MAHATMA GANDHI UNIVERSITY

MGU/DST-FIST/SBS/2019/ETEN/GC Dated: 15/05/2019

NOTICE INVITING TENDER

(Tender No. MGU/DST-FIST/SBS/2019/ETEN/GCMS)

The Registrar, Mahatma Gandhi University, Kottayam for and on behalf of **The Coordinator, DST FIST Project, School of Biosciences Mahatma Gandhi University** invites online bid (technical and financial bid) for Supply and Installation of the scientific equipment GCMS**(GAS CHROMATOGRAPH WITH MASS SPECTROMETER) f**rom reputed firms

1	Name of the scientific equipment	**GAS CHROMATOGRAPH WITH MASS SPECTROMETER (GCMS)**
2	Earnest money deposit (EMD)	Rs.38000/-
3	Tender submission fee	Rs. 5700/-+ GST
4	Period of supply and installation	Within 90 days from the L/C opening date
5	Mode of submission of Bid	Online
6	Tender Documents	Can be downloaded from the website www.etenders.kerala.gov.in
7	Last date and Time of submission of tender by online	25/05/2019, 4.00 pm
8	Date and time of opening of bid opening	28/05/2019, 11.00 am

General tender documents and tender schedule can be downloaded in A_4 plain size paper free of cost from the website www.etenders.kerala.gov.in.

Documents to be submitted along with bid through online

Sl.No	Through online
1	Scanned copy of dealership certificate
2	Scanned copy of duly filled e-payment form
3	Scanned copy of other certificates required, if any, for tender acceptance
4	Scanned Copy of duly filled preliminary Agreement in stamp paper of Rs.200/-
5	BOQ

GCMS Specifications

System should be capable of supporting analysis of plant extract and metabolites from microbes, should have inlet equipped with Automatic pneumatic controls for all the gases and should have Chromatography Data system which is based on Microsoft Windows operating system for instrument control, data acquisition, chromatographic deconvolution and library (qualitative and quantitative data).

GAS CHROMATOGRAPH WITH MASS SPECTROMETER

System Capabilities:	Specification
GC Configuration	Split/Splitless inlet, MSD Interface
EPC/APC Modules / EPC Channels	Must be able to install up to 6 APC/EPC modules, providing control of up to 12 channels of APC/EPC
Leak tests	Must provide pre-programmed leak tests available from keyboard or monitoring software
Column Oven:	• Column oven should have provision to install two or more columns • Operating temp range of column oven from near ambient to 450°C • Column oven temperature ramp rate of oven should be110°C or better • Column oven should have possible to program 15 temp ramps (16 plateaus) or better • Oven cool down (22 °C ambient) 450 to 50 °C in 5.0 min • Oven power must turn-off automatically when the lid/door is opened
Inlets	• GC should have Split/Splitless inlet • Inlet should have Advanced electronic flow control modules with Pressure set points adjustable in increments of 0.001 psi and pressure range up to 100 psi. • Inlet Split ratio up to 6000:1 and suitable for all capillary column from 50um to 530um. • Inlet maximum operating temperature should be 400 °C.
Autosampler	Autoliquid sampler with 15 or better vial capacity should be quoted

GC Detector	• ECD detector with the following specification orbetter:
	  • MDL: <4.4 fg/mlLindane
	  • Dynamic range: >5x10^4 withLindane
	  • Data acquisition rate: up to 50Hz
	Temp range: upto 400 degC

SingleQuadupole Configuration	The following are specifications for a Mass Spectrometer which is to be interfaced in a gas chromatograph
Specification	• Turbo molecular vacuum pump upto 250L/s • Non-coated inert EI source with dual filament heatable up to 350 °C. • Quadruple should be made up of inert non-metallic material with preferably hyperbolic shape to have better mass transfer efficiency or equivalent • Mass range (m/z) upto 1,000amu • Mass axis stability should be 0.10 amu/24 hrs. • Scan rate (electronic) of 20000 u/s or better.

	• Mass resolution – unit mass • Should have independently heated GC/MS interface • EI SIM IDL: 10fg OFN, statistically derived at 99 % confidence level from the area precision of eight sequential splitless injections of 1 µL, 100 fg/µL OFN standard using 30m column
Software Features	• Suitable PC with preloaded software tools should be quoted • Suitable data acquisition software to acquire the data. • Identification of compound spectra with standard libraries and includes chromatographic deconvolution with retention index using application specific database • Should have Suitable Quantitation tools for Scan. SIM
Library and Database	• The system should be supplied with fully compatible Fiehn Metabolomics GC/MS Library Contains 1,000+ compounds GC/MS retention time indexed and spectral matching for common primary metabolites found in biology. Suitable Column and method setup kit accessories to be quoted to setup the method. • Licensed NIST 2017 Library.
Capillary column	• DB 5 MS or equivalent capillary column with 30m,0.25mm x 0.25um • DB 35 or equivalent capillary column with 30m, 0.25mm, 0.25um
Accessories	• Suitable gas cylinders with regulators, gas purification panel and accessories to be quoted along with the instrument • 7.5KVa UPS with minimum 1to 2hrs back up is compulsory
Training	• Onsite training for the faculties / Scientists to be provided on the application side of the instrument
Warranty	• Compulsory 3 Years warranty

- Additional extended 2year warrantee also may be quoted, as optional.

Special Conditions

1. Instrument should have **a warrantee of three years** and should have frequent visits from both service engineer and application scientist.
2. There should be at least one service engineer and one application scientist based in India with onsite training facility on the same quoted instrument. Training should include operation, software applications, analysis, handling and maintenance of system.
3. A good record in supply and service to other research institutes will be considered as a positive point for a particular company. User list of similar equipment supplied recently in India should be provided with the above mentioned specifications.
4. Laboratory floor space, electrical power requirements, earthing, room temperature/ humidity requirements etc. should be mentioned appropriately.

5. All necessary accessories should be supplied with the instrument, as per standard package offered, including complete set of service and operation manuals for diagnosis, trouble shooting, maintenance and electronic circuitry (soft copies).
6. The Delivery Schedule, Payment Terms & Warranty/Guarantee etc must be clearly indicated in the technical bid.
7. The basic price to be entered in BOQ should be inclusive of all taxes, freight, loading & unloading and installation charges.
8. The bids will be opened at the date and time specified. Further details can be had from **The Coordinator, DST FIST Project, School of Bio Sciences M.G. University, Kottayam, Kerala Pin-686560**, on all working days during working hours. Phone: **0481-2731035 E-mail: bio.sc.office@gmail.com**. The bidders are advised to submit their bid well in advance to avoid any kind of network issues.

The undersigned reserves the right to reject any or all the tender without assigning any reason whatsoever.

Registrar