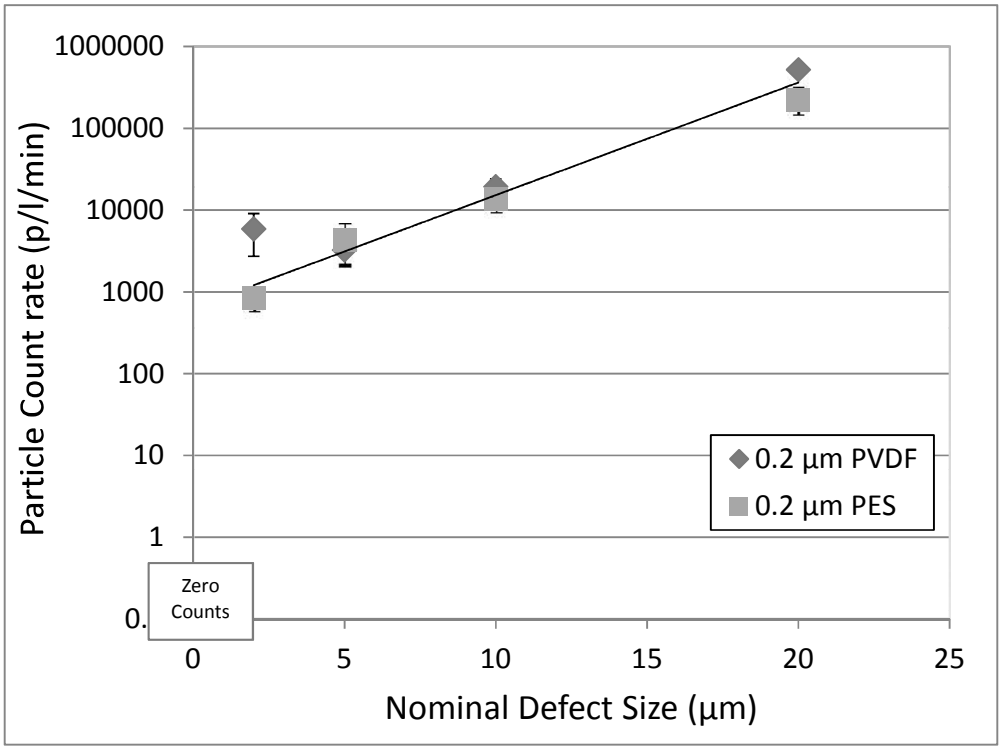
FIG. 1



Aerosol solution: 0.12 g/l NaCl
Aerosol inlet concentration: $3x10^6$ p/cc
Each point average of 3 discs
Error bars represent standard deviation

FIG. 2

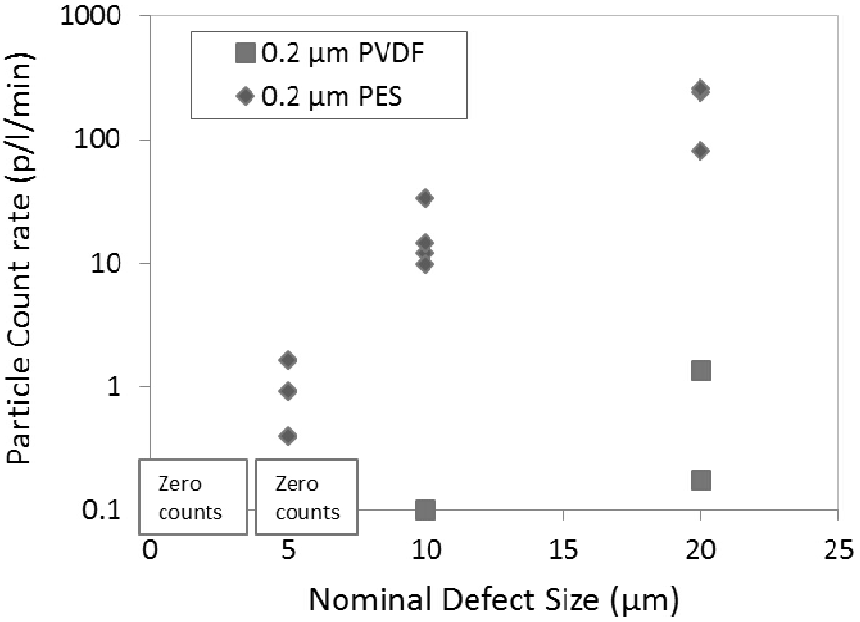

1000
100
10
1
0.1
Particle Count rate (p/l/min)
0.2 µm PVDF
0.2 µm PES
Zero counts
Zero counts
0
5
10
15
20
25
Nominal Defect Size (µm)

FIG. 3

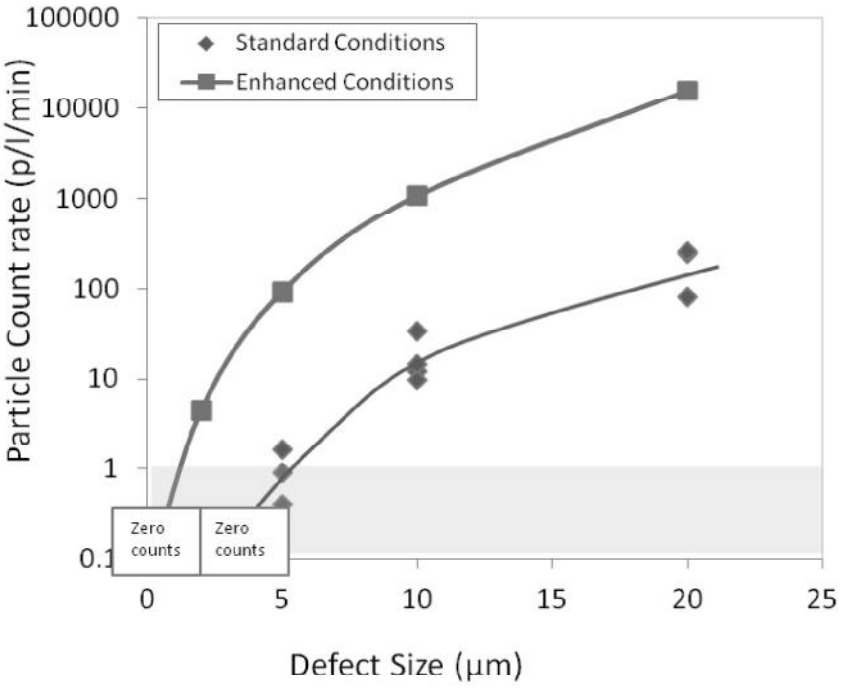

100000
10000
1000
100
10
1
0.1
Particle Count rate (p/l/min)
Standard Conditions
Enhanced Conditions
Zero counts
Zero counts
0
5
10
15
20
25
Defect Size (µm)

FIG. 4

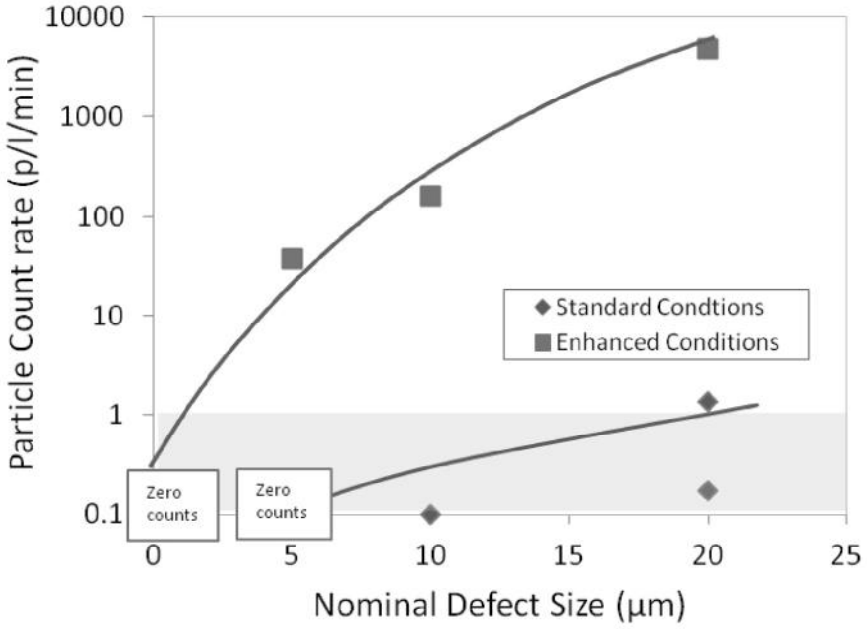

10000
1000
100
10
1
0.1
Particle Count rate (p/l/min)
Standard Condtions
Enhanced Conditions
Zero counts
Zero counts
0
5
10
15
20
25
Nominal Defect Size (µm)

FIG. 5

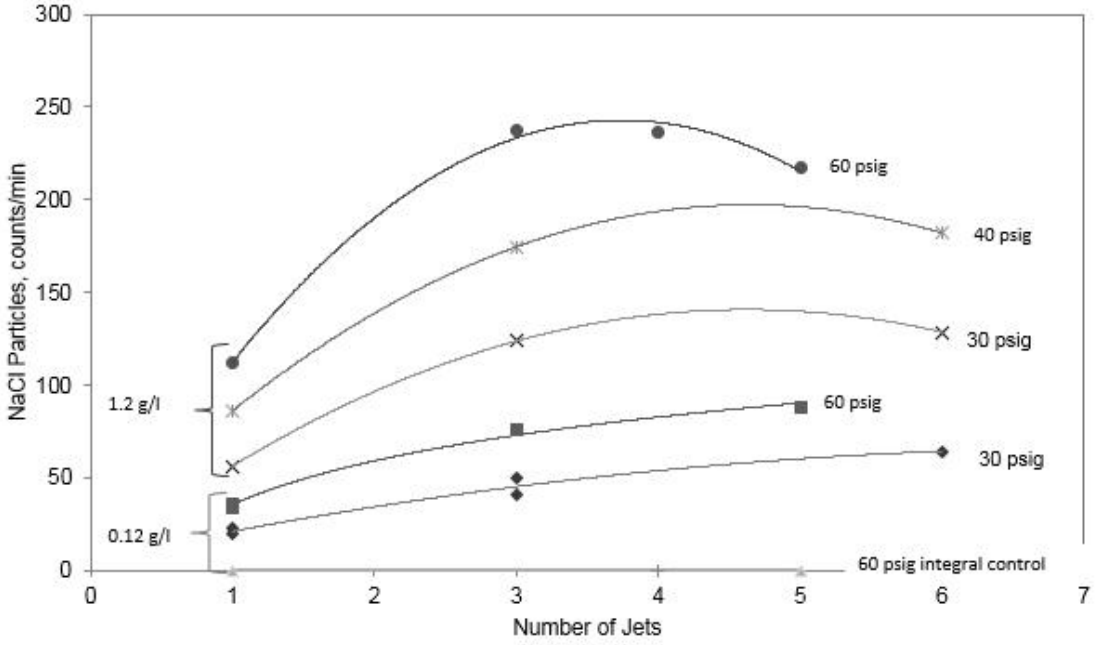

300
250
200
150
100
50
0
NaCl Particles, counts/min
60 psig
40 psig
30 psig
60 psig
30 psig
1.2 g/l
0.12 g/l
60 psig integral control
0
1
2
3
4
5
6
7
Number of Jets

FIG. 6

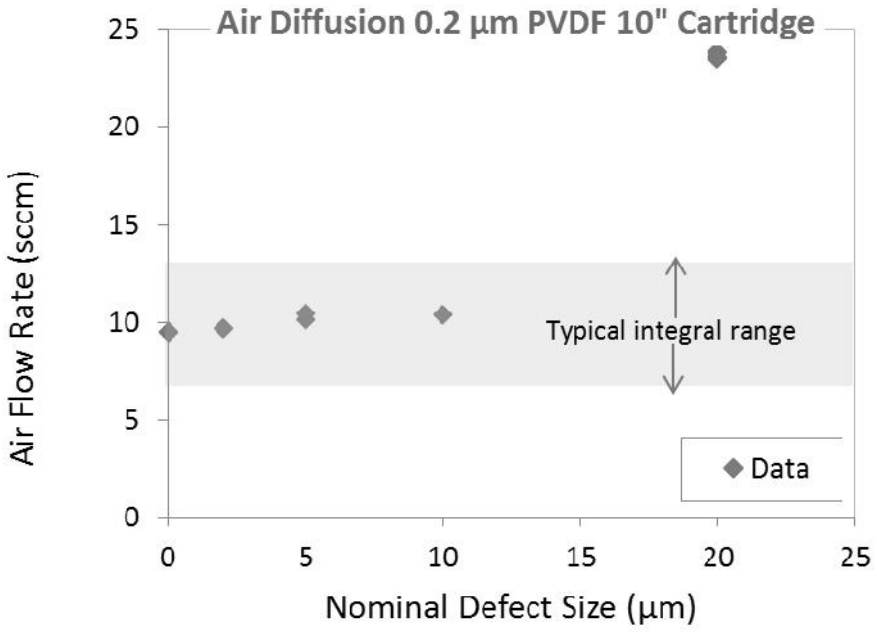

Air Diffusion 0.2 µm PVDF 10" Cartridge
Air Flow Rate (sccm)
Nominal Defect Size (µm)
Typical integral range
Data
0
5
10
15
20
25

FIG. 7

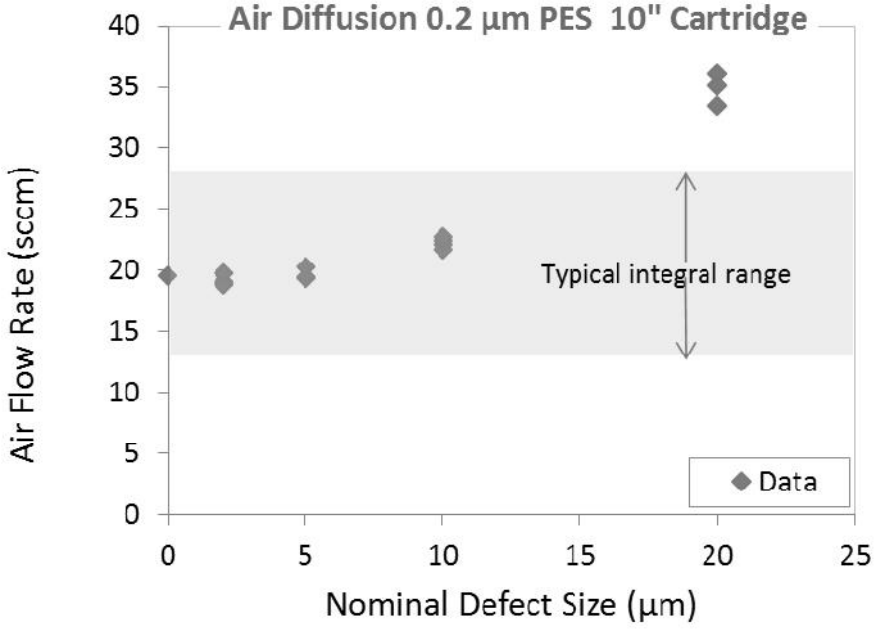

Air Diffusion 0.2 µm PES 10" Cartridge
Air Flow Rate (sccm)
Nominal Defect Size (µm)
Typical integral range
Data
0
5
10
15
20
25
30
35
40

FIG. 8

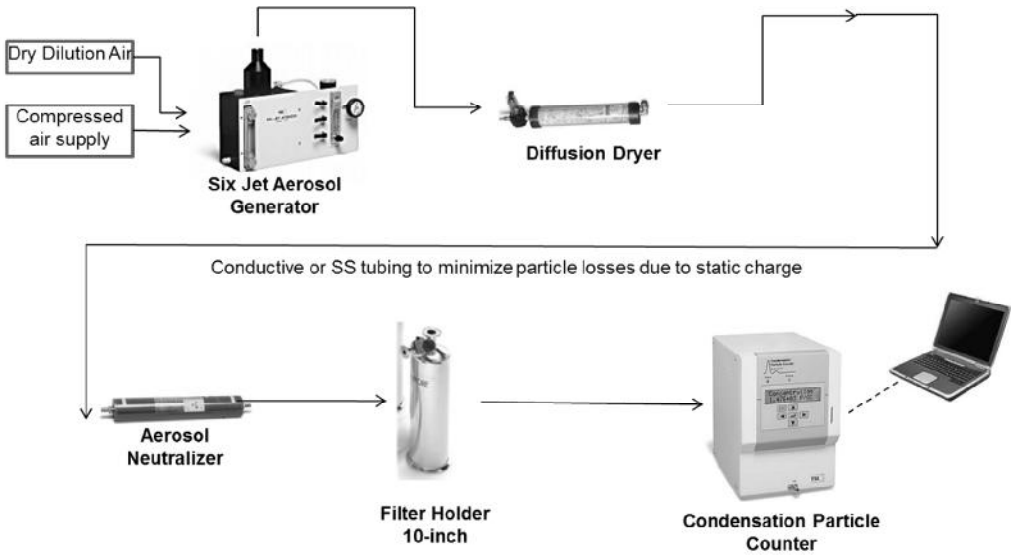
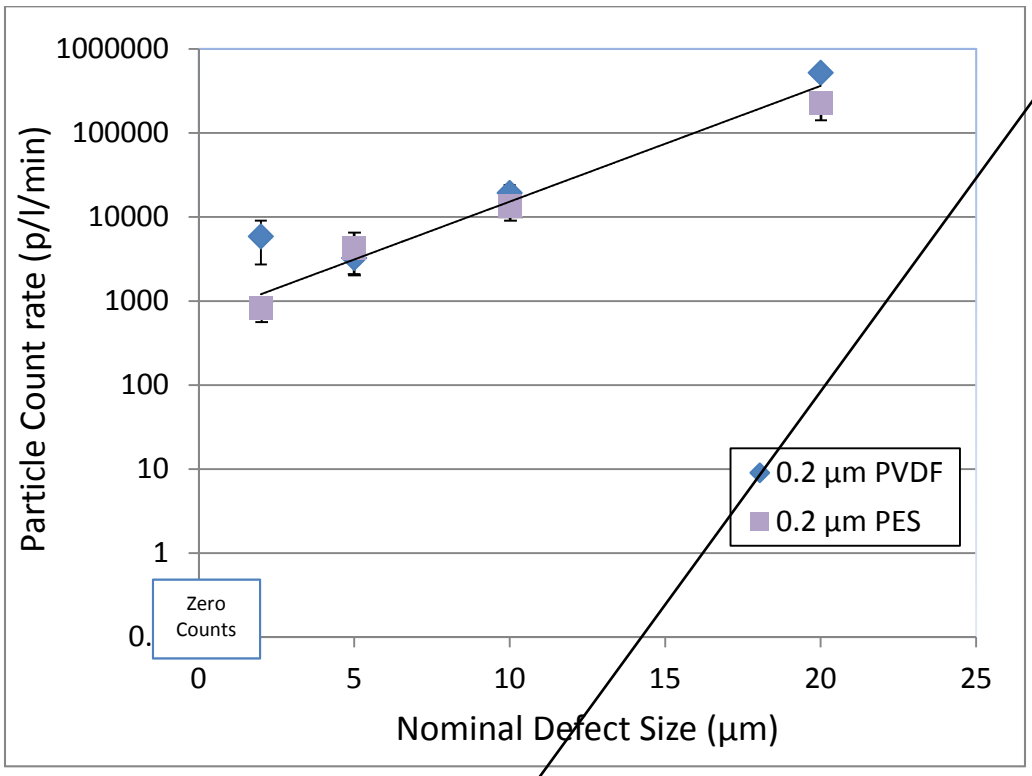

Dry Dilution Air
Compressed air supply
Six Jet Aerosol Generator
Diffusion Dryer
Conductive or SS tubing to minimize particle losses due to static charge
Aerosol Neutralizer
Filter Holder 10-inch
Condensation Particle Counter

FIG. 1



Aerosol solution: 0.12 g/l NaCl
Aerosol inlet concentration: $3x10^6$ p/cc
Each point average of 3 discs
Error bars represent standard deviation

FIG. 2

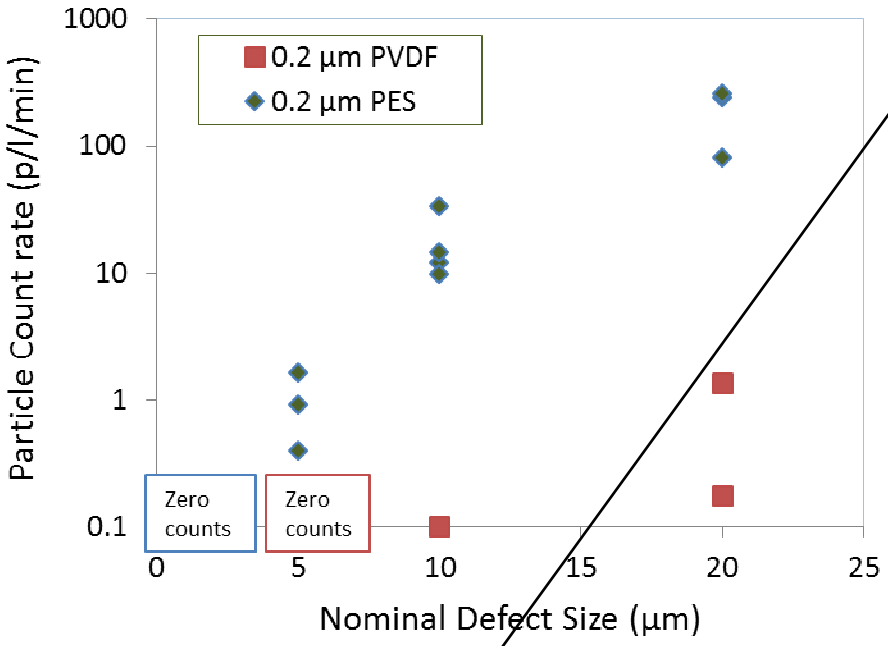

1000
100
10
1
0.1
Particle Count rate (p/l/min)
0.2 µm PVDF
0.2 µm PES
Zero counts
Zero counts
0
5
10
15
20
25
Nominal Defect Size (µm)

FIG. 3

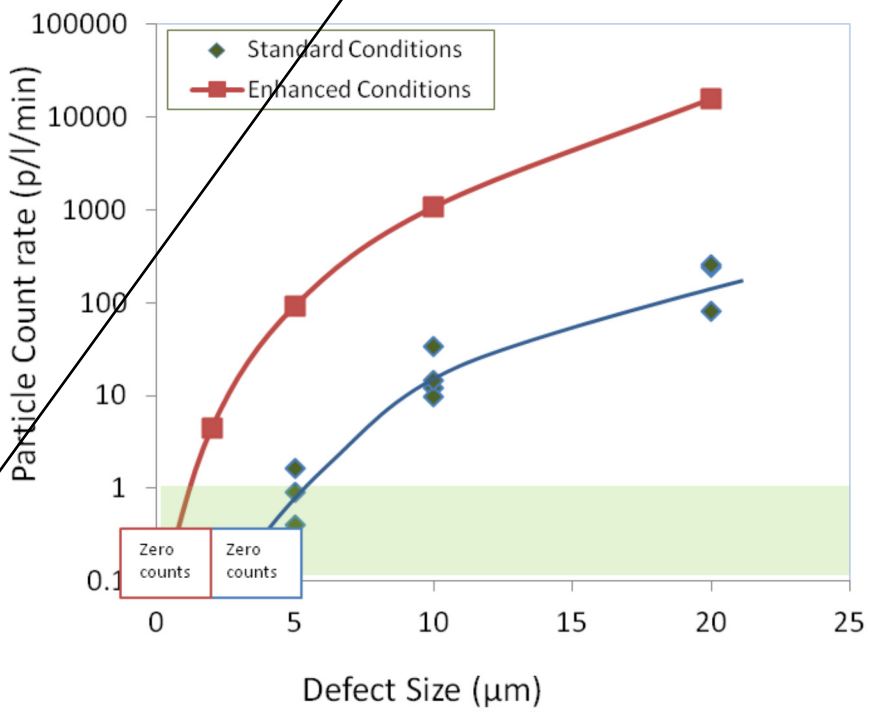

100000
10000
1000
100
10
1
0.1
Particle Count rate (p/l/min)
Standard Conditions
Enhanced Conditions
Zero counts
Zero counts
0
5
10
15
20
25
Defect Size (µm)

FIG. 4

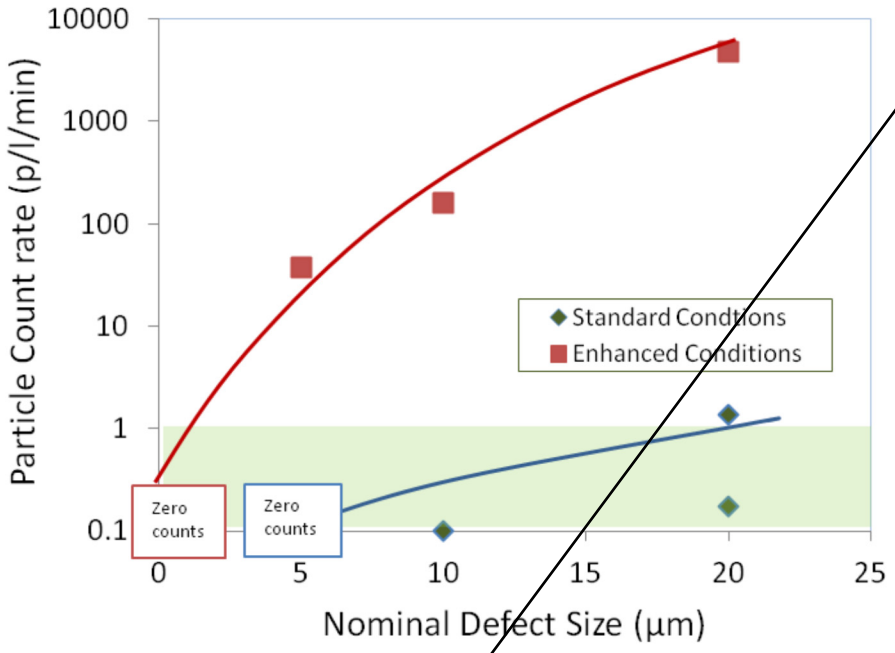

10000
1000
100
10
1
0.1
Particle Count rate (p/l/min)
Standard Conditions
Enhanced Conditions
Zero counts
Zero counts
0
5
10
15
20
25
Nominal Defect Size (µm)

FIG. 5

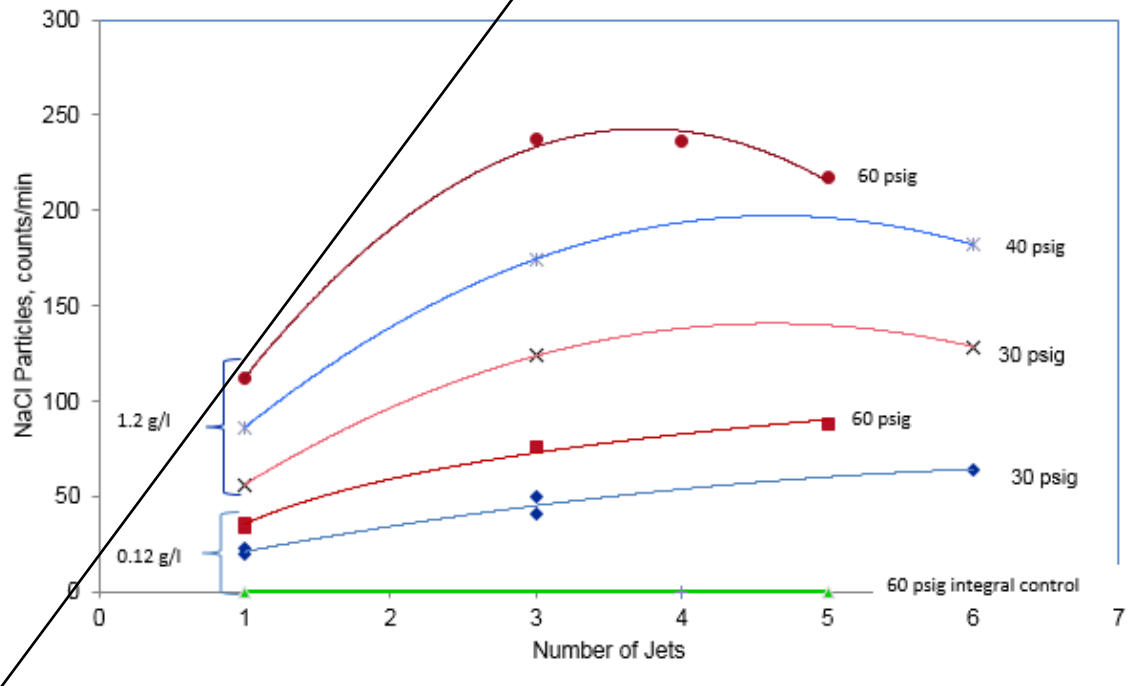

300
250
200
150
100
50
0
NaCl Particles, counts/min
60 psig
40 psig
30 psig
60 psig
30 psig
1.2 g/l
0.12 g/l
60 psig integral control
0
1
2
3
4
5
6
7
Number of Jets

FIG. 6

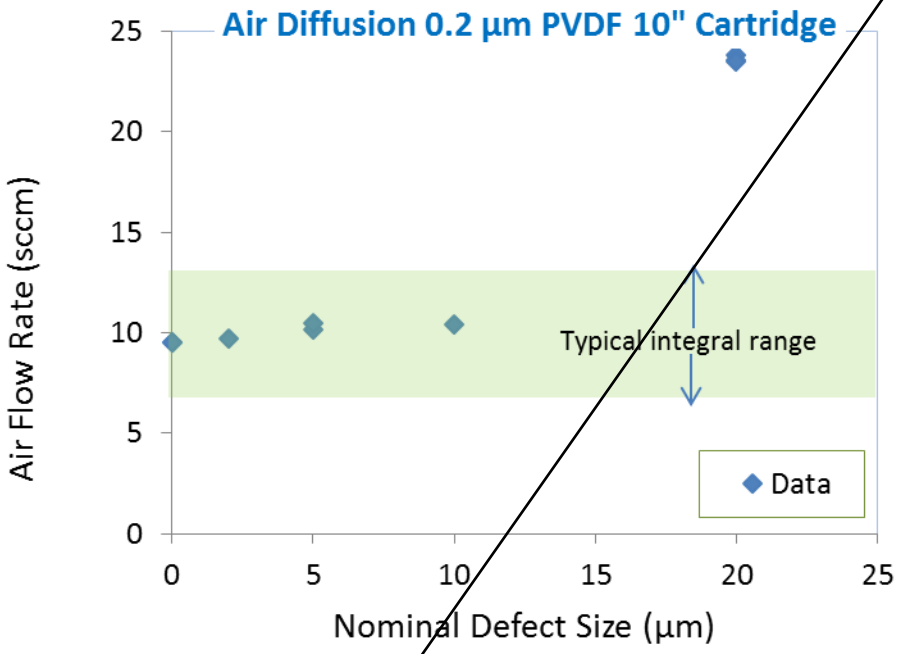

Air Diffusion 0.2 µm PVDF 10" Cartridge
Air Flow Rate (sccm)
Nominal Defect Size (µm)
Typical integral range
Data
0
5
10
15
20
25

FIG. 7

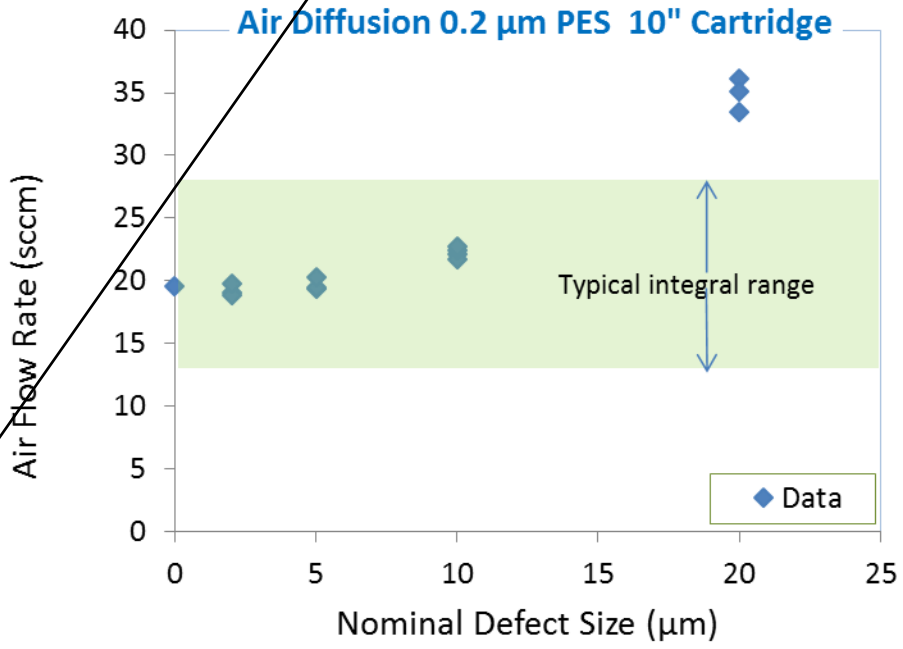
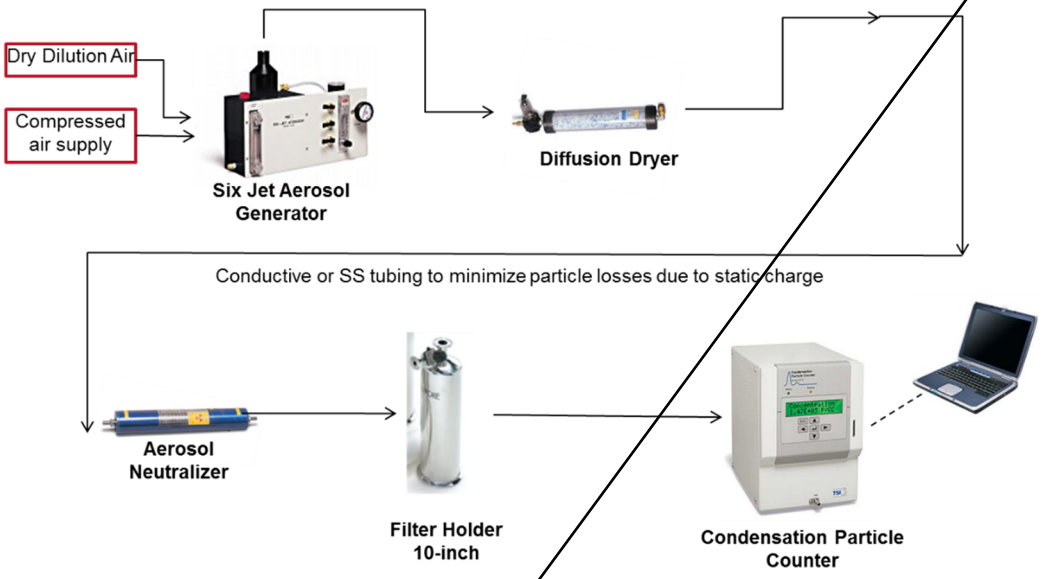

Air Diffusion 0.2 µm PES 10" Cartridge
Air Flow Rate (sccm)
Nominal Defect Size (µm)
Typical integral range
Data
0
5
10
15
20
25
30
35
40

FIG. 8


Dry Dilution Air
Compressed air supply
Six Jet Aerosol Generator
Diffusion Dryer
Conductive or SS tubing to minimize particle losses due to static charge
Aerosol Neutralizer
Filter Holder 10-inch
Condensation Particle Counter