

FILTR Lab Capabilities

The **Filtration Group's FILTR Lab** offers an extensive array of applications & competitive product testing options to support our customers' most challenging applications & needs. The list below is not exhaustive but covers the majority of standard tests available. All testing requires submission of a Lab Work Request Form prior to shipment of samples to the lab.

Standard testing includes setup, laboratory analysis, sample disposal and a thorough standardized report of results. Custom test design and reporting is available if it is determined that the offering below will not meet your needs. Quotations for custom tests will be provided upon submission of a Lab Work Request Form and discussion with lab personnel.

Test Options & Detail:

Full Media Evaluation – Porometry, Basis Weight, Digital Microscopy, Polymer Identification

- Full media evaluation panel, used to identify important media characteristics such as morphology/structure, material of construction, fiber diameter, thickness, basis weight, mean pore size, void volume, etc. This testing is helpful for gaining a qualitative understanding of how a media may perform in a particular application or versus another filter media. Each individual test also available.

Media Air Permeability

- Uses pressurized air to estimate void space, porosity & flow characteristics of filtration media. Standard test produces a quantitative comparison that estimates performance characteristics of two medias. Can be done on hydrophilic or hydrophobic medias.

Media Water Permeability

- Uses water under pressure or vacuum to measure flow characteristics of filtration media in GPM/ft² or LPM/m² at a reported pressure. Standard test produces a quantitative comparison that estimates performance characteristics of two medias. Can only be done on hydrophilic medias.

Minimum Wetting Surface Tension/Surface Energy

- The minimum wetting surface tension of a membrane refers to the lowest surface tension a liquid can have and still be able to spread (wet) on the membrane's surface. This is related to the surface energy of the membrane, with higher surface energy generally leading to better wetting. Indicates how hydrophobic or hydrophilic the membrane is to water.

Fluid pH & Conductivity

- Identifies pH and cleanliness of various fluids for compatibility or filtration effectiveness verification. Ionic conductivity is an indicator for the magnitude of dissolved solutes.

Filterability/Efficiency & Loading Capacity

- Utilizes several pieces of equipment to determine filter efficiency at a given rating, as well as quantify the particulate holding capacity of the filter in grams per unit filtration area (typically per 10" length). This information can be useful in helping estimate filter life, though field results will vary.

Flow vs. Differential Pressure

- Establishes flow curves based on media rating and flow rates, which allows for more accurate filter sizing calculations and provides more data that can be used to estimate filter life.

Fluid Particulate Distribution

- Identifies count/concentration and size distribution of particulate found in a fluid sample. This information is helpful in properly sizing filters as well as ensuring particulate load is correctly distributed across multiple stages of filtration to maximize life.

Filter Integrity Testing

- Determines if filter failure has occurred and provides information that may be helpful in adjusting process or cleaning procedures to mitigate risk of quality issues or product loss. Optional add-on smoke test to identify failure points on a damaged membrane.

Fluid TOC Analysis

- Quantifies total organic carbon in an aqueous sample to ensure quality standards are being met or that system components are not contributing organic carbons to the fluid stream.

Bacterial/Microbial/Spore Retention

- Confirms that a filter is capable of retaining a specified organism to a stated removal level (LRV) and/or helps establish minimum integrity test thresholds to be able to quantify bacterial/microbial retention efficiency. Lead times will be longer if the use of non-standard organisms are required. Consult with your sales representative.

Endotoxin Reduction

- Quantifies a filter's ability to retain endotoxin per established and accepted test methods & protocols. Typically used for high-end pharmaceutical applications, specifically Water for Injection and others regulated by ST-108.

For **SAFETY** purposes, please **DO NOT** send any samples to the **FILTR Lab** until your lab request form has been submitted and approved by the Laboratory Manager. Sample submission prior to approval may result in refusal of the package, increases the chances of loss and may render the sample unusable.