



Mahatma Gandhi University, Kerala

Tender No: SCS/Re- TENDER/DSC/2019

Date: 07/02/2019

**NOTICE INVITING TENDER**

(Tender No: SCS/Re- TENDER/DSC/2019)

The Registrar, Mahatma Gandhi University, Kottayam invites online bid (technical and financial bid) for Supply & Installation of the Scientific Equipment-**Modulated Differential Scanning Calorimeter** from reputed firms. The period of the tender is 180 days from the date of tender.

1	Name of the scientific equipment	<b>Modulated Differential Scanning Calorimeter</b>
2	Earnest money deposit (EMD)	<b>Rs.50,000/-</b>
3	Tender submission fee	<b>Rs.7500/- + VAT</b>
4	Period of supply and installation	Within 60 days
5	Mode of submission of Bid	Online
6	Tender Documents	Can be downloaded from the website <a href="http://www.etenders.kerala.gov.in">www.etenders.kerala.gov.in</a>
7	Last date and Time of submission of tender by online	<b>16/02/2019, 4 pm</b>
8	Date and time of opening of technical bid	<b>18/02/2019, 12pm</b>

General tender documents and tender schedule can be downloaded in A<sub>4</sub> plain size paper free of cost from the website [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in).

Documents to be submitted along with bid through online

Sl.No	Through online
1	Scanned copy of valid registration certificate/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

### **Special Conditions**

1. Onsite training has to be arranged by the vendor. Training should include operation, software applications, analysis, handling and maintenance of system.
2. List of your customers using the instrument with the above mentioned specifications should be given.
3. Laboratory floor space, electrical power requirements, earthing, room temperature/ humidity requirements etc. should be mentioned appropriately.
4. Complete set of service and operation manuals for diagnosis, trouble shooting, maintenance and electronic circuitry (soft copies).
5. The Delivery Schedule, Payment Terms & Warranty/Guarantee, AMC etc must be clearly indicated in the technical bid.
6. All the clearance of the consignment should be carried out by the bidder. Institute will provide all the necessary documents for the same. The consignment should be delivered to the laboratory by the bidder.
7. The quoted BASIC Price should be inclusive of all taxes/freight/Installation etc.
8. Scanned copy of brochure of different models quoted should be enclosed.

The bids shall be opened at the date and time specified. Further details can be had from the office of

**The Director, School of Chemical Sciences, Mahatma Gandhi University, Kottayam, Kerala-686560** on all working days during working hours. **Ph: 0481-2731036, Dept. Head-, Dr.BeenaMathew - 9447145412 Email: office.scs@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**

## SPECIFICATIONS ---Modulated Differential Scanning Calorimeter

Temperature range of DSC	-180°C to 725deg C or better
DSC Cell design	Heat Flux or power compensation principle. Capable of upgradable with photocalorimeter unit in future
Furnace material	Platinum alloy block
DSC sensor/Thermo couple	Chromel/ Alumel/ Platinum
Cooling Accessory	-70°C onwards by Mechanical Refrigeration Unit
Liquid Nitrogen Cooling	-180°C onwards by using computer controlled LN2 accessory
Baseline Bow (-50°-300°C)	<50 μW or better
Baseline Repeatability (-50°-300°C)	<40 μW or better
Baseline Accuracy (-50°-300°C)	±75 μW or better
Heat Flow Digital Resolution	0.001 μW or better
Baseline Noise (-50°-300°C)	<0.2 μW or better
Digital Resolution	0.2 μW or better
Temperature Accuracy	±0.1°C or better
Temperature Precision	±0.01°C or better
Temperature Repeatability	±0.1°C
Enthalpy Precision	±0.05% or better
Enthalpy Repeatability	±0.3% or better
Heating Rate	0.1 to 200°C/min or better
Modulated Heating Rate	Sinusoidal heating profile, Frequency & Amplitude should be programable
Mass flow controller	Built-indual digital mass flow controller
Gas switching Accessory	built-in
Purge Gas flow	Inert, Air & Oxygen, preheated purge flow mechanism to avoid condensation
Auto sampler	Minimum 50 position
Sample Sealing Unit/press	For Solids, paste, liquid samples
Sample Pans	Aluminium, Soilds : 1600 Nos Alumina pans : 6 Nos Aluminum, Liquids : 400Nos Platinum Pans : 10 Nos. Copper pans: 200 Nos.
Calibration Materials	Indium, Zinc & Sapphire
Software	Complete DSC analysis s/w featuring Onset temperature, enthalpy, OIT, Reversing/non Isothermal Kinetics, Scanning Kinetics, Specific Heat and Purity software packages reversing heat flow, Calibration, Report generation, purity, Baseline correction based on Windows 10
Warranty	Three years or better
Installation and Familiarization	Installation and training to users should be given at our laboratory by a trained Application engineer. Library for all samples including polymer samples need to be Supplied
Warranty	Minimum 3 Years warranty for complete instrument
Technical/Analytical/Manpower support for 3 years - A viable plan for the technical/manpower support for a period of 3 years must be quoted.	1
UPS - Necessary UPS with tubular batteries (Branded)	1 unit