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**CSIR-INSTITUTE OF HIMALAYAN BIORESOURCE TECHNOLOGY**

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

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**संशोधन / CORRIGENDUM**

निरीक्षण संख्या/Enquiry No. 4/5(34)24-Pur.

January 09, 2025

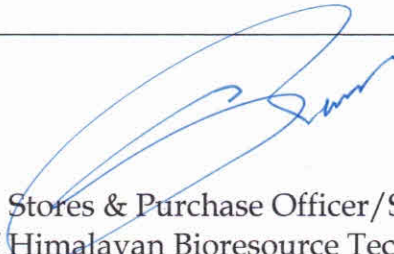
**Subject: थर्मोग्रैविमेट्रिक एनेलाइजर (टी.जी.ए.) से संबंधित तकनीकी विशिष्टताओं में संशोधन / Revision in specifications of Thermogravimetric Analyser (TGA)**

**Tender Reference No.: 4/5(34)24-Pur., Tender ID 2025\_CSIR\_222484\_1 Dated: 02.01.2025**

1. The following amendment may be noted in Technical specifications of above eTender:

क्रम/ संख्या/Sr. No.	निविदा के तहत थर्मोग्रैविमेट्रिक एनालाइजर (टीजीए) की वर्तमान तकनीकी विशिष्टताएं / EXISTING Technical Specifications of the equipment under above eTender	निविदा के तहत थर्मोग्रैविमेट्रिक एनालाइजर (टीजीए) की संशोधित तकनीकी विशिष्टता / Revised Technical specifications of Thermogravimetric Analyser (TGA) (after Pre-bid meeting)
1.	<p><b>Basic Unit Specifications</b></p> <p>❖ <b>Balance</b></p> <ol style="list-style-type: none"> <li><b>Design:</b> A vertical / horizontal design high ultra sensitivity balance.</li> <li><b>Protection:</b> The balance should have cooling and gas protection features to stay stable and safe during operation.</li> <li><b>Highest weighing capacity:</b> Up to 1000 mg or better</li> <li><b>Lowest weighing capacity:</b> 1 mg or better</li> <li><b>Resolution:</b> 1 µg or better.</li> <li><b>Precision:</b> ± 0.01 % or better</li> <li><b>Blank curve reproducibility or weight baseline drift:</b> better than ± 25 µg for whole temperature range.</li> </ol> <p>❖ <b>Temperature</b></p> <ol style="list-style-type: none"> <li><b>Temperature Range:</b> Ambient to 900 °C or better</li> <li><b>Heating Rate Range:</b> 0.1 to 80°C/min or higher</li> <li><b>Temperature Accuracy:</b> ±1°C/K or better</li> <li><b>Temperature Precision:</b> ±0.5°C/K or better</li> <li><b>Furnace cooling:</b> 900°C to 100°C in &lt; 30 min or better</li> </ol> <p>❖ <b>Crucible</b></p> <ol style="list-style-type: none"> <li><b>Sample crucible volume:</b> Must be able to hold upto 1g or better</li> <li>The TGA should be supplied with the sample</li> </ol>	<p><b>Basic Unit Specifications</b></p> <p>❖ <b>Balance</b></p> <ol style="list-style-type: none"> <li><b>Design:</b> A vertical / horizontal design high ultra sensitivity balance.</li> <li><b>Protection:</b> The balance should have cooling and gas protection features to stay stable and safe during operation.</li> <li><b>Highest weighing capacity:</b> Up to 1000 mg or better including crucible weight</li> <li><b>Lowest weighing capacity:</b> 1 mg or better</li> <li><b>Resolution:</b> 1 µg or better.</li> <li><b>Precision:</b> ± 0.01% or better</li> <li><b>Blank curve reproducibility or weight baseline drift:</b> better than ± 25 µg for whole temperature range.</li> </ol> <p>❖ <b>Temperature</b></p> <ol style="list-style-type: none"> <li><b>Temperature Range:</b> Ambient to 900 °C or better</li> <li><b>Heating Rate Range:</b> 0.1 to 80°C/min or higher</li> <li><b>Temperature Accuracy:</b> ±1°C/K or better</li> <li><b>Temperature Precision:</b> ±0.5°C/K or better</li> <li><b>Furnace cooling:</b> 900°C to 100°C in &lt; 30 min or better</li> </ol> <p>❖ <b>Crucible</b></p> <ol style="list-style-type: none"> <li><b>Sample crucible volume:</b> Must be able to hold upto 1g or better including its own weight.</li> <li>The TGA should be supplied with the sample</li> </ol>

<p>crucible made of Pt-pan (4 Qty) &amp; Ceramic-pan (20 Qty)</p> <p>❖ <b>Software control</b></p> <p>15. TGA should have a software-controlled mass flow controllers with automated gas switching and the in-build mass flow controller in the TGA</p> <p>❖ <b>Computer, printer and UPS</b></p> <p>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 &amp; data analysis.</p> <p>17. One unit of Color Laser Printer with facility to print (both sides automatically), scan, photostat.</p> <p>18. One unit of 5 KVA UPS (Uninterrupted Power Supply) with a minimum 30 minutes back-time should be supplied along with the TGA.</p> <p>❖ <b>Warranty and Certification</b></p> <p>19. The TGA should be supplied with a minimum one-year comprehensive warranty from the date of installation.</p> <p>20. Instrument must be supplied with NABL/ILAC/APAC certified calibration or better with respect to specified parameters after installation.</p> <p>❖ <b>Nitrogen gas generator</b></p> <p>A suitable nitrogen gas generator should be supplied along with TGA having:</p> <p>21. <b>Nitrogen Purity:</b> <math>\geq 99.9995\%</math> or better.</p> <p>22. <b>Flow rate:</b> <math>\geq 250</math> ml/min or better.</p> <p>23. <b>Supply Pressure:</b> 80 psi or better.</p>	<p>crucible made of Pt-pan (4 Qty) &amp; Ceramic-pan (20 Qty)</p> <p>❖ <b>Software control</b></p> <p>15. TGA should have a software-controlled mass flow controllers with automated gas switching and the in-build mass flow controller in the TGA</p> <p>❖ <b>Computer, printer and UPS</b></p> <p>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 &amp; data analysis.</p> <p>17. One unit of Color Laser Printer with facility to print (both sides automatically), scan, photostat.</p> <p>18. One unit of 5 KVA UPS (Uninterrupted Power Supply) with a minimum 30 minutes back-time should be supplied along with the TGA.</p> <p>❖ <b>Warranty and Certification</b></p> <p>19. The TGA should be supplied with a minimum one-year comprehensive warranty from the date of installation.</p> <p>20. Instrument must be supplied with NABL/ILAC/APAC certified calibration or better with respect to specified parameters after installation.</p> <p>❖ <b>Nitrogen gas generator</b></p> <p>A suitable nitrogen gas generator should be supplied along with TGA having:</p> <p>21. <b>Nitrogen Purity:</b> <math>\geq 99.9995\%</math> or better.</p> <p>22. <b>Flow rate:</b> <math>\geq 250</math> ml/min or better.</p> <p>23. <b>Supply Pressure:</b> 80 psi or better.</p>
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 Stores & Purchase Officer/SO (S&P)  
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