

**INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE
2A & 2B, Raja S.C.Mullick Road, Jadavpur, Kolkata-700032**

TENDER NOTICE NO: OC/JG/SB/S5/GC-08/2014/02/217 dated 12.02.2015

Sub: Tender for GCMS System

Sealed tenders in two bids system (Technical Bid & Financial Bid) are invited from bonafide, resourceful and eligible manufacturers/exclusive distributors for **GCMS System**.

Part I (Technical Bid) of the tender should contain technical details and commercial terms and conditions and Part-II (Price Bid) should indicate group-wise price as mentioned in the Technical Bid where applicable. The Technical Bid and Price bid are to be submitted in two separately sealed envelopes distinctly marked accordingly and both to be put inside another envelope, which should be sealed and super scribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

The complete tender bids should reach the office of the Registrar (Dispatch Section), Indian Association for the Cultivation of Science (IACS), 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032 on or before scheduled date & time specified below:

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| Tender Notice No. | OC/JG/SB/S5/GC-08/2014/02/217 dated 12.02.2015 |
| Last date and time of submitting tender: | 13 th March, 2015 at 2.00 P.M. |
| Pre-bid meeting to discuss technical specification | 24 th February, 2015 at 3.00 P.M. Room No 98B, IACS |
| Date and time of Technical Bid opening | 13 th March, 2015 at 3.00 P.M. |
| Place of opening tender | Room No 98B, IACS IACS, Kolkata |
| Contact | e-mail: ocjg@iacs.res.in Tel. +91-33-2473 4971 (Extn. 1426) |

The technical bids will be opened first to evaluate the technical specifications of the equipment thereafter, the Price bids of only technically qualified bidders will be opened.

Technical Bid Evaluation: The Technical Bids will be evaluated in the presence of the representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

Opening of price-bid: The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.

Please note that IACS will not provide any accommodation or expenses to any of the bidders for attending opening of technical bid.

1. TECHNICAL BID:

The Technical Bid should contain technical specifications and kept in a separate envelope duly super scribed as "Technical Bid" on the outer side of the envelope as detailed above.

TECHNICAL SPECIFICATIONS for a "GCMS System"

1. GC MAINFRAME:

- Gas Chromatograph with Electronic Flow control for Simultaneous Pressure, Temperature and Flow Programming
- All gases flow should be adjustable/controlled by software with no manual control.
- Auto shut down of instrument in case of leak detection in carrier gas.
- Flame out test to prevent injection by setting the GC to a not ready state.
- Should have Isolation mode to allow septum change without interrupting carrier flow.
- Provision to install two or more columns, Retention time lock facility preferable
- Should be capable of accommodating all types of GC columns from 0.1 mm to 0.53mm ID
- The pressure set points should be adjustable by increments of 0.001 psi up to 100 psi or higher
- Operating temp range of oven from near ambient +4°C to 450°C
- Temperature Accuracy: ± 1 %
- Temperature uniformity of < 2 °C along a 200 mm dia circle
- Graphical user interface with large LCD display
- Electronic Control of Detector Gases
- Auto Ignition facility should be provided
- Self-diagnostic function with GLP/GMP support
- Fast oven cooling speed 450 °C to 50 °C in 4 minutes or faster
- Oven must support 15 or higher temp ramps in single GC method
- System should have at least 6 independent heated zones.
- Changing columns without MS vent feature should also be there.
- System should be upgradable to auto sampler.

2. Temperature programmable Injectors: (2 numbers)

- Independently temperature controlled injection ports.
- Temperature Range: 50 °C to 450 °C.
- Easy adjustment of split ratio.
- Number of temperature and pressure programming steps: 7 or better
- Efficient gas saver mode built-in to reduce gas consumption during standby without affecting performance.
- Electronic septum purge flow control facility should be provided

3. Flame Ionization detector (FID):

- Wide Range Flame Ionization detector for GC with Auto Ignition & Auto ranging facility
- Over heat Protection facility

- Minimum Detection Limit : 1.5 PgC/s (dodecane) or better (specify the compound)
- Dynamic Range: 10^7 or better
- Data acquisition rate: up to 250 Hz or higher

4. MS SPECIFICATIONS:

MS system should be offered with air-cooled turbo molecular pump, EI ion source and with the following specifications:

- Mass Analyzer should be a linear quadrupole. It should be fitted with pre-filter/pre-rod or any other better techniques for higher sensitivity with high ion transmission efficiency and to eliminate neutral noise.
- Mass Range : 2.0 to 1050 m/z or higher in 0.1 amu steps
- Sensitivity EI : 1 Pg OFN m/z 272 S/N \times 1500 RMS (should be demonstrated during installation)
- Ion source temp : 300 °C or higher for better sensitivity for active compounds and it should be programmable.
- Mass Resolution : \times 2M (FWHM)
- Mass axis Stability : \pm 0.1 amu / 48 hours
- Scan Speed : 20,000 u/sec, with 0.1u step scanning
- Variable Ionization Voltage: 10 ó 200 ev or better
- Variable Ionization Current: 5 - 250 μ A or better
- Filament : Dual (Automatic Switching during analysis)
- Detector : 10KV conversion dynode detector with Overdrive lens.
- Should have air-cooled Turbo Molecular Pumps with \times 250 L/s capacity or more
- Evacuation System Control: Fully automatic "Auto Startup" and "Auto Shutdown" automatically should execute Turning - on and - off of Turbo pumps, Fore line pump, and leak valves.
- EI source should be inert to active compounds.
- EI SIM Instrument detection limit should be 10fg or better for OFN standard at nominal 272u ion (must be demonstrated at site).
- Should have provision for Selected Ion Monitoring Scan while simultaneously acquiring data in the Full Scan Mode.

5. Manual liquid Syringe- 10 L (3)

6. Columns: (2 numbers)

DB5MS/HP5MS/EB5MS or equivalent column with dimension ó 30m x 0.25 mm x 0.25 m.
(2)

7. Software for Control of GC as well as GCMS:

Software should be compatible with WINDOWS platform and to be offered directly from the manufacturer of the GCMS system. It should be fitted with Single Point Controller of all GC Parameters, Injectors, and detectors. It should have Security (log-in, User and group), Audit trail, System check. Software integrity and system suitability test should be included as standard functions.

8. Library: NIST 2014 MS Library with license

9. All essential spares & consumables like: EI Filament, Spacer, Septa, Graphite ferrule, Vespal Ferrule, Washers, Nuts, Glass Inserts Split / Split less, O-ring, Standard Tuning Sample (PFTBA), Aluminum Packing, Standard OFN Sample, Vacuum pump Oil, FID jet, FID Nozzle etc. should be provided for trouble Free maintenance for 3 years along with the system.

10. Installation, demo of Instrument and all related expenses to supply instrument up to the Lab has to be borne by the supplier.

WARRANTY: Equipment should be offered with standard one year warranty followed by Annual Maintenance Contract (AMC) for a total (warranty + 4 years AMC) duration of 5 year. The vendor should quote the charges for AMC separately. Taxes as applicable will be deducted at the time of payment of AMC amount.

Additional:

Supplier should arrange application training by their personnel for minimum three working days after the installation of the system.

Users lists of similar equipment supplied in India should be provided (Enclose full list of the users in India). Vendor should have couple of users available in last 5 years in the eastern zone of India.

A detailed technical compliance is required with supporting data where possible to show compliance.

Technical compliance chart should be provided following the following format*

| Sr. No. | Tender specification | Your offered instrument specification | Extent of compliance |
|---------|----------------------|---------------------------------------|----------------------|
| | | | |

*Tender will not be accepted if the technical compliance chart is not provided following the above format.

User List: The supplier should provide a list of current users (with contact no, e-mail address etc) for the quoted item in India.

Service facility: Trained technicians should install the instrument and ensure it is operating correctly and within specifications. User training at site should also be provided. Supplier should mention their details of service setup that are responsible for after sales support.

2. PRICE BID:

The financial bid indicating (item-wise) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly super scribed as "PRICE BID" on the outer cover of the envelope as already detailed above. The price bids of only technically qualified bidders will be opened and they will be intimated the date and time of opening at their email id-(s). Rest of the bids will stand rejected.

PRICE: Price to be quoted in FOB/CIF/EX WORKS basis separately. Name of the particular Port from where our authorized forwarder will lift the consignment must be mentioned clearly with FOB/CIF/EX WORKS price

3. BID SECURITY:

Bid Security (EMD):

1. An Account Payee Demand Draft of Rs. 1,00,000/-(Rupees one lakh only) drawn in the name of "Indian Association for the Cultivation of Science" is to be furnished by the bidders except those who are registered with the Central Purchase Organizations, National Small Industries Corporation or the concerned Ministry or Department, as Bid Security money or Earnest Money Deposit (EMD). EMD to be paid by the Indian Agent in INR.
2. The Demand Draft for the Bid-Security money should have at least 60 (sixty) days validity period after the opening of the Bids.
3. In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders.

4. PERFORMANCE SECURITY:

An Account Payee Demand Draft of 10% of the order value in the name of "Indian Association for the Cultivation of Science" or in the form of a bank guarantee with a validity for a period of 60 days beyond the expiry of the warranty period is to be furnished by the successful bidder as "Performance Security" money in INR. The Bid security money will be refunded to the successful bidder on receipt of the Performance Security money.

5. ANNUAL MAINTENANCE CONTRACT (AMC) RATES FOR FIVE YEARS

AMC should be a criteria for making comparative statement with regard to the technical bid and AMC rates for price bid. The payment of AMC charges will be made as per existing practice. Year wise rate should be mentioned.

6. GENERAL INSTRUCTIONS:

1. Submitting Tender: The Tender must contain materials related to these specifications only. The technical bid should not have any mention of pricing. The prices should be inclusive of all charges (taxes/duties as applicable, shipping charges, delivery at site, installation etc.) with clearly indicated breakups. Fax, e-mail Tender will not be accepted.
2. Incomplete & conditional tenders and tenders received after the date will be summarily rejected without assigning any reasons thereof.
3. Tender Notice Number and tender for **öGCMS Systemö** should clearly be written on the envelope.

4. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the Institute website. Prospective bidders are advised to occasionally visit the website (www.iacs.res.in/tender) for any amendment.
5. Payment: Through letter of Credit. 90% to be released on shipment and balance 10% against successful installation & commissioning subject to submission of performance guarantee.
6. Warranty: Equipment should be offered with standard one year warranty followed by Annual Maintenance Contract (AMC) for a total (warranty + 4 years AMC) duration of 5 year. The vendor should quote the charges for AMC separately. Taxes as applicable will be deducted at the time of payment of AMC amount.
7. Installation/Demonstration/Application Training at site: Supplier should arrange for the application training free of cost by their personnel for minimum three working days after the installation of the system.
8. Service facility: Supplier should mention their details of service setup and Manpower in Kolkata who are responsible for after sales support. Response time should be within 24 hours.
9. Validity of tender: Tender submitted shall remain valid at least for three months from the date of opening the tender. Validity beyond three months from the date of opening of the tender shall be by mutual consent.
10. The tender should accompany a detailed technical compliance chart with part no of each component.
11. The rate should be inclusive of all taxes, transportation etc. Nothing extra will be paid in addition to the quoted rate. All components of the price should be mentioned separately.
12. The model number, make, and a printed literature of the product shall be submitted positively.
13. Proposed delivery schedule should be mentioned clearly.
14. Manufacturers/exclusive distributors/vendors should have history of supplying this type of instrument to this or other Scientific Organization.
15. Authorized Dealership Certificate is mandatory in case of principal manufacturing company is not quoting directly.
16. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.

17. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of technical bids will be the following working day at the appointed time.
18. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.
19. For any clarification regarding technical specifications etc. please send your queries to "Dr. Joyram Guin" ocjg@iacs.res.in.
20. The Institute reserves the right to reject any or all of the tenders received without assigning any reason thereof.

Registrar