

THERMO GRAVIMETRIC ANALYSER

Photo of Instrument:



Instrument Name	TGA (Thermo Gravimetric Analysis)
Instrument Model & Serial No.	STA7200
Instrument Make	HITACHI
Category of Instrument	Analytical instrument
Description of Instrument	TGA used to measure the changes in the mass of a sample as a function of temperature (or time) while it is subjected to a controlled atmosphere. This type of analysis is particularly useful for studying thermal decomposition, oxidation, and other processes that involve changes in mass.
Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)	<ol style="list-style-type: none"> 1) Furnace or Heating System: The sample pan and reference pan are subjected to a controlled temperature program (Up to 1000°C). The temperature can be increased linearly or held at specific points. 2) Sample Pan: The sample is placed in a small, temperature-controlled pan. This pan is typically made of a material that is inert and does not react with the sample. 3) Reference Pan: A reference pan, containing an inert material with a known thermal behavior, is also placed in the instrument. This pan serves as a baseline for comparison with the sample. 4) Balance System: The instrument is equipped with a highly sensitive balance system that continuously measures the mass of both the sample and the reference pan.

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Application of Instrument (Limited to Major 4 or 5)	<ul style="list-style-type: none"> • Thermal Stability Studies • Polymer Characterization • Catalyst Evaluation • Quality Control • Environmental Studies
Type of Sample Required for Analysis/Testing (Quantity, Pre-Preparation, State etc.) Guidelines for Sample Submission – User Instructions	Sample should be solid in nature (Powdered form or film)
Types of Analysis/Testing (Quantity, Pre-Preparation, State etc.) Guidelines for Sample Submission – User Instructions	Thermo Gravimetric Method
Faculty In-Charge Name / Email / Contact	Prof. Shiny Joseph shiny@nitc.ac.in 04952285404
Technical Staff Name / Email / Contact	Muhammed Munaver Muhammedmunaver@nitc.ac.in / 04952285484
Location of Instrument	Instrumentation Lab
Other Details	

User Charges:

S.NO.	Type of Analysis/Testing	Internal - within Department of NITC	Internal - Other Departments NITC	External Academic Educational Institutes	National Labs	Industry
1	Thermo Gravimetric Method		400 (up to 600°C)	800 (up to 600°C)	800 (up to 600°C)	1600 (up to 600°C)
			800 (up to 1000°C)	1600 (up to 1000°C)	1600 (up to 1000°C)	3200 (up to 1000°C)

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Slot Booking and Payment Work Flow:

- Discuss the slot availability with the technical staff in the instrumentation lab of chemical engineering department.
- Collect the request form.
- Payment should be at the accounts section of the institute.
- Get the request form signed from the faculty in charge.
- Submit the request form and samples in the instrumentation lab.