



ATI 100Xs PFE Performance Validation Sheet

Date	<input type="text"/>	Settings	Load Time	8s
Time	<input type="text"/>		Sample Time	2s
Operator	<input type="text"/>		Flow Rate	85 l/min

Aerosol Concentration	<input type="text"/>	ug/l
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	Penetration	Resistance	Flow	Lot Number
# of filter sheets	4	<input type="text"/>	<input type="text"/>	<input type="text"/>
	3	<input type="text"/>	<input type="text"/>	<input type="text"/>
	2	<input type="text"/>	<input type="text"/>	<input type="text"/>
Performance within limits (Y/N)				<input type="text"/>

Note: If 'No', re-calibrate instrument and repeat validation with four new sheets. Green Line verification charts D21-2422561.

VERIFYING PENETRATION DATA

The validation procedure is designed to test many aspects of the ATI 100Xs Filter Tester, one of which is verifying the particle size and distribution, by performing filter penetration measurements on reference filters with a known aerosol penetration level and comparing the results. This technique is useful for testing the following:

- Filter test flow measurement
- Filter pressure drop measurement
- Proper photometer operation
- General system operation.

The validation technique uses “calibrated” filter media sheets with a known penetration range. The filter media are glass fibre HE-1071 type, in 6” disks. Supplied by ATI the disks are accompanied by data sheets that list the expected penetration range for the specific media (Lot #).

Graphs of penetration versus resistance (pressure drop) for different numbers of media sheets are included with the sheets. When verification tests are performed using the media sheets, the test data should fall within an acceptance zone having boundaries defined by the dashed lines on the graphs. To obtain differing levels of aerosol penetration, the media sheets are stacked together. Each reference graph will list the number of standard media sheets used to obtain the penetration range of interest.

The filter media test method of system performance verification is a precise means of ensuring proper Filter Tester operation. The technique verifies not only the correct challenge aerosol but also tests the entire system as a whole.

EXAMPLE ONLY

ATI 100Xs PFE Performance Validation Sheet

Date	26/09/2020	Settings	Load Time	8s
Time	0:00		Sample Time	2s
Operator	s22		Flow Rate	85 l/min

	Penetration	Resistance	Flow	Lot Number	
# of Filter sheets	4	0.0680	100.0	84.9	511264
	3	0.3306	74.0	84.9	511264
	2	1.7568	49.1	85.0	511264
Performance within limits (Y/N)			yes		

Note: If 'No', re-calibrate instrument and repeat validation with three new sheets.