sales & Service team & Application lab in Karnataka.
2. The vendor must demonstrate that it has a proven appropriate set-up and capability to provide after-sales service efficiently and effectively. The supplier should have a similar system in their facility to that proposed in this tender for training purposes.
3. On-site installation, commissioning, and training shall be conducted by a qualified factory-trained engineer.
4. Support should be available from Monday to Friday, 8:30 am to 5:30 pm (excluding Public Holidays), local time.
5. A declaration of Conformity certificate and System Validation certificate must be provided. All modules must be GLP compliant.
6. Warranty terms and additional warranty options are a must for all the components. Please specify the service plan, like whether the local distributor will address the issue or the parent company. A minimum of three years of complete system warranty should be given. If the system requires service during the warranty period, the vendor must guarantee or replace of instrument for free. Vendor to have logistic support to ensure that over at least 95% of the service parts are readily available and upkeep delivery within 24 hours.
7. Terms and conditions for the annual maintenance contract beyond the warranty period should be mentioned.
8. If there is any delay in replacement or rectification, the warranty period should be extended accordingly.

Technical requirements: Please note that the requirements listed below are only guidelines. Vendors are requested to quote for equipment that meets the criteria to the best extent possible and list deviations if any. Deviations are NOT an automatic reason for disqualification. They will be discussed by a technical group prior to making an informed decision.

Technical Specification: Gas chromatography system with Flame Ionization Detector (FID)

Gas Chromatograph configured with a Capillary injector port, Flame ionization detector, & Automated liquid injector should be quoted as per the following specifications.

Column Oven	<ul style="list-style-type: none"> • Column Oven should have the provision to accommodate two or more columns • Operating temperature range of the column oven from near ambient +4°C to a maximum of 450 °C with a set point resolution of 0.1 °C • Column oven should support 15 ramps & maximum temperature ramp rate of 70°C/min • Cool down of Oven from 450 °C to 50 °C in less than 3.5-4 minutes • Oven power must turn off automatically when the lid/door is opened • Auto retention time adjustment feature • Auto leak detection • Interactive screen with display of real-time parameters going into the instrument
Inlets	<p>Capillary Split/Splitless Injector</p> <ul style="list-style-type: none"> • Inlet should have Advanced electronic flow control modules with Pressure set points adjustable in increments of 0.001 psi and a pressure range of up to 100 psi. The Inlet Split ratio should be at least 7000:1 or better and suitable for all capillary columns from 530 µm to 50 µm or smaller • Inlet maximum operating temperature should be at least 400 °C or better
Auto Sampler/Injector	<ul style="list-style-type: none"> • GC should be equipped with an auto-sample injection device and a software-controlled sampler • Vial capacity of 150 vials or more with 2 mL vial volume for liquid injection • Should inject sample volume 1 to 80% of syringe capacity. • Viscosity delay should be available up to 60s.
Detector	<ul style="list-style-type: none"> • GC should be equipped with a Flame Ionization Detector (FID) • FID should have a data acquisition rate of 200 Hz or more • Flameout detection and re-ignition should be possible • Maximum operating temperature should be 450 °C or more • FID should have a minimum detection limit of 1.5 Pg carbon/s or better for dodecane/tridecane or equivalent • FID should have a linear dynamic range >10⁷ • Automated flow control for H₂, Air and Makeup gas, or any other necessary gases
Instrument Performance	<ul style="list-style-type: none"> • Retention time repeatability should be <0.0008 min and Peak area repeatability < 1 % RSD. • Integrated leak check function allows you to easily check for leaks and self-diagnosis function with safety features. • Must be able to install independently temperature-controlled injectors up to 2 Nos and detector units up to 3 Nos. • Should be field upgradable to detector splitter or column backflush.
Computer and Software Features	<ul style="list-style-type: none"> • Latest Branded 64-bit computer with Intel i5 or better processor, minimum 8 GB RAM, 2 TB HDD, DVD drive, minimum 7200 RPM SATA hard drive, minimum 20" branded monitor, keyboard and mouse with Licensed Windows® 10 OS • Original software with a license to control GC, data acquisition, and data analysis • Monochrome laser printer

Accessories	<ul style="list-style-type: none"> Hydrogen, nitrogen, zero Air-gas cylinders (1 each) with the regulator, gas purification panel, and manifold for each gas which can switch from empty cylinder to filled cylinder. Enough tubing should be supplied so that cylinders can be connected with GC. Interested vendors can visit and inspect the site and distance from the lab to the cylinder hub. All connectors and essential accessories for the full installation and working of the GC system Standard accessories with additional SS/plastic tubing, ferrules, wrenches, etc. 5 KVA UPS system with 60 mins backup should be provided
Consumables	<ul style="list-style-type: none"> Auto-Injector 10 μL syringes – 6 nos Screw cap vial for autosampler – 500 nos Autosampler vial glass insert (100 - 150 μL with plastic feet): 500 nos Septa Non-Stick BTO Inlet 11 mm 200 nos Ferrule, 0.5mm Graphite 0.32 col – 30 nos FID Jet, universal fit – 1 no (optional) Gas Filter Kit to be included
Capillary column	<ul style="list-style-type: none"> Two columns should be provided: Restek RTX-5 Amine (30 x 0.32 x 1.50) column for amines analysis and another HP-5 (30 x 0.25 x 2.50) column (equivalent) for hydrocarbon analysis
Warranty	<ul style="list-style-type: none"> Three years comprehensive warranty to be offered on the entire system
Training	<ul style="list-style-type: none"> Onsite demonstration and training for the faculty/scientists/students to be provided periodically for the handling of the system and its application
Optional items:	
Total warranty of 3 years + 2 years AMC optional	

Other Requirements

1. The payment terms should be specified in the commercial proposal, which should be consistent with IISc's domestic purchase policies.
2. Please provide details of the number of trained personnel in India, the number in the southern region, or Bangalore who can service the instrument.
3. Please include other options currently available which can be added in the future.
4. The vendor should attach product brochures along with the technical bid.
5. A set of basic experiments for performing routine checks of acceptable operation with clear instructions to be provided. A standard sample to estimate column efficiency should be included.
6. The quotations should be on FOR-IISc Bangalore basis in INR only.

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