

Detailed Specifications of Global/Open Tender Notice No: 06/2017

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Technical Specifications of Gas Chromatograph-Mass Spectrometer

Injection Port (Split/split less capillary injector)

Max. Temp.: 400°C or higher

Temperature increment in steps of 1°C

Pressure Setting range: 0 to 100 psi or more (suitable for all capillary columns from 0.05 mm to 0.5 mm diameter)

Split ratio: 6000 or more

Pneumatic software controlled

Auto-Liquid Sampler

Auto-Liquid sampler having Tower and sample tray with capacity of minimum 100 vials (1.5 ml) or more

Column Oven

Oven Capacity: 12L or more

Temperature range: Ambient +4°C to 450°C

Temperature program: Minimum 8 ramps or more

Temperature ramp rate: 120°C/min or more

Oven cool down time: 450 °C to 50°C in 4 min or less

Mass Spectrometer (MS) System

Mass Spectrometer (MS) System based on Electron Ionization (EI) mode

Electron Energy: Variable, 100 eV or more

Mass range: m/z 1 to 1000 amu or more

Scan rate: >12,000 amu/s

Mass axis stability: ≤ 0.1μ/48 hours

El scan sensitivity: 1.0 pg OFN m/z 272 ≥800:1

(The performance specification to be demonstrated at site)

Pumping System:

Turbo-molecular pump with 250 L/s or more

Column

Length: 30 m, ID: 0.25 mm, thickness: 0.25 μm (Brand name -5 MS)

GC-MS software

Microsoft Windows based original and licensed software. All the functions should be controlled through single point control. Capability of audit trail, pass/fail, Function for QA/QC control, report customization, Automatic adjustment of retention time, Scan/SIM high speed data acquisition, maintenance support

Warranty of GC-MS

2 years onsite warranty from the date of installation

Spectra Library software

NIST library: Licensed and latest version

Wiley Library: Licensed and latest version

Accessories and Consumables

Tool Kit, EI filaments (2 Nos.), Inlet liner for split splitless injection port (2 Nos. each), Auto sampler vials (100 vials of 1.5 ml capacity with screw cap), Column cutter (01 No.), Graphite (10 Nos.), Vespel ferrules (10 Nos.), Syringe for auto-sampler injection (2 Nos.) and manual injection (1 No.), O-rings (10 Nos. all types), Septa for injection port (100 Nos.)

PC and Printer

PC compatible with hardware and software of GC-MS: Intel core i5 or better processor, 8 GB RAM, 500 GB HDD or better, DVD ROM, 20" LCD display, Licensed Windows 7 professional or better. It must be compatible with GCMS software

Printer: Laser printer

Warranty: Min. 2 yrs for PC and Printer from the date of installation

Gas Supply

Gas regulator: Dual stage SS regulator for Helium cylinder

Gas purification panel for Helium gas with tubing, nuts and ferrules, etc.

UPS

Branded online constant voltage (230V) 10 KVA UPS with 1 hr backup along with battery with min. 2 yrs warranty from the date of installation

Certified Standards: For calibration of instrument to be provided by the supplier.

Documents, Brochure, and Catalogues: All user, technical and maintenance manuals must be made available at the time of equipment supply. All technical specifications must be supported with printed brochure and comply with working performance of the equipment at the time of installation and demonstration

Installation and Training: Complete onsite installation, Validation with control as per applicable regulatory standards and demonstration of performance of complete system for its working in line with technical specifications along with accessories, complete training at supplier's own cost

Power requirement: Compatibility as per Indian electric standard (GC-MS electrical input should be 230V, 50Hz)

Optional:

Calibration Certificate: Traceable to country NMI
