



**ADVANCED MATERIAL CHARACTERIZATION FOR
CHEMICAL INDUSTRY**



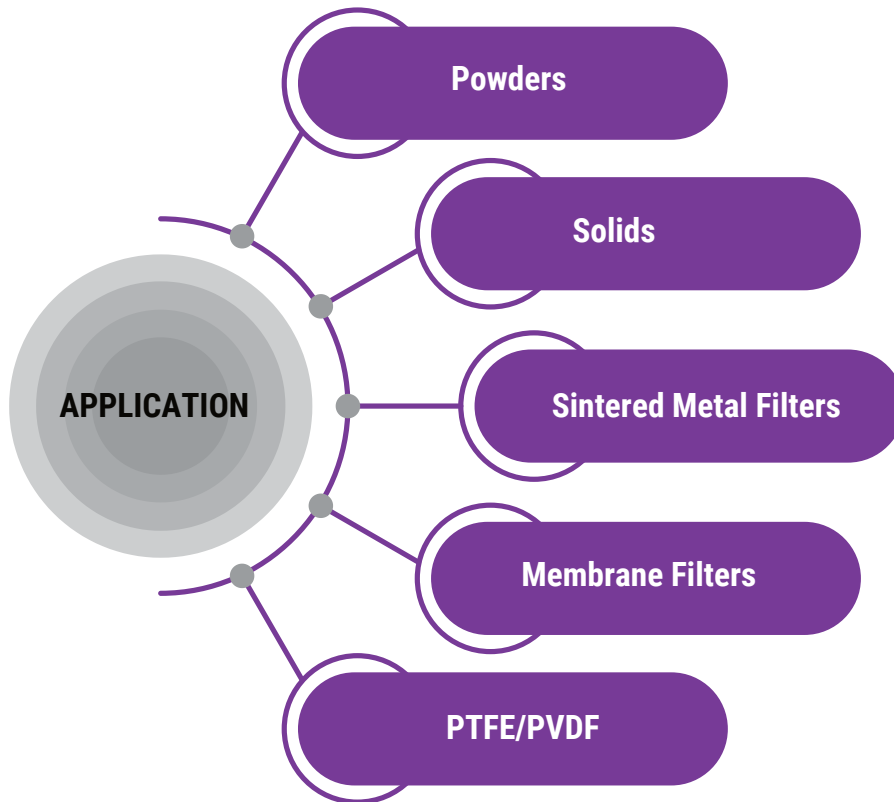
At M19-Material Intelligence Lab, Baroda, we create and deliver game changing Chemical Industry Products enabling you to develop the product of the future, enhance your competitive market position, supported by our world leading characterization products, lab testing and certification division.

Chemical Filtration is a crucial aspect of the Chemical Industry, ensuring the production of high-quality chemicals and preventing the release of hazardous substances into the environment.

It involves the removal of impurities, contaminants, and undesired particles from chemical process streams to maintain product purity, meet regulatory requirements, and optimize production efficiency. Chemical Filtration Technologies are employed at various stages of the chemical manufacturing process, including raw material purification, intermediate product separation, and final product refinement. The chemical filtration industry within the chemical sector has experienced significant growth due to advancements in filtration technologies and the rising demand for cleaner and safer chemical products.

HOW WE HELP?

- Design & Manufacture Lab Instruments
- Lab Testing Services
- Identify & Rectify Failures
- Improve Product Performance
- Ensure Your QA/QC Requirements







PRODUCT PORTFOLIO



MICROPORE ANALYZER





The Micro Pore Analyzer device stands out as a cutting-edge pore size analyzer, offering remarkable capabilities. Its advanced technology relies on both liquid displacement and capillary flow porometry, making it highly efficient in characterizing the pore sizes of various fabric such as woven, non-woven, spunboard/meltblown media. The device is specifically tailored for microporous media, making it an ideal choice for evaluating the performance of a wide range of textile products and provide accurate and detailed insights into the fabric's pore structure.

-  Standard : ASTM F316, ASTM D6767
-  Test Range : 0.1 -100 microns
-  Test Duration : 0 -3 minutes
-  Precision : 0.01% F.S

Application: All types of Filtration & Separation Products, Filter Media and Cartridges

DENSITY ANALYZER

Density Analyzer is used to determine the density and volume of solids, powders, and porous materials with high accuracy. It operates based on the principles of Boyle's law and the ideal gas law. The main components of a helium pycnometer include a sample chamber, an expansion chamber, a helium source, a pressure transducer, and a control unit. The helium gas pycnometer provides accurate and precise true density measurements, especially for samples with irregular shapes or voids.

-  Standard : ASTM D5550-14, ASTM 4892-14, ASTM B923-10
-  Test Range : 0.1 -135g/cc
-  Test Duration : 10 minutes
-  Precision : 0.1% F.S

Application: Powder True Density, Solid True Density, Material Porosity, Quality Control, Drug Density

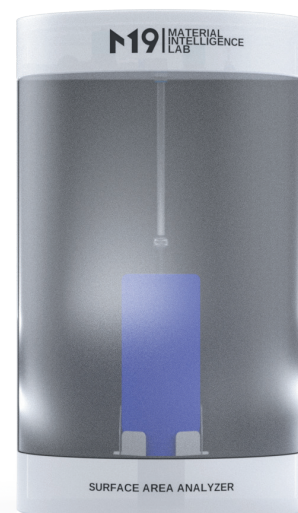



PRODUCT PORTFOLIO


SURFACE AREA ANALYZER

Surface Area Analyzer, also known as a Gas Adsorption Analyzer or BET Analyzer, is a sophisticated instrument used to measure the specific surface area of solid materials.


It is based on the principles of gas adsorption, specifically the Brunauer-Emmett-Teller (BET) theory. Surface area analysis is essential in various scientific and industrial applications, including catalyst characterization, pharmaceutical development, and materials research.



 Standard : ISO 9277, ASTM C1069, ASTM D3663

 Test Range : SSA 0.5 - > 1000 m²/g

 Test Duration : 1 -2 hours

 Precision : 0.001m²/g

Application: Drug Formulation, Excipient Characterization, Quality Control, Adsorption-Desorption Studies, Nanoparticle Characterization, QA of Packaging Materials, Active Ingredient Purity, Nanoparticle Characterization



EASY 3- STEP PROCESS TO ACCESS M19 TESTING SERVICES

Step 1: Sample Preparation

1.1 Select the Sample: Choose representative sample from your batch for testing.

1.2 Package Your Sample: Pack your sample securely to prevent any damage during transit. Each sample should be individually wrapped and labeled to ensure they can be easily identified.

Make sure to include the Sample Specification Sheet detailing important information, such as the type of fabric, manufacturer, model, and any specific tests requested.

Step 2: Sample Dispatch

2.1 Select a Reputable Courier: Choose a reliable courier service that offers tracking and ensures your package will arrive safely at the lab.

2.2 Address and Dispatch: Clearly write the laboratory's address on your package and dispatch it via your chosen courier.

M19 Lab

Atten: Dr. A.S Dey

(Porelab Scientific Pvt Ltd)

801/802 K10 Grand,

Sarabhai Campus,

Vadodara, Gujarat-390007

Pb- +91 8140308833

2.3 Share Tracking Information: Share the courier tracking number with the lab so they can anticipate the arrival of your samples.

Step 3: Lab Confirmation and Follow-up

3.1 Arrival Confirmation: Upon receipt of your samples, M19 lab team shall confirm their arrival and condition.

3.2 Lab Testing: The lab will then perform the requested tests. The timeline for this can vary depending on the complexity and volume of the tests.

3.3 Results and Report: Once testing is complete, M19 lab team will compile a detailed report and share the results with you. This may be done via email, through a client portal, or mailed as a hard copy, depending on the lab's practices and your preferences.

CLIENTS



MISSION

Why we exist; why the world will be different because we are here?

The mission of M19 Team is to provide high precision insights in the Nanoscale World with seamless coordination and provide advance material characterizations through unrivalled education, research and outreach in the many diverse industry we serve.

VISION

Who we want to become; what we want to achieve or create?

The M19 lab's vision is to continue to grow and challenge convention through our pioneering spirit, scientific advancements, forward thinking leadership, collaborative approach to provide exceptional material testing support.

BRAND PROMISE

The net benefit we deliver to those we serve.

M19 lab is the choice for ground-breaking material research. Our unrivalled education, translational research laboratory, custom instruments ensure that we deliver the best laboratory support from everyday products to testing of the most serious and complex material products.

FAQ's

✓ **How does Surface Area Analyzer Work?**

Surface Area Analyzer works by utilizing a network of tiny pores that allow air and moisture to pass through while blocking larger particles. These pores create a breathable and protective barrier, making it suitable for applications such as wound dressings and surgical tapes.

✓ **What are the benefits of Surface Area Analyzer?**

A Surface Area Analyzer can benefit companies by providing valuable insights into the pore structure and characteristics of materials, aiding in quality control, product development and optimization of manufacturing processes. It enables companies to make informed decisions, enhance product performance and meet specific customer requirements more effectively.

✓ **What are the basic requirements for Density Analyzer usage?**

Basic requirements for Density Analyzer usage include a stable power supply to ensure uninterrupted operation and an environment with controlled temperature and humidity levels to maintain instrument performance and accuracy.

✓ **Who uses Density Analyzer?**

Density Analyzer instrument are commonly used by researchers, scientists and medical professionals seeking precise and delicate measurements at the microscale.

✓ **What is the importance of Surface Area Analyzer in Chemical Industry?**

Surface Area Analyzer holds significant importance in the chemical industry as they enable precise characterization of materials with microporous structures. These instruments provide critical data on micropore volume, surface area, and pore size distribution, which are essential for catalyst development, adsorption studies, quality control, and optimizing materials for various applications.

In the chemical sector, Surface Area Analyzer contribute to enhancing efficiency, selectivity, and performance in processes like gas storage, separation, and environmental applications.

✓ **What is need of Density in Chemical Industry?**

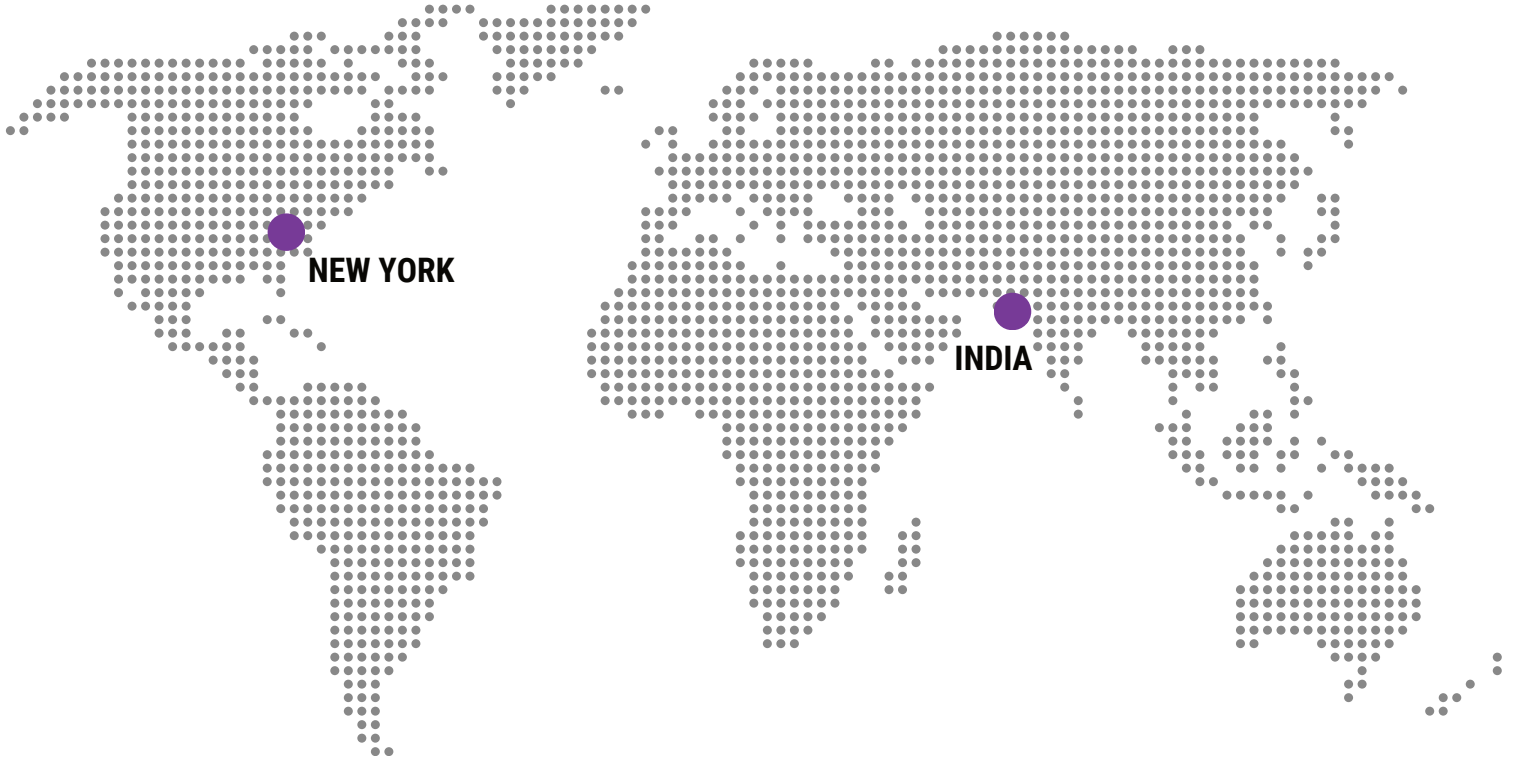
Density is a cornerstone parameter in the chemical industry, encompassing various vital functions as density acts as a distinctive fingerprint, aiding in the verification of substances through their unique density values. Also, quality control relies on density measurements to guarantee the purity and uniformity of raw materials, intermediates, and finished products, allowing for the detection of impurities or compositional variations. Density also finds application in concentration determination, particularly in industries such as pharmaceuticals and cosmetics, where precise solute concentrations are paramount. For reaction monitoring, density changes during chemical processes provide valuable insights into product formation or reactant consumption, thereby facilitating precise process control.

✓ **What are the applications of Density Analyzer?**

Density analyzers is a valuable instrument for various applications related to material characterization. It play a pivotal role in the various industries by providing accurate density and porosity data for materials used in production, quality control, and stability testing. These applications contribute to the development of safe, effective, and consistent products.

✓ **What is the benefits of M19 Lab Products?**

M19 Lab Products are fully automated and digital instruments Advanced AI-based Software Control Program is provided for easy operation and test report generation. Also, M19 lab team offers better after sales support, AMC. Since the products are designed and manufactured in India.



CONTACT US

USA



85 Murray Hill Road
Suite 2403,
Vestal - 13092
New York, US



support@m19.com



+1 (731) 602 7890

INDIA

801/802 K10 Grand
Vikram Sarabhai Campus
Alkapuri, Vadodara- 390007
Gujarat, India

info@m19.io

+91 814 030 8833