

Bacterial & Viral Filtration Efficacy (BFE/VFE) Test

The Bacterial Filtration Efficiency (BFE) test is performed on filtration materials, fabrics, covers and devices that are designed to provide protection against biological aerosols, such as face masks, surgical gowns, caps, and air filters. It is a measure of a material's resistance to bacterial penetration. The Bacterial Filtration Efficiency test compares the bacterial control numbers with test article effluent numbers to evaluate the filtration efficiency. *Staphylococcus aureus* is used as the challenge organism. This test is used for FDA 510(k) submissions for surgical masks.

Viral Filtration Efficiency (VFE) test follows the same procedure as BFE, except the challenge organism used is the bacteriophage phiX174. VFE test evaluates the filtration efficiency by comparing viral control numbers with test substance waste numbers.

Applicable Standards

- ASTM F2100 Standard Specification for Performance of Materials Used in Medical Face Masks
- ASTM F2101 Standard Test Method for Evaluating the Bacterial Filtration Efficiency (BFE) of Medical Face Mask Materials
- EN 14683 Medical Face Masks-Requirements and Test Methods

STEMart provides you with a thorough and accurate BFE and VFE tests that limit risk for your business and your customers. If you want to learn more detail about our service, or would like to consult with the experts at STEMart, please feel free to [contact us](#).