



3040 E. Cornwallis Road • PO Box 12194 • Research Triangle Park, NC 27709-2194 • USA  
Telephone +1.919.541.6941 • Fax +1.919.541.6936 • mko@rti.org • www.rti.org

## **EPA Method 319 Test Example Report**

Manufacturer: Paint Arrestor Company  
Product Names: 3-stage system:  
Ring Panel  
2-in. Pleated Panel  
6-Pocket Bag Filter

RTI Test Number: BX05011601

This filter meets the NESHAP requirements for:

- New Sources  
 Existing Sources

**Test Laboratory:  
RTI  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
919-541-6941  
mko@rti.org**

## EPA Method 319 Certification Test Report Summary

This report applies to the tested devices only.

### Laboratory Data

RTI Report No.	<u>BX05011601</u>	Date	<u>1-May-16</u>
Test Laboratory	<u>RTI International</u>		
Operator	<u>Pope</u>	Supervisor	<u>Owen</u>
Particle Counter(s):	Brand <u>Climet</u>	Model	<u>Spectro 0.3</u>

### Device Manufacturer's Data

Manufacturer	<u>Paint Arrestor Company</u>
Product Names	<u>3-stage system: Ring Panel, 2-in. Pleated Panel, &amp; 6-Pocket Bag Filter</u>
Test requested by	<u>Paint Arrestor Company</u>
Sample obtained from	<u>Paint Arrestor Company</u>

### Device Descriptions

Nominal Dimensions (in.): (height x width x depth)	<u>24 x 24 x 1</u>	<u>24 x 24 x 2</u>	<u>24 x 24 x 8</u>
Generic name	<u>ring panel</u>	<u>pleated panel</u>	<u>bag filter</u>
Media color	<u>white</u>	<u>red</u>	<u>yellow</u>
Other attributes	<u>6 bags</u>		

### Test Conditions

Face Velocity (fpm)	<u>120</u>	Airflow (cfm)	<u>333</u>
Test aerosol type:	<u>KCl</u>		

### Resistance Test Results

KCl Tests: Run Number	Resistance (in. wg)	OA Tests: Run Number	Resistance (in. wg)
<u>BX09241102</u>	<u>0.24</u>	<u>BX09251101</u>	<u>0.23</u>
<u>BX09241104</u>	<u>0.23</u>	<u>BX09251103</u>	<u>0.25</u>
<u>BX09241106</u>	<u>0.25</u>	<u>BX09251105</u>	<u>0.24</u>

### Test Method

Fractional efficiency was computed from upstream and downstream aerosol concentration measurements performed with a high resolution optical particle counter covering the particle diameter size range from 0.3 to 10  $\mu$ m in 15 particle-sizing channels. The efficiency tests were conducted at a nominal face velocity of 120 feet per minute (corresponding to a volumetric flow of 333 cfm for 20" x 20" arrestors and to 480 cfm for 24" x 24" arrestors) and used polydisperse challenge aerosols of solid-phase potassium chloride and liquid-phase oleic acid. The pressure drop measurements were performed at the test air flow. Additional details on the test procedure are provided in the NESHAP (Federal Register, September 1, 1995 as Subpart 66 of 40CFR Part 63) or available from RTI on request.

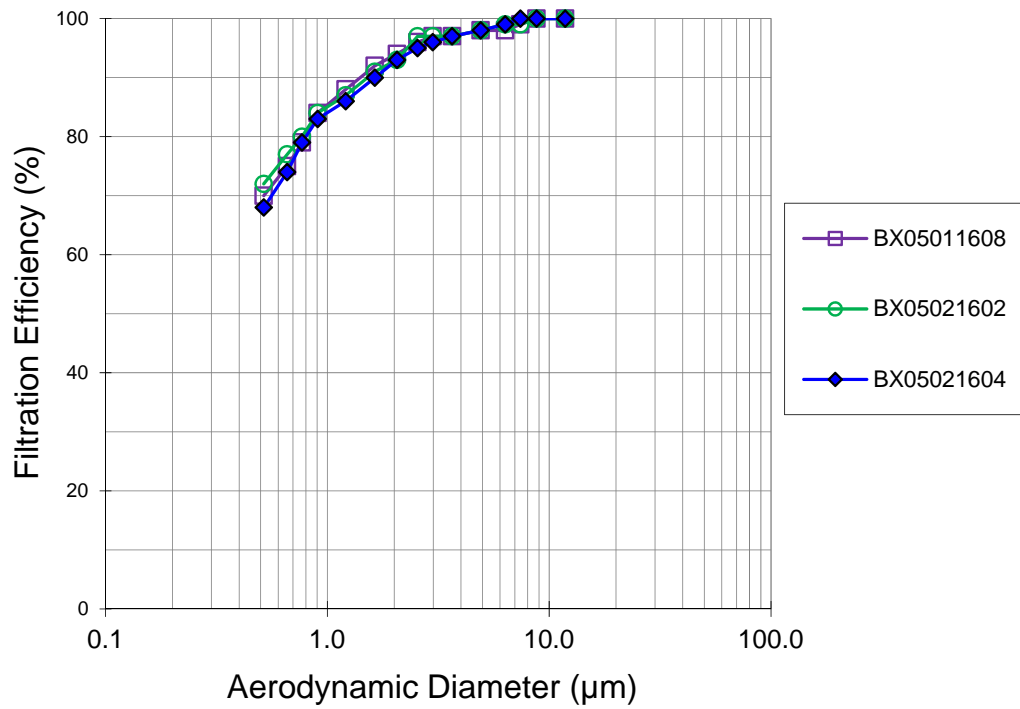
### Conclusion

Based on the filtration efficiency results from the Method 319 tests, this Paint Overspray Arrestor meets the Aerospace NESHAP filtration efficiency requirements for:

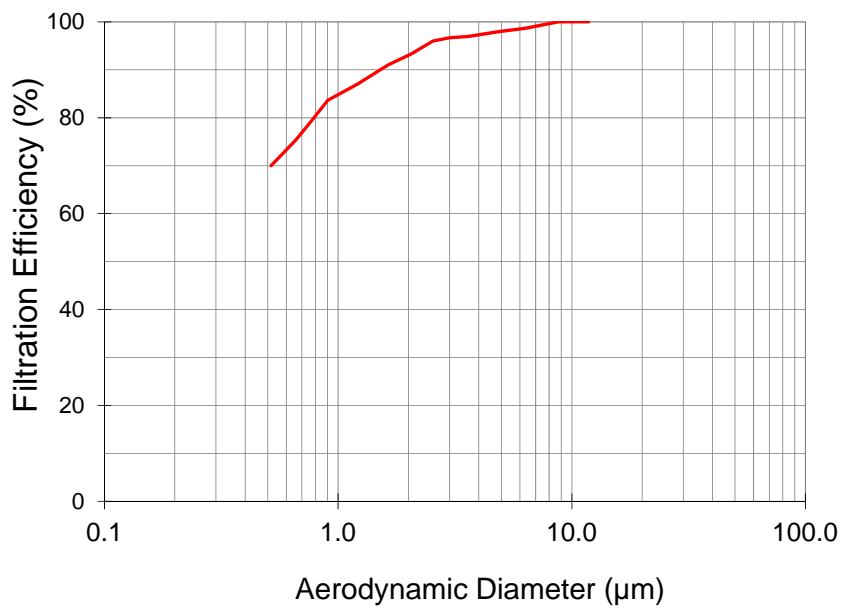
X New Sources                      X Existing Sources



### Triplicate Solid-Phase Results



### Average of Solid-Phase Results



## SUMMARY OF LIQUID- PHASE TEST RESULTS

### Filtration Efficiency (%) at Indicated Size Range

OPC Channel Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Min. Diam. (um)	0.28	0.37	0.47	0.52	0.66	0.94	1.22	1.51	1.88	2.07	2.83	3.77	4.71	5.18	6.60
Max. Diam. (um)	0.37	0.47	0.52	0.66	0.94	1.22	1.51	1.88	2.07	2.83	3.77	4.71	5.18	6.60	9.43
Geo. Mean Diam (um)	0.32	0.418	0.49	0.58	0.78	1.07	1.36	1.68	1.97	2.42	3.26	4.21	4.94	5.85	7.89

### Arrestor Manufacturer 3-stage system: Ring Panel / 2-in. Pleated Panel / 6-Pocket Bag Filter

Run #1	BX05021606	66	71	75	80	84	88	90	92	93	94	95	97	98	99	99
Run #2	BX05021608	66	72	76	80	84	88	90	91	92	93	95	97	97	98	99
Run #3	BX05031601	65	71	76	79	83	87	90	91	92	94	95	97	98	98	99
Average		66	71	76	80	84	88	90	91	92	93	95	97	97	98	99

#### Interpolated Efficiency Values (%) for Existing Source Criteria:

2.20 um (> 10% required):	93
4.10 um (> 50% required):	96
5.70 um (> 90% required):	98

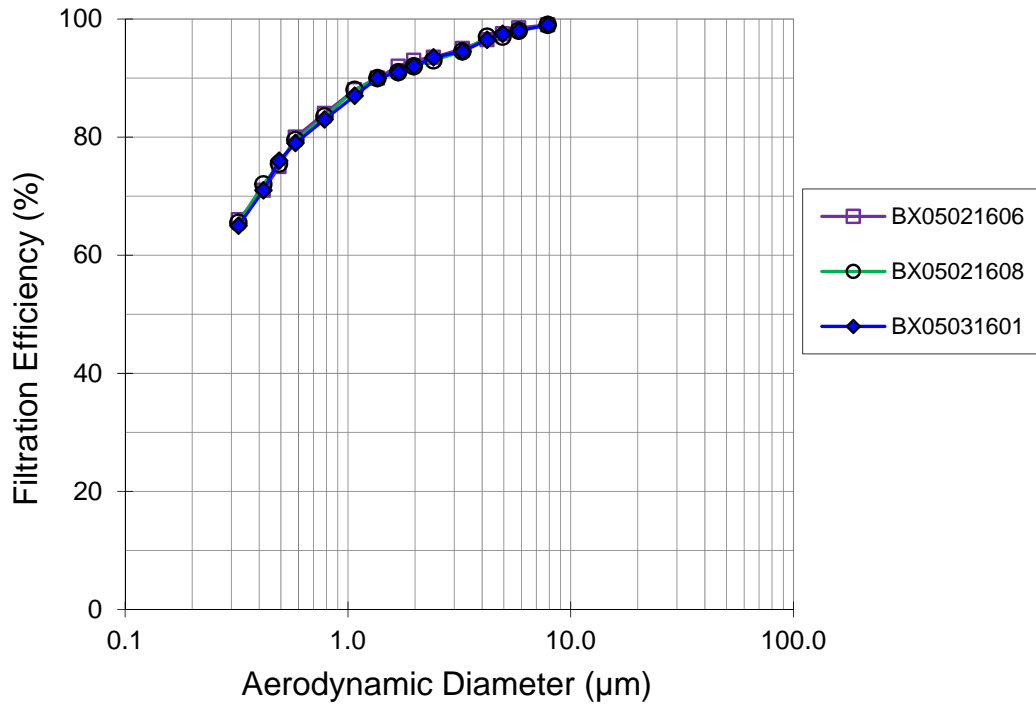
#### Interpolated Efficiency Values (%) for New Source Criteria:

0.42 um (> 65% required):	71
1.00 um (> 80% required):	87
2.00 um (> 95% required):	92

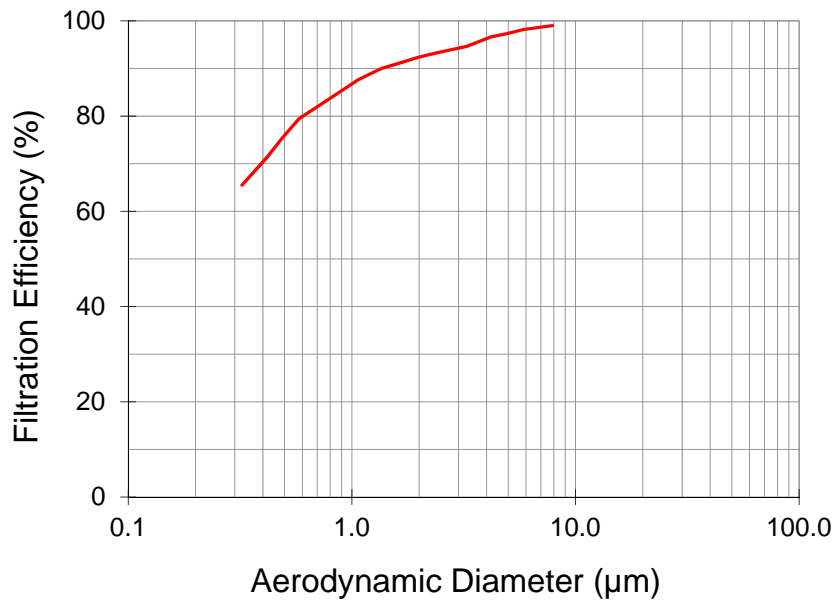
### "No Filter" Control Tests

		Penetration For Each Size Range														
Run #1	BX05021605	0.97	0.96	0.98	0.97	0.96	0.95	0.94	0.96	0.93	0.96	0.94	0.97	0.93	0.96	0.94
Run #2	BX05021607	0.97	0.95	0.97	0.95	0.96	0.93	0.94	0.97	0.94	0.96	0.95	0.98	0.95	0.97	0.96
Run #3	BX05021609	0.96	0.95	0.95	0.96	0.95	0.94	0.93	0.95	0.94	0.95	0.93	0.96	0.94	0.95	0.96

### Triplicate Liquid-Phase Results



### Average of Liquid-Phase Results



## Appendix A. Individual Data Sets

For an actual report, 13 data pages would follow.