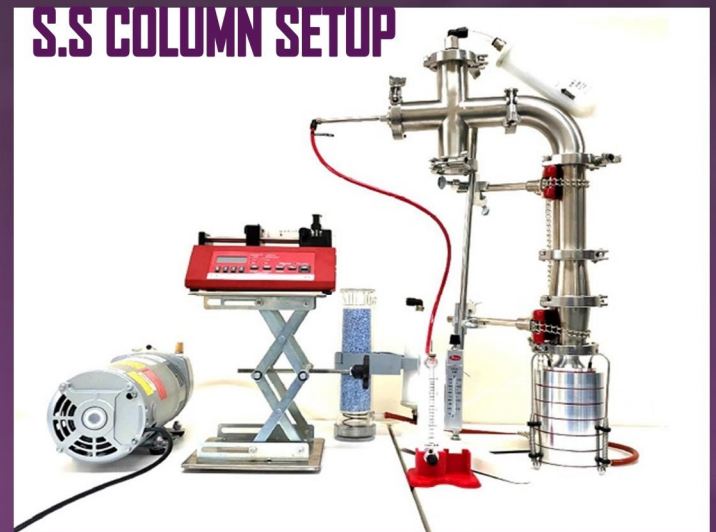




# BACTERIAL FILTRATION EFFICIENCY TEST



# ASTM F2101 IS 16288

**BFE System** manufactured by **CH Technologies (USA)** is used to perform the Bacterial Filter Efficiency Test of Medical Face Mask Material using *Staphylococcus aureus*. This system uses a quantitative method to determine the filtration efficiency of medical face mask materials. The maximum filtration efficiency that can be determined by this method is 99.9%.

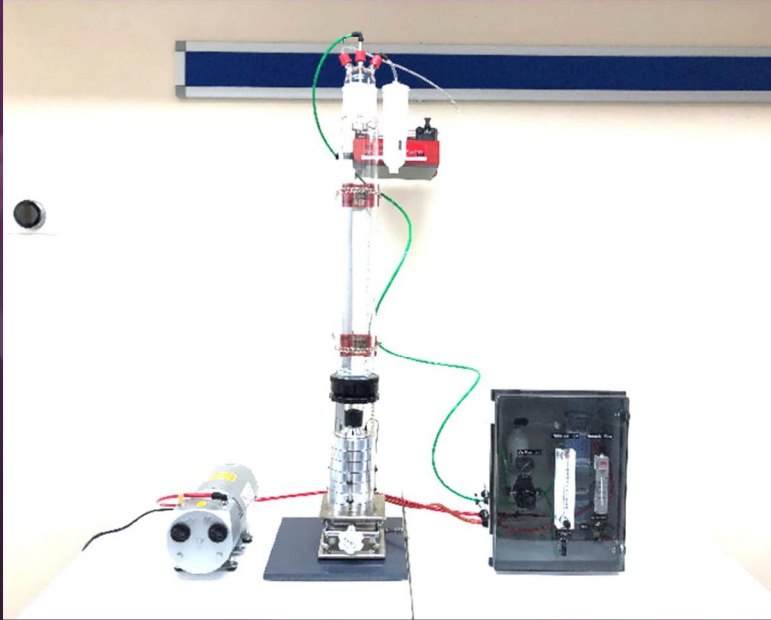
The system is available in two variations:

- **BFE System with Glass Column and 4 Jet BLAM Nebulizer.**
- **BFE System with Stainless Steel Column and 4 Jet BLAM Nebulizer.**



# GLASS COLUMN SETUP FOR ASTM 2101

## System Components:



- Aerosol Column with Built-in Mask/ Media Holder
- 4 Jet BLAM Atomizer
- Syringe Pump
- 6 Stage Viable Cascade Impactor
- Control Unit (Includes Rotameters, Pressure Regulator, Pressure Gauge, Flow Switches, Filters and Tubing)
- Custom Ring Stand with Lab Jack Support
- Rotary Vane Vacuum Pump

## OPERATIONAL BRIEF:

- The liquid test article (Bacterial Solution) is loaded into a syringe Pump.
- The test article is then injected into the BLAM nozzle at a controlled feed rate.
- Agar plated petri dishes are mounted inside the stages of the Viable Impactor.
- The sample to be tested is clamped into the system for exposure.
- The BLAM nozzle sprays fine Aerosol containing bacteria.
- The agar Plates are removed from the impactor for incubation and further analysis to count the bacterial colonies.

## SPECIFICATIONS:

System Component	Specifications
Viable Impactor*	Anderson 6 Stage Cascade Impactor (P/N: TE-10-800)
Atomizer	4 Jet BLAM Delivering 3.0 +/- 0.3 $\mu$ m aerosol
Aerosol Column	Prism Research Glass Column, 60 cm long and 8 cm in diameter
Syringe Pump	New Era (N-300) up to 42.8 ml/min, can deliver 0.01 ml/min
Flow Indicating Rotameters**	Built-in needle valve for impactor flow control
Pressure regulator and Gauge	SMC 0-100 psi (0-700 kPa)
Vacuum Pump	Rotary Vane Vacuum Pump (GAST 101Q) 2.7 CFM (76 l/min) at 20" HG Vacuum

\* Does not include petri dishes (100 mm diameter X 10 mm deep) with impactor

\*\* You will require an airflow calibrator with minimum flow range of 30L/min for proper operation Petri Dishes and flow calibrator sold separately.



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