MAHATMA GANDHI UNIVERSITY

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

NOTICE INVITING TENDER

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

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 **Microwave Digester System f**rom reputed firms

1	Name of the scientific equipment	**Microwave Digester System**
2	Earnest money deposit (EMD)	Rs. 9500/-
3	Tender submission fee	Rs. 1500/- + 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
9	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

Specification for Microwave Digester System

Specifications of Microwave Oven:

- System must deliver unpulsed Microwave energy output for precise reaction control.
- Must have a self-adaptive microwave field
- Must recognize vessels positions and adapt the microwave field density according to the filling state
- System must have a directed Multimode Cavity and with a volume of< 8 ltrs
- To ensure user safety during handling, vessels must be cooled inside the oven.
- System must have built-in high performance vessel cooling system. The airflow must be directed through air-guides around the vessels.
- Removal of hot, pressurized vessels and the use of external cooling devices like water baths is not acceptable.
- System should have a large illuminated 5.7 " LCD Capacitive touch Screen of 320X240 Pixels
- The rotor must have a rotor lid

Rotors

- Must have a lightweight Al rotor construction with 12 or more positions with fast digestion of upto 40 samples/20 minutes.
- The rotors must have a lid for protection of cavity and a Hall sensor for rotor identification and rotor lid detection must be available.

Sensor System

- Should have IR temperature sensor for remote/non-invasive measurement of temperature at all the vessel positions with programs based on temperature programming for sample digestion.
- There should not be any electronic plugs/sockets inside the oven cavity, to prevent corrosion.

Vessel Specifications

Pressure-activated venting vessels must be available for digesting high sample amounts up to 2 grams safely. The closure can be automatic and also must be possible by hand; the vessel shall consist of maximum 3 parts and shall be HF-resistant. The opening of the vessel must be controlled by means of metal springs due to the higher possible precision and the lower temperature dependence of the opening pressure.

The pressure vessels must be supported by metal tubes, fiber-reinforced polymer support tubes are not allowed.

- Sample Capacity : ≤ 2g

- Volume : 50 ml or more
- Material : PTFE-TFM
- Max Operation Temperature: 250 deg C or more
- Material Design Pressure : 35 bar or more

1. All vessels should have automatic or hand tightening closure.
2. System should have controlled release of overpressure at all-time stable for full temperature range.
3. Each pressure vessels must be individually tested & deliverance with pressure test certificate.
4. Any other essential component should quote
5. Desirable components as optional.

Compulsory 3 year Warranty

Additional 2 Year warranty 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