

## Viral Filtration Efficiency (VFE) Final Report

Test Article: n-1, n-2, n-3, n-4, n-5  
 Laboratory Number: 667974  
 Study Received Date: 14 Dec 2012  
 Test Procedure(s): Standard Test Protocol (STP) Number: STP0007 Rev 07

**Summary:** The VFE test is performed to determine the filtration efficiency by comparing the viral control counts to test article effluent counts. A suspension of bacteriophage  $\Phi$ X174 was aerosolized using a nebulizer and delivered to the test article at a constant flow rate. The aerosol droplets were drawn through a six-stage, viable particle, Andersen sampler for collection. This method allows a reproducible challenge to be delivered to the test articles. The VFE test procedure was adapted from ASTM F2101. All test method acceptance criteria were met.

Test Side: Outside Surface  
 Area Tested: ~45.6 cm<sup>2</sup>  
 VFE Flow Rate: 28.3 Liters per minute (L/min)

### Results:

Test Article	Percent VFE (%)
n-1	99.6
n-2	99.5
n-3	99.6
n-4	99.6
n-5	99.8

Note: Plate count totals for each stage are available upon request.

Mean Positive Control Count: 2,179 plaque forming units (PFU)  
 Negative Control Count: <1 PFU  
 Mean Particle Size (MPS): 3.0  $\mu$ m



Study Director

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 Study Completion Date