

Technical Specifications of Thermal Gravimetric Analysis

Bidder Eligibility Criteria-I

I	Bidder Eligibility Criteria-I (Public Procurement – Preference to Make in India)	Class I / Class II	Local Content value	Reference, Page No.
I	Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16 th September 2020 and other subsequent orders issued therein.			
2.0	Bidder Eligibility Criteria-II	Compliance (Yes/No)	Reference Page No.	Remarks, If any
1	The bidder/OEM should have supplied at least 5 similar items to IITs, NITs, IISERs, CSIR Labs or other Govt. R&D organizations in the last 10 years, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation.			
2	The bidder should provide local service engineer details to attend service related issues			
3	Company should be registered in India for last 3 years. Proof of company registration should be enclosed			
4	The bidder should have 5 Crore turnover in any one of the last 3 Financial Year.			
5	The bidder/OEM service center should be available in India. Proof of facility location & contact details to be provided along with technical bid.			

3.0 Technical Compliance:

Sl. No	Parameter	Specification	Complied / Not Complied	Reference Page No.
1	Balance Design	Vertical Design Furnace and the Balance should be thermally isolated for better stability and protection.		
2	Balance Sensitivity	0.1 µg or better.		
3	Balance Capacity	1000 mg or better.		
4	Balance precision	0.001% or better		
5	Thermal insulation for balance	Thermally insulated balance chamber for maintaining temperature.		

6	Temperature Range	(Room temperature)/15°C to ≥1000°C or more.		
7	Temperature accuracy	± 1°C or better		
8	Heating Rate	0.1 to ≥ 100 to 500°C/min or better.		
9	Furnace Cooling	1000°C to 50°C in less than 15 minutes		
10	Sample Weight Capacity	250 – 1000 mg or more		
11	Resolution	1 µg or less		
12	Dynamic Drift	≤ 0.02 mg or better.		
13	Calibration Standards	Nickel, Alumel, Perk alloy wire kit, and Calcium Oxalate and Calibration sample kit (Indium, Tin, Zinc, Aluminum, and Gold) should be supplied for weight calibration along with 100 mg weight.		
14	Experience	<ul style="list-style-type: none"> a) The quoted model must have been supplied and installed in Nationally funded institutes like IIT's IISER, IISc., etc. b) The purchase order of the same along with the service satisfactory certificate from the end user should be provided along with the tender. c) A minimum of 10 installations within the past five years should be proved in the form of purchase orders. d) Availability of instrument details online and online resources. e) Demo of the instrument for performance check might be asked if needed. 		
15	Computer & Accessories	<p>Branded computer with Windows 10 Professional OS compatible with the latest version of the software, 11th Generation Intel Core i5 processor or higher, RAM 16 GB DDR4 or better and 2 x 2 TB HDD, DVD-RW optical drive, minimum 6 numbers USB ports and LAN card, 24" monitor, A Multi-functional color laser jet printer should be provided</p>		
16	Hyphenation Capability	The quoted model must be easily upgradable to Hyphenation towards FT-IR, GC-MS for evolved gas analysis without changing the existing furnace.		
17	Technical support	The OEM must have a dedicated application support lab in India to provide after-sales technical support within 48-72 hours.		
18	Software	<p>The latest version of the software capable of running multiple instruments simultaneously. Capable of exporting the data in ASCII/TIF format. Software must have built-in calibration algorithms to avoid recalibration of instruments while changing gases, heating or cooling rate, and crucibles.</p>		

19	Warranty	<p>a) 3 years of comprehensive warranty on the complete instrument including the third-party items such as chiller, vacuum pump, compressor and also computer, and printer.</p> <p>b) The scope of warranty: 2 or more Routine services, 1 Maintenance (PM) kit as applicable, all spare parts should be covered except consumables, all breakdown calls must be supported within 2 – 3 days of response time, and remote support must be provided whenever needed.</p> <p>c) Additional two years of AMC should be quoted for the main instrument.</p> <p>d) Scope of AMC: Routine services, should cover all breakdown calls and should provide remote support, Response time should be within 2 – 4 days, One PM kit as applicable, and all spare parts should be covered except consumables, Remote support should be provided. In case, the vendor provides the warranty, the principal should certify (authenticate) the extended warranty. Appropriate documents must be attached along with the quotation in this regard.</p>		
20	Accessories	<p>a) A branded chiller should be supplied and installed along with the instrument (specifications of the chiller must be specified).</p> <p>b) Reusable 60-70 µL alumina crucibles – 30 nos.</p> <p>c) Platinum pans - 2 Nos</p> <p>d) Calcium Oxalate reference material - 10 g</p> <p>e) Aluminium Oxide powder - 10 g</p> <p>f) Gas Split (SVC) kit (If required) - 1 Nos</p> <p>g) TA Filter dryer kit (If required, to remove moisture and particulates from the purge gas) - 1 Nos</p> <p>h) Purge gases: Nitrogen gas cylinder (47L; 99.99%), Argon (47 L, 99.99%), and Helium (47 L, 99.99%) two numbers each. All the gas cylinders must be provided with a regulator.</p>		
	Terms and Conditions			
1	A certificate will be required from the original equipment manufacturer that the technical support along with all the essential spares will be provided/made available for at least 5 years after the expiry of the initial 3 years of the warranty period			
2	Necessary training and installation to be provided.			

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the Above points with document proof as required. Failing which bidders will be technically disqualified)