

3M Filtration Products Laboratory

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To Whom It May Concern:
As per your request here is the data.

There are standard methods for testing the Bacterial Filtration Efficiency - BFE and Virus Filtration Efficiency - VFE of filter media. The test consists of challenging the filter media using bacteria that are classified as Biosafety No. 2, and viruses that are classified as Biosafety No. 1, meaning that there is little if any health risk associated with them.

These microbes are contained in aerosol droplets with an average size of approximately 2.8 μm . This challenge is passed through the filter media and the challenge reduction is calculated. The filter performance reported using this test method reflects the removal of the aerosol that contains the microorganisms not the removal of the individual microbes, and therefore is independent of the size or shape of the virus or bacteria.

The testing was performed at Nelson Laboratories, Inc. according to Procedure No. 920693-1, Laboratory No. 48061 for BFE and Procedure No. 920694-1, Laboratory No. 48060 for VFE.

There is also information on the filtration efficiency of the media versus Tuberculosis TB. Due to the obvious health risk of TB or any other hazardous bacteria and viruses, testing laboratories in the United States will not test the efficiency of filters against the aerosol transmission of these specific microorganisms.

Fortunately, there are standard methods for testing this type of bacterial filtration efficiencies. See the above description for bacterial testing. Nelson Laboratories, Inc. did the testing according to Procedure No. 930743-1, Laboratory No. 49838 using *Mycobacterium Smegmatis* for the challenge aerosol.

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Testing was done as an audit basis only, not on every lot of filter media. If bacterial and/or virus filtration efficiency performance claims are to be made on any product containing 3M media, it is ultimately the responsibility of the manufacturer to test the filter assembly.

The information provided above cannot be used for any performance or marketing claims. 3M Company cannot claim and does not represent that the filter media will eliminate the risk of contraction any disease or infection. Please see the attached disclaimer from Nelson Laboratories regarding their liability and responsibility.

Media	Bacterial Filtration Efficiency - BFE Staphylococcus aureus ≈1µm	Viral Filtration Efficiency - VFE ØX174 Bacteriophage ≈0.027µm
G-200	99.99674%	99.99362%

Media	Bacterial Filtration Efficiency - BFE Mycobacterium Smegmatis rod shaped 0.3 - 0.6 µm X 1-4 µm
G-200	99.9979%

If I may be any additional help please feel free to contact me.

Best Regards,

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