

POROMETER

Photo of Instrument:



Instrument Name	POROMETER
Instrument Model & Serial No.	3G zh , 1050046130
Instrument Make	Quantachrome
Category of Instrument	Analytical Instrument
Description of Instrument	Porometer is a scientific instrument designed to measure the porosity of materials by analyzing the flow of gases or liquids through their porous structures. Porosity refers to the presence of void spaces, or pores, within a material. Understanding and quantifying porosity is essential in various fields such as materials science, geology, biology, and industrial applications.
Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)	<p>1) Principle of Operation:</p> <ul style="list-style-type: none"> • Porometers typically operate based on the principles of gas or liquid flow through a porous material. They measure the rate at which a fluid (commonly air or a specific gas) passes through a sample. <p>2) Pore size, minimum:- <math>0.02 \mu\text{m}</math> 3) Pore size, maximum:- 500 <math>\mu\text{m}</math> 4) Pressure:- 0 psi to 500 psi 5) Pressure sensing accuracy:- $\pm 0.05 \%$</math></p>

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	6) Flow sensor type:- Precision thermal mass flow
Application of Instrument (Limited to Major 4 or 5)	<ul style="list-style-type: none"> Porometers are used in a wide range of applications, including the characterization of membranes, filters, textiles, ceramics, polymers, and other materials with porous structures. They are crucial in industries such as pharmaceuticals, food and beverage, oil and gas, and environmental science.
Type of Sample Required for Analysis/Testing (Quantity, Pre-Preparation, State etc.) Guidelines for Sample Submission – User Instructions	Solid membrane sample
Types of Analysis/Testing (Quantity, Pre-Preparation, State etc.) Guidelines for Sample Submission – User Instructions	Average Pore Size Measurement
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	Average Pore Size Measurement		400	800	800	1600

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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.