

NIPER-G/PUR/GLOBAL/2018/10

Specifications for Differential Scanning Calorimeter

A Differential Scanning Calorimeter Operating on Heat Flux Principle with following specifications

Specification as per the Tender in Chapter 4	Amended Specifications as per the Pre Bid meeting held on 22-02-2018 in Chapter 4
1. Temperature range: Room Temperature to 500°C or -30°C to 500°C in a single run & intracooler should be serviceable in India.	Temperature range: Room Temperature to 450°C or more or -30°C to 450°C or more in a single run & intracooler should be serviceable in India.
2. The Temp Accuracy should be +/-0.5°C or better.	No change
3. The Temperature Precision Should be +/- 0.5°C or better.	No change
4. Furnace should be single, made of Silver or similar.	No change
5. Furnace temp resolution should be 0.0001°C or better.	Specification deleted
6. Heating rate 0.1 to 250°C / min or above.	No change
7. Controlled Cooling rate: 0.1 to 40°C and above.	No change
8. DSC measuring range should be preferably +/- 300 mW or above.	No change
9. Accuracy of Enthalpy measurement <1% Indium.	No change
10.The sensor should be made of Ceramic with 40 or more thermocouples , Au-Au /Pd or similar	No change
11.The sensor should be an integral part of Furnace and the sensor should be easily replaceable from the furnace.	No change
12.Sensor should offer low sensor time constant < 2 Sec	No change
13.The resolution should be 0.05µW or better (Not digital).	No change
14.Baseline Curvature: < ±10 µW (at -50 to 350 °C at 5°C/min) or better	No change

15. Baseline Repeatability: $< \pm 25 \mu\text{W}$ or better.	No change
16. The Sensitivity i.e. Peak Height/ Noise should be 10 or better.	No change
17. Calorimetric Sensitivity should be $14 \mu\text{V/mW}$.	No change
18. Enthalpy Precision: $\pm 0.06\%$ or better	No change
19. Data sampling rate should be 40/Sec or more. 20. The instrument should support different volumes of flat bottom crucibles with or without lid variety.	19. Data sampling rate should be 30/Sec or more.
21. Crucibles: 1000nos 40 ul with a Sealing press should be supplied.	No change
22. Calibration standards: Should be provided with tool kit for both temp & Heat flow.	No change
23. The system should have option for flexible calibration, should not demand recalibration on change of crucible, use/switching of different gases or changing heating rates.	No change
24. System should have the built-in adjustment capability for the change of parameters by itself.	No change
25. Suitable software for the DSC instrument should be provided. The software should possess the capability of choosing different baseline e.g. line, tangential, horizontal, integral tangential, polygon etc. for correct evaluation / integration of peaks.	No change
26. The DSC system should provide raw data without mathematical treatment/ deconvolution/ smoothing/ baseline correction.	The DSC system should provide raw data without mathematical treatment/ deconvolution/ smoothing/ baseline correction.
27. The system should have provision for future up gradation with temperature modulation options for separating kinetic and non-kinetic events/ with microscopy.	No change

28.Three gas cylinders (With pure Oxygen, Nitrogen and Argon) with Regulator and flowmeters should be supplied.	No change
29.A suitable branded computer for system control & data acquisition. It should have following minimum specs: i5 processor, 4GB RAM, 1 TB HDD or above, DVD combo drive, 2 USB Ports, 19" TFT/LED Colour Monitor, Keys Keyboard, Optical mouse, with original operating system, HP or any standard brand Laser Printer.	No change
30.Application Support: Application Lab in India with qualified personnel to assist in case of application related queries with 3 years of warranty.	No change
31.If the bidder is unable to show the proof for the technical compliance of specified points in the tender either in the brochure or technical data sheet or instruction manuals the specific point will be considered as does not complies the institutional specification.	No change
32.Supplier should assure the shifting of the equipment to the new campus within the warranty period without any additional cost	No change

Sd/-
Purchase officer

General Terms and Conditions applicable to all 13 tenders published in newspaper on 19th February 2018 and exhibited in NIPER Guwahati website.

Following additional information is provided for the information of prospective bidders for 13 different items for which tender inquiry is issued:

1. Payment terms:

Considering the request made by few prospective bidders during the pre-bid conference held in the institute on 22nd February 2018, regarding payment terms related with foreign suppliers it is clarified that the **indicated payment terms in the tender documents still remains unchanged.** However Director, NIPER Guwahati **at his own discretion** can consider any other mode of payment requested by suppliers based on the reputation, credentials of foreign suppliers in the field and also protecting the interests of NIPER Guwahati. **No request for advance payment will be considered.**

2. Clarification with regard to projecting the cost implications of free delivery of the item at NIPER Guwahati premises.

Subsequent to the Pre-bid conference with regard to projection of price for items coming from abroad, the following guidelines may be followed:

- A) The F.O.B. C.I.F., C.I.P. prices as per the suppliers quote should be indicated in foreign currency only
- B) The additional cost towards payments of custom duty against duty exemption certificated provided by the institute, clearance charges, forwarding consignment from port of clearance to NIPER Guwahati premises etc. can be quoted in Indian currency.

For comparing the price with other bids, the institute at the time of preparing comparative chart for the tenders, the total F.O.B., C.I.F., C.I.P. cost will be converted into equivalent Indian currency at the exchange rate prevailing on the date of tender opening i.e. 13th February

2018 at 1500 hours IST and add the equivalent Indian currency value to the clearance and forwarding charges indicated by the supplier.
