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**CSIR-INSTITUTE OF HIMALAYAN BIORESOURCE TECHNOLOGY**

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद् / Council of Scientific & Industrial Research)

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MINUTES OF PRE-BID CONFERENCE HELD ON 10.12.2024

No.4/5(34)24-Pur

Dated December 13, 2024

Tender Ref.No.4/5(34)24-Pur

Ref: Tender ID 2024\_CSIR\_216856\_1 dated 29.11.2024

Tender Title: Global Tender for Thermogravimetric Analyzer (TGA)

Work Description: Supply and Installation of Thermogravimetric Analyzer (TGA)

The Pre-Bid meeting for supply and installation of Thermogravimetric Analyzer (TGA) scheduled on 10-12-2024 did not witness physical participation from any firms. However, two firms submitted their queries via email. The queries have been addressed and two points in the technical specifications have been revised.

Detailed revised specifications are attached herewith.

All prospective bidders may please note and submit their offers as per the revised specifications only.

(Sanjay Rawat)  
Stores & Purchase & Purchase

# Revised Specifications of Thermogravimetric Analyzer (TGA)

## after Prebid meeting

### Basic Unit Specifications

#### ❖ Balance

1. **Design:** A vertical / horizontal design high ultra sensitivity balance.
2. **Protection:** The balance should have cooling and gas protection features to stay stable and safe during operation.
3. **Highest weighing capacity:** Up to 1000 mg or better including crucible weight
4. **Lowest weighing capacity:** 1 mg or better
5. **Resolution:** 1  $\mu$ g or better.
6. **Precision:**  $\pm 0.01\%$  or better
7. **Blank curve reproducibility or weight baseline drift:** better than  $\pm 25 \mu$ g for whole temperature range.

#### ❖ Temperature

8. **Temperature Range:** Ambient to 900 °C or better
9. **Heating Rate Range:** 0.1 to 80°C/min or higher
10. **Temperature Accuracy:**  $\pm 1^\circ\text{C/K}$  or better
11. **Temperature Precision:**  $\pm 0.5^\circ\text{C/K}$  or better
12. **Furnace cooling:** 900°C to 100°C in < 30 min or better

#### ❖ Crucible

13. **Sample crucible volume:** Must be able to hold upto 1g or better including its own weight.
14. The TGA should be supplied with the sample crucible made of Pt-pan (4 Qty) & Ceramic-pan (20 Qty)

#### ❖ Software control

15. TGA should have a software-controlled mass flow controllers with automated gas switching and the in-build mass flow controller in the TGA

#### ❖ Computer, printer and UPS

*(Signature)*  
11/12/2024

*(Signature)*  
14/12/24

*(Signature)*  
12/12/2024

*(Signature)*  
12.12.24

16. A suitable configuration of the PC/ Laptop with latest windows i-7/mac OS, 16GB RAM, 1 TB SSD, latest operating system must be supplied along with the TGA for the operational & data analysis.
17. One unit of Color Laser Printer with facility to print (both sides automatically), scan, photostat.
18. One unit of 5 KVA UPS (Uninterrupted Power Supply) with a minimum 30 minutes back-time should be supplied along with the TGA.

❖ **Warranty and Certification**

19. The TGA should be supplied with a minimum one-year comprehensive warranty from the date of installation.
20. Instrument must be supplied with NABL/ILAC/APAC certified calibration or better with respect to specified parameters after installation.

❖ **Nitrogen gas generator**

A suitable nitrogen gas generator should be supplied along with TGA having:

21. **Nitrogen Purity:**  $\geq 99.9995\%$  or better.
22. **Flow rate:**  $\geq 250$  ml/min or better.
23. **Supply Pressure:** 80 psi or better.

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11/12/2024

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12/12/24

(Sp1) *[Signature]*  
12/12/2024 *[Signature]*  
12.12.24

Summary on points of discussion after Prebid meeting

S.No.	Tender specification	Revised Specification
3	Highest weighing capacity: Up to 1000 mg or better	Highest weighing capacity: Up to 1000 mg or better including crucible weight
13	Sample crucible volume: Must be able to hold upto 1g or better	Sample crucible volume: Must be able to hold upto 1g or better including its own weight.

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