

## Virus Filtration Efficiency Test (VFE) at an Increased Challenge Level Final Report

Test Article: TECHNOSTAT 150 PLUS FILTER MEDIA (T150PLUS) LOT #2010728-148  
 Purchase Order: 110081  
 Laboratory Number: 566755  
 Study Received Date: 09 Feb 2011  
 Test Procedure(s): Standard Test Protocol (STP) Number: STP0010 Rev 03

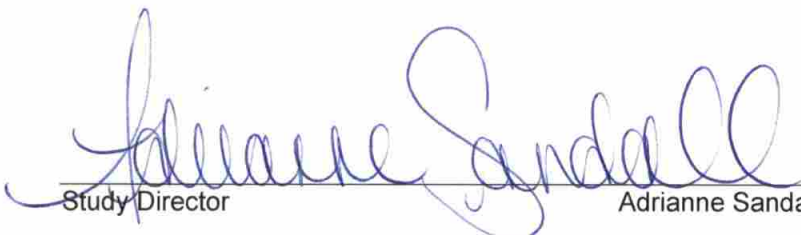
**Summary:** This procedure was performed to evaluate the virus filtration efficiency (VFE) at an increased challenge level of the test article. A challenge level of greater than  $10^6$  plaque-forming units (PFU) was delivered to each test article to determine filtration efficiency. This test procedure was modified from Nelson Laboratories, Inc., standard VFE test in order to employ a more severe challenge than would be expected in normal use. All test method acceptance criteria were met.


Challenge Flow Rate: 30 Liters per minute (LPM)  
 Sample Area Tested: ~3.0 inches (75 mm) in diameter

**Results:**

Unit Number	Total PFU Recovered	Filtration Efficiency %
1	$4.5 \times 10^1$	99.9977
2	$3.6 \times 10^1$	99.9982
3	$1.8 \times 10^1$	99.99909
4	$4.5 \times 10^1$	99.9977
5	$7.2 \times 10^1$	99.9963

Challenge Level:  $2.0 \times 10^6$  PFU  
 Mean Particle Size (MPS): 2.7  $\mu$ m

  
 Study Director Adrienne Sandall, B.S.

  
 Study Completion Date