

Bacterial Filtration Efficiency (BFE) Testing System

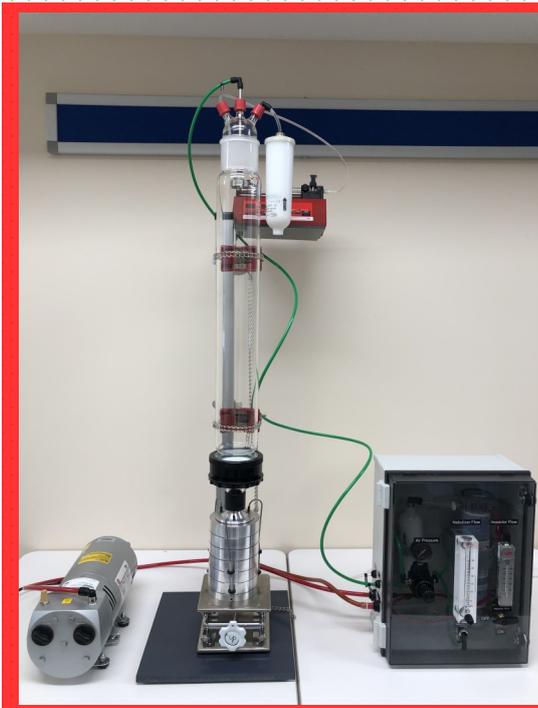


Bacterial Filtration Efficiency (BFE) testing System manufactured by **CH Technologies (USA)** is used to test the efficiency of the medical face mask material using *Staphylococcus aureus*. This system uses a quantitative method to determine the filtration efficiency of medical face mask materials against pathogens.

The system is available in two variations:

- BFE System with a Glass Aerosol Column
- BFE System with a Stainless Steel (SS) Aerosol Column

Glass Aerosol Chamber Setup for ASTM2101



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:

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

System Components	Specifications
Viable Impactor*	Anderson 6 Stage Viable impactor (P/N: TS-10-800)
Atomizer	4 Jet BLAM delivering $3.0 \pm 0.3 \mu\text{m}$ aerosol
Aerosol Column	Prism Research Glass column, 60 cm long and 8 cm 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	0-100 psi (0-700 kPa)
Vacuum Pump	Rotary Vane Vacuum Pump (GAST101Q), 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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