

# QC Porometer

## Principle

A wetting liquid spontaneously fills the pores of a sample. A pressurized nonreacting gas can displace the liquid from pores. Pressure required to remove liquid is related to pore diameter. A fully wetted sample is placed in the sample chamber. The chamber is sealed, and gas is allowed to flow into the chamber to a value of pressure sufficient to overcome the capillary action of the fluid in the pore of the largest diameter, empty the pore, and initiate gas flow through the sample. This is the Bubble Point Pressure. The pressure is further increased in small increments, resulting in flow that is measured until the pores are empty of fluid. Such flow and pressure data are generated using a dry sample. The results are used to compute pore parameters and pore distribution.

$$p = 4g \cos q/D$$

p= Differential gas pressure on the sample

g= Surface tension of wetting liquid

q= Contact angle of wetting liquid

D= Pore Diameter

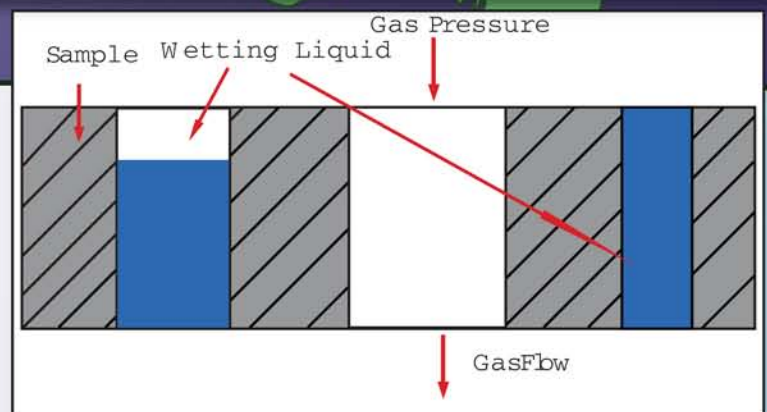


## Applications

The unique features of the instrument, especially its ability to generate highly reproducible data quickly, make it highly suitable for quality control and process control operations. The instrument is used in these applications in a wide variety of industries.

## Feature

- Fully automated and user friendly
- Only a few minutes per test
- Preset test parameters
- Very little operator time and involvement
- Ideal for quick generation of highly reproducible data
- Variety of sample shapes and sizes
- Very little maintenance





## Specifications

Flow Rate  
up to 200 x10<sup>3</sup> cm<sup>3</sup>/min

Pore Size Range  
500 mm to 0.013 mm

Pressure Accuracy  
0.15 % of reading

Sample Size  
0.25" to 2.5" (0.6 to 6.25 cm) diameter and 1"  
(2.5 cm) thick

## Industries

- Automotive
- Battery
- Beverage
- Biotechnology
- Ceramic

- Filtration
- Food
- Fuel Cells
- Geotextiles
- Health Care

- Health Care
- Medical
- Nonwovens
- Paper
- Powder Metallurgy

- Textiles
- Diapers
- Pharmaceutical Products
- Household Products

## Other Products

Average Fiber Diameter Analyzer  
Bubble Point Tester  
Capillary Flow Porometer  
Clamp-On Porometer  
Compression Porometer  
Complete Filter Cartridge Analyzer  
Cyclic Compression Porometer  
Envelope Surface Area Analyzer  
Filtration Media Analyzer  
High Flow Porometer  
Integrity Analyzer  
Integrity Analyzer

In-Plane Porometer  
Microflow Porometer  
Multi-Chamber and Multi-Mode Porometer  
QC Porometer  
Diffusion Permeameter  
Gas Permeameter  
Liquid Permeameter  
Vapor Permeameter  
Water Vapor Transmission Analyzer  
Liquid Extrusion Porosimeter  
Mercury/Nonmercury Intrusion Porosimeter  
Water Intrusion Porosimeter (Aquapore)

BET Sorptometer  
Gas Pycnometer  
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