

Date:

24/5/2023

To,
The Head
SAIF, IIT Bombay.

Sub: TGA & DTA (Instrument/facility name) Analysis of Samples at SAIF IIT Bombay.

Dear Sir,

Ms. Sanika Benke studying at our Institute under the guidance of **Prof.(Dr) Rajesh Chaudhari & Mechanical engineering Department** would like to use the Instrument Facility at SAIF IIT Bombay.

We have 03(No. of Samples) for **TGA & DTA** (name of instrument/facility). The Material Safety Data Sheet (MSDS) is attached herewith for the said analysis.

Further we state that if any of the analysis data / results received from the **TGA & DTA** (Instrument/facility name) facility is used in any Publication or Thesis, we agree to acknowledge the **TGA & DTA** (Instrument/facility name) SAIF, IIT Bombay in our Publication and Thesis. We shall submit a soft copy of the same to office.saif@iitb.ac.in for information.

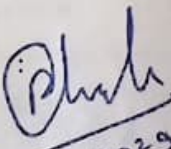
Further we acknowledge & accept that:

- The contents of the report prepared based on the measurement are purely technical/scientific in nature.
- This report is not a legal document per se and is based on the samples provided by us.
- We (the applicants) understand and accept that this report is not a certificate for any performance / efficacy / efficiency / utility related aspects. This report may not be construed as a legal document, certificate or endorsement and may not be used for marketing of the products or processes.
- We (the applicants) shall be solely responsible for any intended use / utilization of the report provided and / or the contents thereof. All warranties or representations of any kind pertaining to the report, or its contents are hereby expressly excluded.
- I accept that all the issued reports/results (Soft/hard) will not carry any Signature or Seal and Stamp of SAIF IIT Bombay.
- If our Institute has GST Number. But if we fail to provide the same to you, in that case Invoice / Bill will be generated without GST No. and request to add GST No. after invoice generation will not be entertained by SAIF is acceptable by us.

The GSTIN Registration No. of our Institute is **27AAATB438KIZJ**

Thanking You,

Signature of Guide / Professor / Head
Name : Prof.(Dr)Rajesh Chaudhari
Designation: Assistant Professor
Department: Mechanical engineering


24/5/2023

Official Seal



INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY
Sophisticated Analytical Instrument Facility (SAIF)

ANALYSIS REQUEST FORM AND SAFETY DATA SHEET – TGD TA
User Type: IITB/EXTERNAL (University/National Lab/R&D/Industry)

Name of the User: Ms. Sanika Benke Email: sanika.benke21@vit.edu Contact No: 8459302028 Name of Institute/Organization: Address of Institute/Organization: Vishkarma Institute of technology Bibewadi pune 411037	Name of Guide/PI: Dr. Rajesh Chaudhari Email: rajesh.chaudhar@vit.edu Contact No.: 8087789752
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1. Number of Samples: 3
2. Heating Program: (Add more rows if required OR attach a separate sheet)

S.No.	Sample Name	Temp. range (RT to °C)	Heating rate (Ramp) °C/min	Atmosphere (N ₂ , Ar, Air, O ₂)	Analysis reqd. TGA/DTA/Both
1.	TC-10	1300	10	Ar	Both TGA & DTA
2.	TC-15	1300	10	Ar	Both TGA & DTA
3.	TC-20	1300	10	Ar	Both TGA & DTA
4.					
5.					

Samples containing alkali metal oxides, hydroxides, heavy metals, alkali metal halides, nitrates or large amounts of sulphur when heated in platinum crucible can erode the crucible.

3. Does the sample contain any Halogens/Corrosive substance? YES / NO
4. Hygroscopic or non-hygroscopic: No
5. Explosive or non-explosive at higher temp: P No
6. Does your sample contain any heavy metals like lead, bismuth, tin, arsenic, silver, mercury, copper, Selenium, tellurium, etc.? If yes, specify. No

Notes:

- At least 30-40 mg of sample should be submitted.
- Sample size should be < 5 mm in diameter and < 2.5 mm in thickness.
- Samples with corrosive substance that will react with Aluminium/Platinum/Ceramic pans at the time should not be sent for analysis by TGD TA or DSC.
- Sample should not be toxic or hazardous.
- Radio-active material, unstable and explosive compounds are not accepted for analysis.
- Interpretation of spectra is NOT undertaken.

Additional Information

1. Moisture: Present/Absent/NA ✓
2. Sample nature: Organic/Inorganic/Any other characteristic nature (Specify)
3. Sample Properties: Carcinogenic (carcinogenicity level -----) / Non Carcinogenic / Radioactive / Explosive / Toxic / Corrosive / Flammable / Nonflammable / Other (specify)
4. Stability of sample: Stable under RTP / hygroscopic / sublimes / Reactive in air / moisture / light / heat ✓
5. Toxicity: Non-Toxic / Mildly toxic / Highly toxic.
6. Potential Health Hazards: Yes / No (irritant to skin / irritant to eyes / harmful to skin / toxic if inhaled / toxic if ingested)
7. Precautions for Safe Handling and Use:
8. Symptom on Exposure: Difficulty in breathing / reddening of skin / burning sensation in eyes / vomiting / giddiness / headache / unconsciousness / ----- Others (specify)
9. First aid measures:
10. Disposal Method of sample
11. Label the sample / sample container with hazard class
12. All Samples will be discarded within 7 days of analysis. If you wish to collect the samples then you are required to make arrangement for the same. SAIF office will not dispatch the same to users under any circumstances.
13. Please fill in appropriate numbers in the NFPA diamond if MSDS available: (# Kindly refer the image at the end of the file for reference):

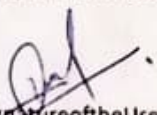


Declaration

I confirm that the samples submitted for analysis are for research purposes only and that the above-furnished details are correct and true to the best of my knowledge. I understand that I will be held responsible for any damages arising from incorrect information provided by me against points 7-10.

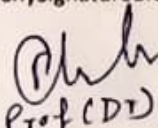
I agree to acknowledge DST and SAIF, IIT Bombay for providing (Instrument name) analytical facility for my research work, in my publications. I also agree to send the publication reference (Journal name/volume number/names of the authors/date of issue of the publication etc) to office.saif@iitb.ac.in

I declare that the "Content of this report is meant for our information only and we will not use the content of this report for advertisement, evidence, litigation or quote as certificate to third party" I accept that all the issued reports/results (Soft/hard) will not carry any Signature or Seal and Stamp of SAIF/CRNTS IIT Bombay.


Signature of the User

Date: 29/5/2025

Place: VIT Pune


Signature of the In-Charge/HOD/PI with Code
P.I./Guide seal/stamp



Health Hazard Blue Diamond

- 4-Deadly
- 3-Extreme Danger
- 2-Hazardous
- 1-Slightly Hazardous
- 0-Normal Material

Fire Hazard Red Diamond

- Flash Points
- 4-Below 73°F
- 3-Below 100°F
- 2-Above 100°F
- 1-Above 200°F
- 0-Will not burn



Specific Hazard White Diamond

- ACID - Acid
- ALK - Alkali
- COR - Corrosive
- OXY - Oxidizer
- ☢ - Radioactive
- WF - Use No Water

Reactivity Yellow Diamond

- 4-May Detonate
- 3-Shock & Heat may detonate
- 2-Violent Chemical change
- 1-Unstable if heated
- 0-Stable

#refer the image below for reference for filling up Point 17: