



File No.AC/2023/EFC

01/11/2023

NOTICE FOR E-PROCUREMENT THROUGH GEM

On-line Bids on Gem are invited from reputed Manufactures/Supplier/Authorized dealer in two bid system (Technical bid & Financial bid) for purchase of following scientific Equipment on behalf of Director, ICAR-Indian Agricultural Research Institute, New Delhi. The last date for submission of Bid is 22.11.2023 at 2:00PM. The bid will be opened on 22.11.2023 at 2:30 PM by the prescribed committee.

Please visit www.iari.res.in for details Rules and Regulation and log in www.gem.gov.in for online bidding.

Sl.No.	Name of the Scientific Equipment	Qty.	Earnest Money	Cost of the Equipment
1.	GC-MSMS with Accessories	01	425000/-	8500000/-

Detail of Gem Bid (Tender) are mentioned below:

Gem Bid (Tender) No.	GEM/2023/B/4153324
Bid Submission start date & time	1/11/2023 at 11:00AM
Last date & time for submission of bid	22/11/2023 at 2:00PM
Date & time for opening of technical bid	22/11/2023 at 2:30PM
Cost of estimated bid value (in Rupees)	Rs.85,00,000/-
Pre-Bid date and Time	08/11/2023 at 11:00AM
Pre-Bid Venue	Division of Agricultural Chemicias ICAR-IARI, New Delhi

**Technical specifications for GC-MS/MS with accessories
(for each instrument)**

Specifications (for each instrument)
Gas Chromatograph with touch screen display
A. Column Oven
1. Temperature: maximum 450 °C
2. Set point: 0.1°C or less
3. Ramps : 20 or more
4. Max. ramp rate: 120 °C/min or more
5. Cooling rate from 450 °C to 50 °C in 4 minutes or less
B. Injection port: programmable temperature vaporizer (PTV) or Multimodal Inlet (MMI)
1. Pressure range: 100 psi or more
2. Maximum temperature: 400 °C or more
3. Temperature programming of 3 ramps or more
4. Electronic pneumatic control (EPC)/Advanced flow control (AFC)/ Integrated Electronic Control (IEC)
5. Split ratio range 9000:1 or better
6. Temperature ramped split/ splitless injection modes
C. Auto sample liquid injector and head space combined. Same sampler can do liquid, headspace injection and SPME injection
1. Auto Injector with 100 or more vials (2 mL) capacity
2. Auto injector vial volume: 2 mL
3. Head space capacity : minimum 45 vials
4. Vial volume for head space: 20 mL
5. Capable of injecting through SPME fibre conditioning module
D. MS-MS system:
1. Mass range m/z : maximum 1000 amu/u or more
2. Mass resolution minimum: 0.7 amu/u or better
3. Mass axis stability: ±0.1 amu/ u over 24 h or better

4. Scan rate: upto 20,000 amu/sec or u/sec or more
5. Ionization modes: EI
6. Dual EI filament for EI
7. EI-electron energy: 150 eV or more
8. Ion source temperature maximum: 300 °C or more
9. SRM or MRM Speed: upto 800 transitions/sec
10. Minimum MRM dwell time of 1 milliseconds or less
11. Air cooled dual stage turbomolecular pumps, more than 250 L/sec
12. Collision energy upto 60 eV
13. EI MRM for Octafluoronaphthalene (OFN) at 100 fg/μL should be S/N 30000:1 or at 1 fg/μL should be 300:1 or better
14. EI MRM Instrument Detection Limit (IDL): Sensitivity of the system should be 0.5 fg or better with 2 fg injection of OFN or better
15. Probe for analysis of pure solid or powder sample
E. Workstation & instrument control software :
1. Windows compatible, capable of working both online and offline for data acquisition, manipulation and transfer to word format
2. GC-MS/MS system should be integrated with the same workstation for simultaneous settings and programming
3. Original standard latest licensed NIST (2020), pesticides MRM database and plant metabolomics database library with part number should be provided.
4. PC with Printer: Branded, latest configuration, compatible to instrument software factory fitted along with A4 printable laser printer should come with the instrument. A separate high configuration work station should be quoted for off-line data processing and analysis with following or equivalent specifications: CPU Intel Xeon, 10 Core HT or better, RAM 64 GB (4 x 16GB), DDR4, UDIMM, HDD 2 TB hard-disk or better, 1 TB SSD or better, with Dedicated Graphic card, OS Windows 10 Pro for Workstations (4 Cores Plus) English, 27 inch HD LED Monitor, DVD RW, Optical Mouse, Keyboard. 5 year Onsite warranty with installation support, Antivirus for 3 year. Printer: B/W –duplex – laser – Legal, A4 – 1200 dpi x 1200 dpi – up to 21 ppm – capacity with Network Card
F. UPS: Suitable Online constant voltage (220 volts) 10 KVA UPS with 3 hours backup.

G. Start up kit for installation:
1. Installation kit must be included
2. Gas purification panel with required cylinders (one for each type of gas) and appropriate dual stage steel regulators (one for each type of gas) must be included
3. Copper/SS tubing, nuts and ferrules for all the gases should be provided
4. Granite top suitable tables for housing the complete GC-MS-MS instrument along with steel four chairs for operator and two acclimatizers
H. Accessories and consumables
1. Syringe for auto sampler liquid (10 nos) and headspace injection (10 nos)
2. Auto sampler 2 mL vials with screw caps: 1000 nos Headspace 20 mL vials with caps: 1000 nos and 10 mL vials with caps: 1000 nos
3. Graphite ferrules for capillary columns (20 nos)
4. Septa for injector (50 nos)
5. Appropriate nuts to fit capillary columns to the injector and MS interface: 10 nos
6. Inlet liner (with glass/quartz wool at optimum position) for Splitless, Split and PTV or MMI (100 nos each)
7. O-ring for injector liner (50 nos)
8. EI Filaments (5 nos)
9. Column cutter with blade: 1 nos
10. Gas tube cutter: 1 nos
11. One set of tool kit and cleaning kit should be supplied
12. i) 30 meter Capillary 0.25 mm ID MS-columns, HP/DB-5MS equivalent – 2 nos ii) 60 meter Capillary 0.25 mm ID MS-columns, HP/DB-5MS equivalent – 2 nos
13. SPME fibres: 18 nos
14. Micropipet (0.1-1 mL adjustable) for handling sample: 5 nos with 1000 tips Micropipet (1-5 mL adjustable) for handling sample: 3 nos with 1000 tips
15. Vacuum Pump Oil-20 L
I. Minimum Eligibility Criteria
1. WARRANTY: Comprehensive warranty of 1 (one) year from the date of installation of the instrument (including

Computer, UPS and batteries). Extended Warranty for 4 (four) years after warranty period shall be quoted. Extended Warranty includes GC-MS/MS, Computer system, UPS and batteries. Terms and conditions for the extended Warranty has to be specified.
2. TRAINING: Training for atleast three persons at application centre and onsite training as required to be provided at no additional cost
3. The vendor should have atleast 20 globally installations of the GCMS/MS in National R&D Institutions in last 5 years. Documents supporting documents by means of purchase orders/latest service reports/installation reports to be enclosed. List of installation for the quoted model to be enclosed and performance certificate.
4. Declaration from the Principals that minimum 10 years support in terms of spares and service will be provided.
5. Buy Back value of existing two GC-MS instruments need to be quoted.

General Conditions:

1. Original and licensed software for the equipment should be provided.
2. Documentary evidence in terms of publications for the quoted model.
3. List of service staffs and centers available in India.
4. List of the Indian users of quoted model for last three years.
5. Firms should not quote obsolete / discontinued models.
6. Equipment should work under 220 to 240 V/50Hz conditions.