 <p>2820 S. English Station Road - Louisville, KY 40299 Tel: (502) 357-0132 Fax (502) 267-8379</p>	Date: 22-May-12	TEST NO. 12-0733Rev1
	<h2 style="margin: 0;">Federal Register Part 63 Method 319 TEST REPORT</h2>	

Filter Description	
Manufacturer Filter Model Part Number Generic Filter Type Nominal Dimensions (H x W x D) Pocket / Pleat Quantity Media Type Est. Gross Media Area Adhesive Type	Viskon-Aire Corp. AS-95 Synthetic AS1420201505 Pocket 20"x20"x15" 5 Pockets Synthetic Standard N/A

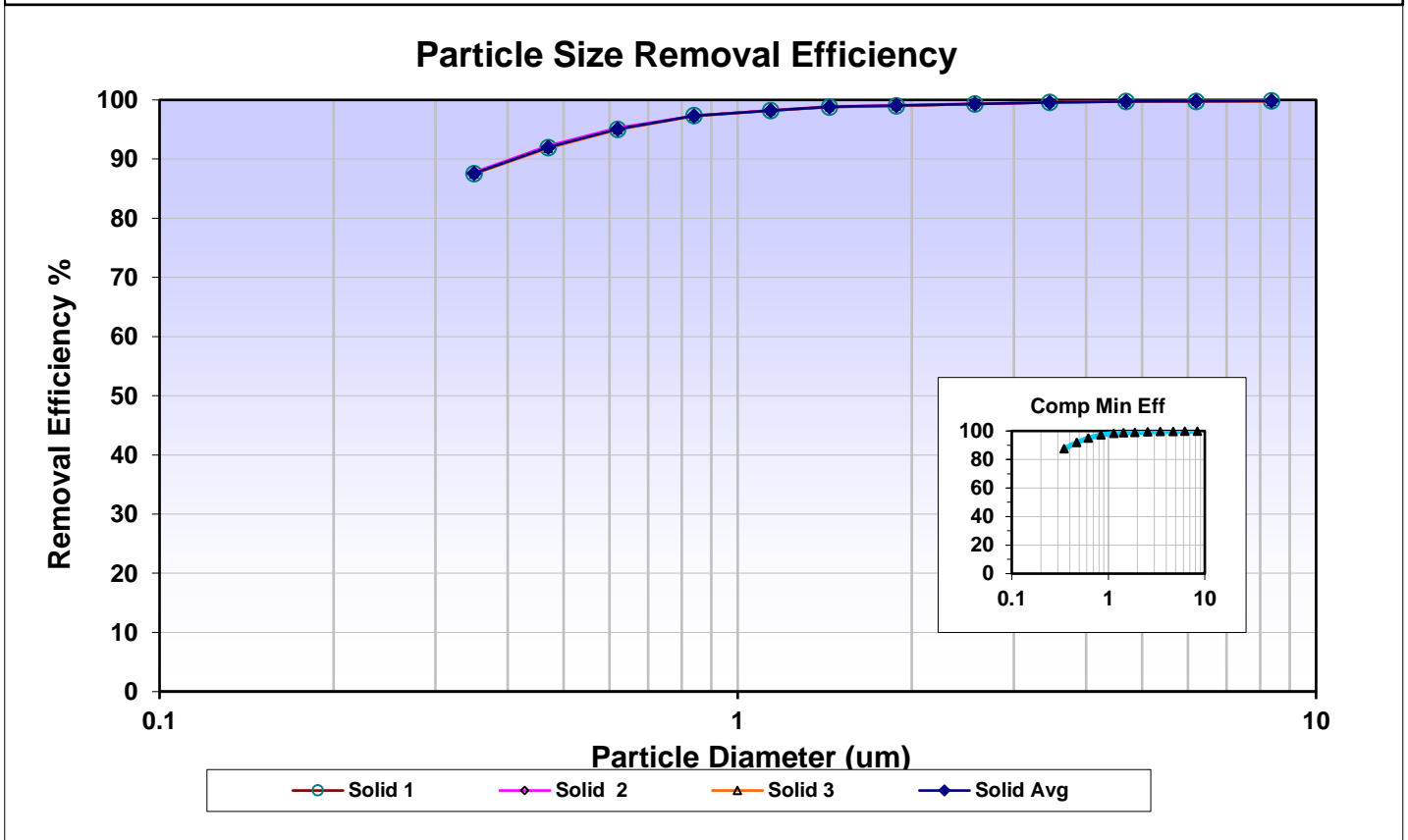
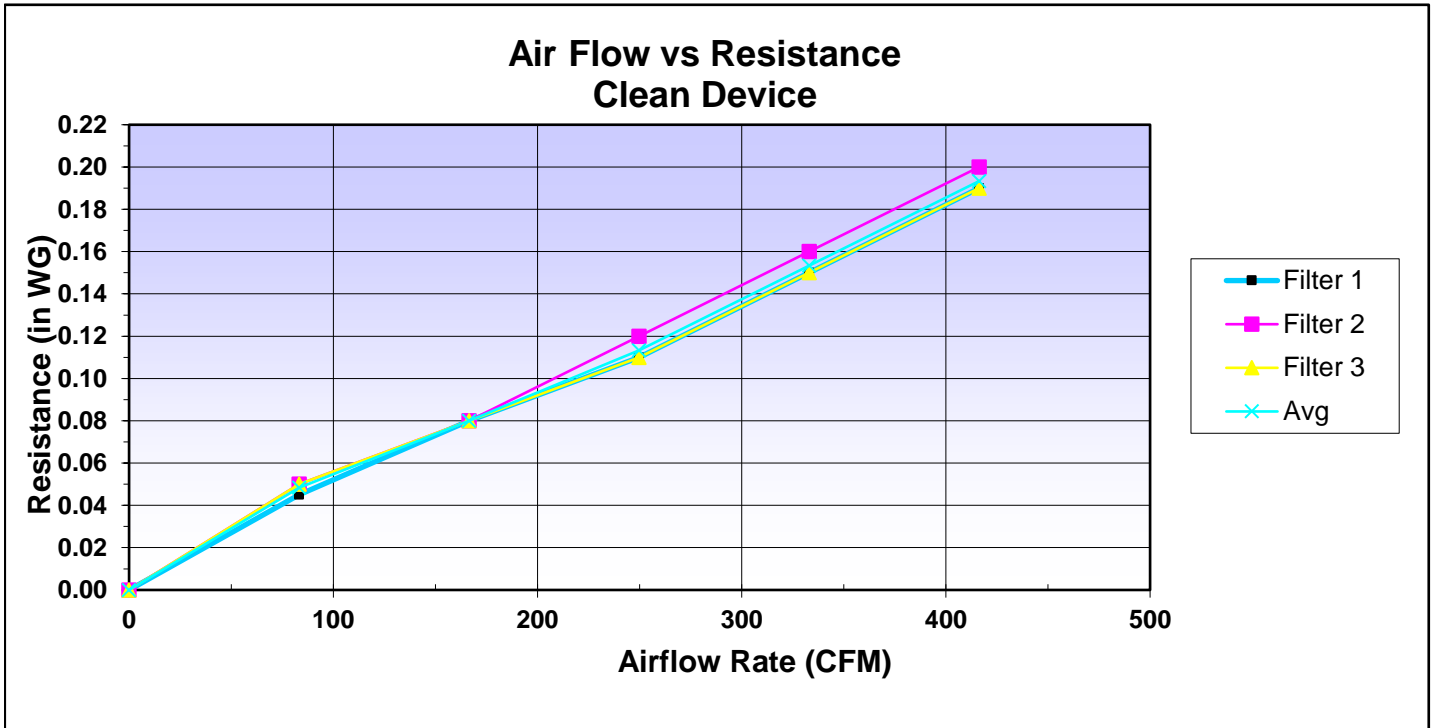


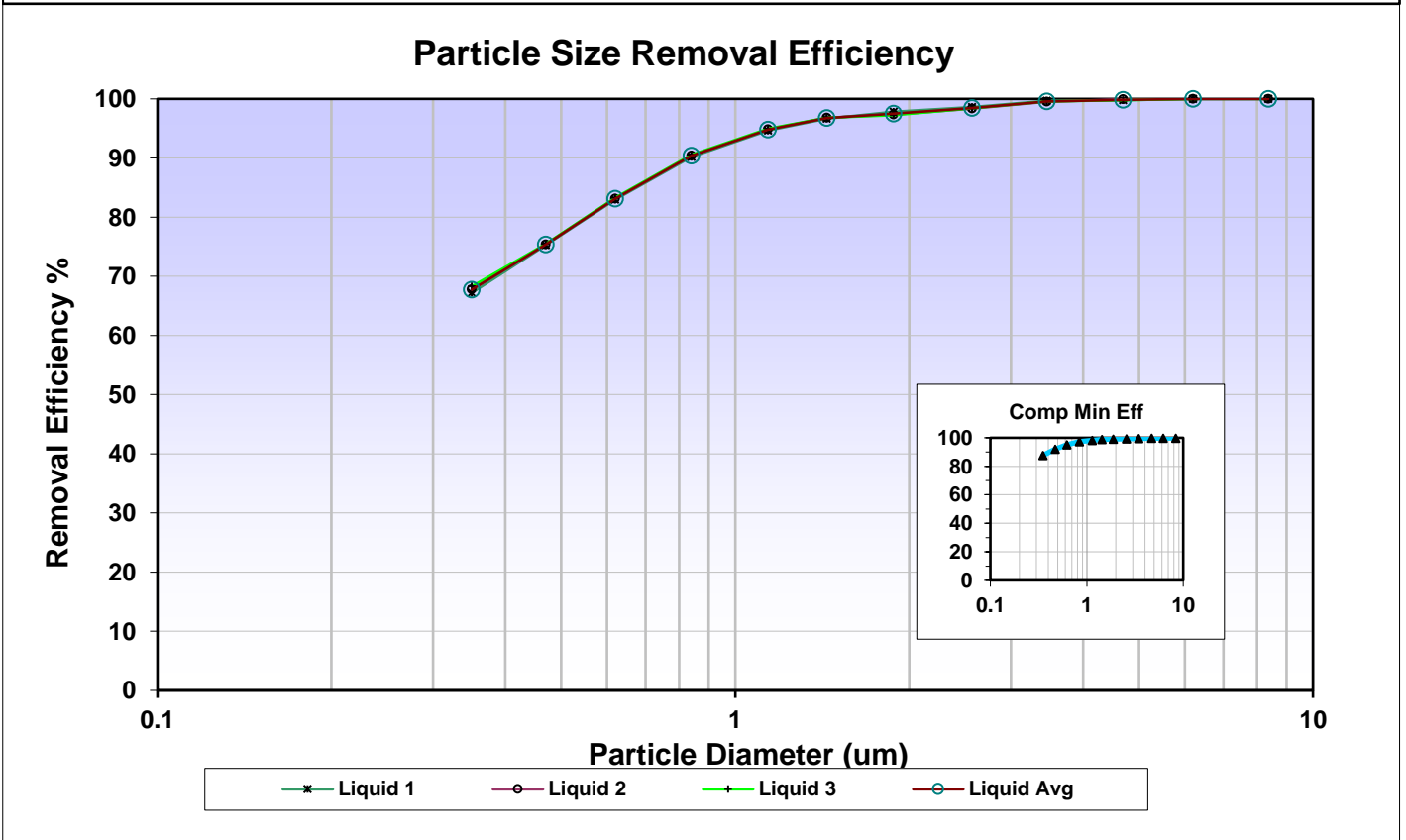
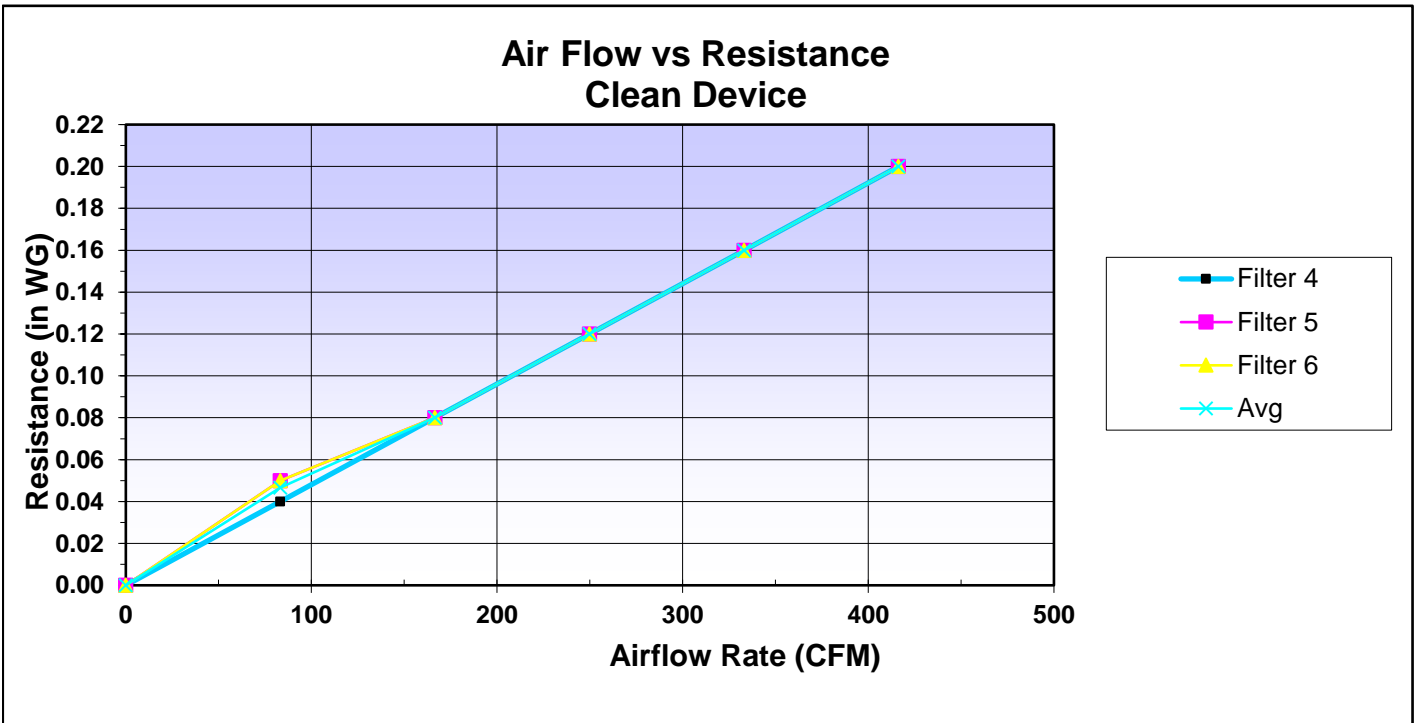
Test Conditions			
Loading Dust Type	N A	Test Air Temp (degrees F.)	71
Barometric Pressure (In. Hg.)	29.56	Relative Humidity (%)	48

Test Results			
Airflow Rate (CFM)	333		
Nominal Face Velocity (fpm)	120		
 Avg. Initial Resistance (in WG)	 0.15		
	<u>Solid</u>	<u>Liquid</u>	
(%) Composite Avg. Efficiency 0.30 - 1.0 um	93	79	
(%) Composite Avg. Efficiency 1.0 - 3.0 um	99	97	
(%) Composite Avg. Efficiency 3.0 - 10.0 um	100	100	

Comments	Tested For: Viskon-Aire Corp. Solid Phase Challenge - KCL Liquid Phase Challenge - Oleic Acid Filter Has Passed Min. Requirements As Detailed In CFR Part 63 Method 319 For New and Existing Sources
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Approval: 





Data

Test No. 12-0733Rev1
Date: 22-May-12

Data - Initial Resistance (Solid Phase)

Airflow (CFM)	Resistance (in WG)	Resistance (in WG)	Resistance (in WG)	Avg Resistance (in WG)
0	0.00	0.00	0.00	0.00
83	0.05	0.05	0.05	0.05
167	0.08	0.08	0.08	0.08
250	0.11	0.12	0.11	0.11
333	0.15	0.16	0.15	0.15
416	0.19	0.20	0.19	0.19

Data - Particle Removal Efficiency (Solid Phase)

Particle Size Range (um)	Geometric Mean Diam (um)	Particle Removal Efficiency (%)			
		Solid 1	Solid 2	Solid 3	Solid Avg
0.30 - 0.40	0.35	87.5	87.8	87.5	87.6
0.40 - 0.55	0.47	92.0	92.3	91.8	92.0
0.55 - 0.70	0.62	95.0	95.3	95.0	95.1
0.70 - 1.00	0.84	97.4	97.3	97.3	97.3
1.00 - 1.30	1.14	98.2	98.3	98.2	98.2
1.30 - 1.60	1.44	98.8	98.9	98.8	98.8
1.60 - 2.20	1.88	99.0	99.1	99.0	99.0
2.20 - 3.00	2.57	99.3	99.3	99.3	99.3
3.00 - 4.00	3.46	99.6	99.6	99.6	99.6
4.00 - 5.50	4.69	99.7	99.8	99.7	99.7
5.50 - 7.00	6.20	99.7	99.8	99.8	99.8
7.00 - 10.00	8.37	99.8	99.9	99.7	99.8
		Solid 1	Solid 2	Solid 3	Solid Avg

Interploated Data		Minimum
Micron Size	Efficiency%	
8.1	99.8	>90
5.0	99.7	>50
2.6	99.3	>10

Solid Phase - Pass
Existing Sources

Interploated Data		Minimum
Micron Size	Efficiency%	
2.5	99.3	>95
1.1	98.1	>85
0.7	95.9	>75

Solid Phase - Pass
New Sources

Data - Initial Resistance (Liquid Phase)

Airflow (CFM)	Resistance (in WG)	Resistance (in WG)	Resistance (in WG)	Avg Resistance (in WG)
0	0.00	0.00	0.00	0.00
83	0.04	0.05	0.05	0.05
167	0.08	0.08	0.08	0.08
250	0.12	0.12	0.12	0.12
333	0.16	0.16	0.16	0.16
416	0.20	0.20	0.20	0.20

Data - Particle Removal Efficiency (Liquid Phase)

Particle Size Range (um)	Geometric Mean Diam (um)	Particle Removal Efficiency (%)			
		Liquid 1	Liquid 2	Liquid 3	Liquid Avg
0.30 - 0.40	0.35	67.2	67.8	68.3	67.8
0.40 - 0.55	0.47	75.3	75.4	75.5	75.4
0.55 - 0.70	0.62	83.0	83.1	83.3	83.1
0.70 - 1.00	0.84	90.2	90.4	90.6	90.4
1.00 - 1.30	1.14	94.6	94.8	95.0	94.8
1.30 - 1.60	1.44	96.6	96.8	96.8	96.7
1.60 - 2.20	1.88	97.8	97.4	97.3	97.5
2.20 - 3.00	2.57	98.6	98.4	98.4	98.5
3.00 - 4.00	3.46	99.7	99.5	99.6	99.6
4.00 - 5.50	4.69	99.8	99.9	99.8	99.8
5.50 - 7.00	6.20	100.0	100.0	100.0	100.0
7.00 - 10.00	8.37	100.0	100.0	100.0	100.0
		Liquid 1	Liquid 2	Liquid 3	Liquid Avg

Interploated Data		Minimum
Micron Size	Efficiency%	
5.7	99.9	>90
4.1	99.7	>50
2.2	98.0	>10

Liquid Phase - Pass
Existing Sources

Interploated Data		Minimum
Micron Size	Efficiency%	
2.0	97.7	>95
1.0	92.8	>80
0.42	72.2	>65

Liquid Phase - Pass
New Sources

Solid 1

Test No. 12-0733Rev1
Date: 22-May-12

Geo. Mean Dia. (uM)	0.350 Up	0.475 Up	0.625 Up	0.850 Up	1.150 Up	1.450 Up	1.900 Up	2.600 Up	3.500 Up	4.750 Up	6.250 Up	8.500 Up
bin #	bin 1	bin 2	bin 3	bin 4	bin 5	bin 6	bin 7	bin 8	bin 9	bin 10	bin 11	bin 12
Upstream	69199	61786	57871	49437	32284	9406	5468	23012	7763	3069	1366	722
Upstream	73493	62948	58299	50083	31920	9699	5404	23481	7955	3094	1377	657
Upstream	80987	68634	63813	55238	35073	10664	6027	26375	8825	3274	1530	734
Upstream	85983	71548	66136	56425	35553	10826	6179	27253	9172	3361	1533	748
Upstream	88835	72487	67077	57557	36216	11270	6258	27437	9287	3426	1569	746
Upstream	87310	70603	64741	55161	34551	10459	6096	26450	8966	3428	1563	681
Upstream	86744	69595	63295	54379	33468	10452	5873	26105	8792	3334	1503	677
Upstream	87084	68454	62401	52888	32503	10100	5957	25508	8575	3141	1409	621
Upstream	87020	68485	62173	52939	32360	10058	5799	25304	8664	3264	1387	722
Upstream	92771	73821	66996	57136	35362	11089	6268	27559	9156	3431	1450	706
Average Ub	368.40	105.20	25.50	8.10	2.70	0.90	0.40	1.00	0.80	0.10	0.00	0.00
Average U	83942.60	68836.10	63280.20	54124.30	33929.00	10402.30	5932.90	25848.40	8715.50	3282.20	1468.70	701.40
StdDev Ub	81.82	15.50	4.12	3.18	1.16	0.74	0.52	0.67	1.03	0.32	0.00	0.00
95% Ub,ucl	426.9273	116.2856	28.4445	10.3733	3.5294	1.4278	0.7694	1.4769	1.5388	0.3262	0.0000	0.0000

Downstream	6709	5302	2608	1350	365	98	51	167	33	8	5	0
Downstream	7132	5253	2630	1342	359	81	51	165	42	8	6	0
Downstream	8285	5991	2978	1467	387	101	43	184	40	9	6	3
Downstream	10010	6534	3212	1553	478	124	67	209	40	22	2	2
Downstream	13068	6573	3226	1629	472	121	52	197	55	12	7	3
Downstream	12041	5999	3100	1495	458	119	43	200	30	20	3	3
Downstream	11057	5819	3011	1537	490	103	53	209	47	14	4	2
Downstream	12158	5366	2950	1451	438	89	41	174	37	8	8	0
Downstream	12001	5216	2926	1384	462	118	32	189	45	10	4	3
Downstream	13021	5619	3197	1526	470	134	45	204	40	0	11	1
Average Db	61.60	12.80	1.70	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average D	10548.20	5767.20	2983.80	1473.40	437.90	108.80	47.80	189.80	40.90	11.10	5.60	1.70
StdDev Db	19.93	2.94	1.16	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% Db,ucl	75.8592	14.9004	2.5294	0.6455	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Average R	0.996	1.041	0.944	1.033	0.725	0.864	0.793	1.055	1.062	1.244	1.398	1.341
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Average P	0.1241	0.0837	0.0471	0.0272	0.0129	0.0104	0.0081	0.0073	0.0047	0.0034	0.0038	0.0024
StdDev P	0.0196	0.0055	0.0012	0.0007	0.0013	0.0013	0.0016	0.0004	0.0007	0.0018	0.0018	0.0019
Corrected P	0.1247	0.0804	0.0499	0.0263	0.0178	0.0121	0.0102	0.0070	0.0044	0.0027	0.0027	0.0018

PSE	87.53	91.96	95.01	97.37	98.22	98.79	98.98	99.30	99.56	99.73	99.73	99.82
E1	92.97											
E2	98.82											
E3	99.71											

Solid 2

Test No. 12-0733Rev1
Date: 22-May-12

Geo. Mean Dia. (uM)	0.350 Up	0.475 Up	0.625 Up	0.850 Up	1.150 Up	1.450 Up	1.900 Up	2.600 Up	3.500 Up	4.750 Up	6.250 Up	8.500 Up
bin #	bin 1	bin 2	bin 3	bin 4	bin 5	bin 6	bin 7	bin 8	bin 9	bin 10	bin 11	bin 12
Upstream	44874	34113	31623	25342	16856	4962	2689	12125	4834	2147	1121	726
Upstream	43970	32323	29602	23144	15074	4387	2567	11235	4385	1844	1053	692
Upstream	49668	35441	32565	25696	16599	4930	2799	12768	4855	2159	1105	741
Upstream	50326	35457	32659	25506	15840	4912	2829	12662	4772	2102	1119	743
Upstream	52716	37333	34065	26413	16707	5320	2960	13346	5025	2148	1097	735
Upstream	56533	39805	36448	28195	17572	5488	3097	14134	5342	2330	1284	715
Upstream	55929	38295	34922	27367	17174	5261	3068	13465	5033	2161	1157	731
Upstream	56871	38983	35703	27380	17242	5310	3123	13577	5088	2149	1093	646
Upstream	58804	40028	36197	28346	17378	5375	3222	13678	5088	2121	1105	633
Upstream	58034	39637	35802	27738	17507	5428	3033	13777	5119	2087	1098	602
Average Ub	972.50	307.70	99.00	22.80	4.20	0.60	0.70	1.50	0.10	0.20	0.10	0.10
Average U	52772.50	37141.50	33958.60	26512.70	16794.90	5137.30	2938.70	13076.70	4954.10	2124.80	1123.20	696.40
StdDev Ub	216.80	45.50	13.78	5.09	2.86	0.70	1.06	1.08	0.32	0.42	0.32	0.32
95% Ub,ucl	1127.5801	340.2481	108.8598	26.4442	6.2456	1.1001	1.4578	2.2726	0.3262	0.5016	0.3262	0.3262

Downstream	5335	2851	1474	800	210	49	21	90	17	9	2	0
Downstream	5491	2817	1426	717	186	43	17	58	23	3	2	0
Downstream	6237	3185	1569	817	201	45	19	83	22	1	5	1
Downstream	6452	3063	1528	744	200	34	26	93	20	6	1	1
Downstream	6851	3213	1535	818	196	47	22	91	20	7	5	0
Downstream	7338	3532	1736	861	234	40	29	102	17	5	2	1
Downstream	7246	3404	1692	816	233	61	22	88	19	5	3	1
Downstream	7222	3312	1727	843	227	40	30	84	18	4	1	0
Downstream	7527	3493	1699	824	248	40	23	98	15	6	3	2
Downstream	7638	3521	1729	869	243	52	27	91	18	0	1	0
Average Db	187.70	43.30	8.30	1.20	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00
Average D	6733.70	3239.10	1611.50	810.90	217.80	45.10	23.60	87.80	18.90	4.60	2.50	0.60
StdDev Db	33.01	9.53	1.42	1.23	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00
95% Db,ucl	211.3113	50.1198	9.3144	2.0793	0.0000	0.0000	0.0000	0.0000	0.3262	0.0000	0.0000	0.0000

Average R	1.030	1.120	0.997	1.139	0.742	0.808	0.880	1.028	0.958	1.020	1.069	0.833
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Average P	0.1261	0.0867	0.0473	0.0306	0.0129	0.0088	0.0080	0.0067	0.0038	0.0022	0.0022	0.0009
StdDev P	0.0038	0.0020	0.0011	0.0010	0.0008	0.0015	0.0011	0.0007	0.0007	0.0013	0.0014	0.0011
Corrected P	0.1224	0.0775	0.0475	0.0269	0.0175	0.0109	0.0091	0.0065	0.0040	0.0021	0.0021	0.0010

PSE	87.76	92.25	95.25	97.31	98.25	98.91	99.09	99.35	99.60	99.79	99.79	99.90
E1	93.15											
E2	98.90											
E3	99.77											

Solid 3

Test No. 12-0733Rev1
Date: 22-May-12

Geo. Mean Dia. (uM)	0.350 Up	0.475 Up	0.625 Up	0.850 Up	1.150 Up	1.450 Up	1.900 Up	2.600 Up	3.500 Up	4.750 Up	6.250 Up	8.500 Up
bin #	bin 1	bin 2	bin 3	bin 4	bin 5	bin 6	bin 7	bin 8	bin 9	bin 10	bin 11	bin 12
Upstream	36165	27136	25306	19623	12825	3759	2096	9340	3526	1535	883	551
Upstream	40609	29846	27359	21321	13720	4075	2237	10054	3740	1720	938	595
Upstream	44199	30950	28195	22177	13853	4112	2395	10437	4056	1804	957	625
Upstream	44630	30941	28194	22083	13669	4098	2345	10474	3950	1862	960	619
Upstream	48395	32870	30217	23037	14330	4461	2467	11153	4274	1874	987	657
Upstream	45696	30645	27586	21452	13072	4006	2292	10225	3835	1689	894	564
Upstream	46409	30859	28231	21251	12994	3945	2291	10280	3865	1673	872	543
Upstream	49858	33438	29966	23362	14407	4420	2430	11307	4185	1722	928	603
Upstream	51928	34667	31360	24405	14935	4644	2683	11571	4396	1776	954	609
Upstream	53352	35435	32089	24916	15280	4795	2696	11900	4523	1836	986	673
Average Ub	957.00	286.10	82.50	17.70	4.40	0.50	0.10	1.00	0.00	0.00	0.10	0.00
Average U	46124.10	31678.70	28850.30	22362.70	13908.50	4231.50	2393.20	10674.10	4035.00	1749.10	935.90	603.90
StdDev Ub	276.56	53.79	14.82	6.20	1.90	0.53	0.32	0.82	0.00	0.00	0.32	0.00
95% Ub,ucl	1154.8247	324.5754	93.1003	22.1358	5.7572	0.8770	0.3262	1.5840	0.0000	0.0000	0.3262	0.0000

Downstream	4495	2450	1164	623	157	36	18	61	14	3	4	2
Downstream	5459	2764	1399	692	187	38	16	86	9	6	3	1
Downstream	5471	2881	1393	701	187	34	20	67	12	1	1	0
Downstream	6031	2854	1421	715	187	50	21	65	9	8	5	0
Downstream	6289	2991	1490	681	206	43	30	77	25	11	1	1
Downstream	6067	2782	1436	698	175	39	16	84	17	1	0	1
Downstream	5946	2874	1388	627	180	37	20	64	11	8	1	1
Downstream	6533	3177	1548	700	212	37	29	87	14	6	1	1
Downstream	6813	3116	1582	744	178	40	21	83	24	9	3	4
Downstream	7171	3249	1662	793	209	49	22	81	17	0	1	2
Average Db	190.20	34.80	7.50	0.60	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average D	6027.50	2913.80	1448.30	697.40	187.80	40.30	21.30	75.50	15.20	5.30	2.00	1.30
StdDev Db	50.95	7.55	2.80	0.84	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% Db,ucl	226.6468	40.2036	9.5020	1.2032	0.5016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Average R	1.030	1.120	0.997	1.139	0.742	0.808	0.880	1.028	0.958	1.020	1.069	0.833
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Average P	0.1290	0.0917	0.0500	0.0312	0.0135	0.0095	0.0089	0.0071	0.0037	0.0030	0.0021	0.0022
StdDev P	0.0042	0.0016	0.0018	0.0012	0.0009	0.0011	0.0018	0.0008	0.0012	0.0021	0.0018	0.0019
Corrected P	0.1252	0.0819	0.0502	0.0274	0.0182	0.0118	0.0101	0.0069	0.0039	0.0029	0.0020	0.0026

PSE	87.48	91.81	94.98	97.26	98.18	98.82	98.99	99.31	99.61	99.71	99.80	99.74
E1	92.88											
E2	98.83											
E3	99.71											

Liquid 1

Test No. 12-0733Rev1
Date: 22-May-12

Geo. Mean Dia. (uM)	0.350 Up	0.475 Up	0.625 Up	0.850 Up	1.150 Up	1.450 Up	1.900 Up	2.600 Up	3.500 Up	4.750 Up	6.250 Up	8.500 Up
bin #	bin 1	bin 2	bin 3	bin 4	bin 5	bin 6	bin 7	bin 8	bin 9	bin 10	bin 11	bin 12
Upstream	60299	58446	65770	56228	29407	8745	5074	12374	999	153	95	61
Upstream	56462	52794	59227	50255	25677	8045	4706	11928	901	146	86	57
Upstream	67374	61062	67507	58862	28980	9087	5216	13747	1022	128	88	68
Upstream	81574	72825	81432	71803	35107	11187	6146	16959	1165	128	95	60
Upstream	95144	84024	94056	83834	41628	12699	7371	19406	1309	181	95	54
Upstream	88722	77166	86104	76200	36836	11812	6526	18343	1262	183	91	64
Upstream	73694	62435	69731	59971	29218	9436	5286	14745	1037	159	68	57
Upstream	63228	53494	58848	51051	24392	7990	4628	12474	947	134	88	56
Upstream	69798	58433	64584	56306	26440	8610	4916	13719	1024	150	85	57
Upstream	78681	66061	73223	64242	30939	9979	5757	15794	1169	182	93	58
Average Ub	969.00	329.00	133.10	50.50	14.20	3.50	1.20	4.40	1.00	0.50	0.20	0.00
Average U	73497.60	64674.00	72048.20	62875.20	30862.40	9759.00	5562.60	14948.90	1083.50	154.40	88.40	59.20
StdDev Ub	192.80	31.36	21.23	17.48	11.64	3.06	1.32	4.74	1.49	0.97	0.42	0.00
95% Ub,ucl	1106.9119	351.4307	148.2869	63.0003	22.5268	5.6918	2.1417	7.7922	2.0663	1.1952	0.5016	0.0000

Downstream	17844	15151	10928	6670	1013	170	114	173	3	0	0	0
Downstream	15036	12078	9027	5461	856	183	94	169	2	0	0	0
Downstream	18375	14467	10592	6411	1040	231	81	205	3	1	0	0
Downstream	23489	18316	13323	7924	1280	239	127	232	3	2	0	0
Downstream	30045	23122	16554	9766	1588	337	138	288	3	0	0	0
Downstream	28544	21567	15712	9518	1526	344	125	285	4	0	0	0
Downstream	21507	16211	11685	7003	1136	288	116	258	3	0	0	0
Downstream	17269	12626	9406	5640	977	207	84	200	4	0	0	0
Downstream	18126	13402	9827	5915	970	223	72	209	1	0	0	0
Downstream	21814	16196	11584	7042	1119	259	107	269	4	0	0	0
Average Db	138.80	46.00	13.40	5.30	0.10	0.10	0.10	0.10	0.00	0.00	0.00	0.00
Average D	21204.90	16313.60	11863.80	7135.00	1150.50	248.10	105.80	228.80	3.00	0.30	0.00	0.00
StdDev Db	26.97	10.31	2.50	1.95	0.32	0.32	0.32	0.32	0.00	0.00	0.00	0.00
95% Db,ucl	158.0906	53.3723	15.1907	6.6924	0.3262	0.3262	0.3262	0.3262	0.0000	0.0000	0.0000	0.0000

Average R	0.878	1.014	0.961	1.150	0.689	0.750	0.874	1.098	0.795	1.025	1.199	0.840
Average P	0.2882	0.2507	0.1636	0.1130	0.0372	0.0253	0.0190	0.0153	0.0028	0.0024	0.0000	0.0000
StdDev P	0.0206	0.0181	0.0099	0.0060	0.0025	0.0034	0.0025	0.0013	0.0009	0.0053	0.0000	0.0000
Corrected P	0.3281	0.2471	0.1703	0.0983	0.0539	0.0337	0.0217	0.0139	0.0035	0.0023	0.0000	0.0000

PSE	67.19	75.29	82.97	90.17	94.61	96.63	97.83	98.61	99.65	99.77	100.00	100.00
E1	78.91											
E2	96.92											
E3	99.86											

Liquid 2

Test No. 12-0733Rev1
Date: 22-May-12

Geo. Mean Dia. (uM)	0.350 Up	0.475 Up	0.625 Up	0.850 Up	1.150 Up	1.450 Up	1.900 Up	2.600 Up	3.500 Up	4.750 Up	6.250 Up	8.500 Up
bin #	bin 1	bin 2	bin 3	bin 4	bin 5	bin 6	bin 7	bin 8	bin 9	bin 10	bin 11	bin 12
Upstream	60270	59065	66693	56889	29936	9064	5176	12658	915	141	96	61
Upstream	56168	52427	58357	50253	25358	7699	4652	11417	857	136	79	56
Upstream	67831	61739	67984	59090	29612	9320	5308	13481	984	139	87	54
Upstream	77044	68538	77064	66414	33232	10508	6037	15868	1110	147	97	59
Upstream	88774	77898	87896	77716	39118	12172	7024	18635	1271	146	97	54
Upstream	96933	85927	96745	85665	42930	13325	7564	20452	1341	159	99	56
Upstream	90662	78886	87936	77535	38233	11815	6749	18385	1226	149	97	56
Upstream	81507	69008	77144	67608	32653	10623	6057	16368	1203	163	91	57
Upstream	71025	59965	66434	57920	28026	9001	5197	14275	970	124	88	55
Upstream	67838	55930	62389	53812	26070	8158	4896	13370	971	129	78	55
Average Ub	953.50	314.30	120.20	41.10	10.20	2.40	0.90	2.80	0.60	0.30	0.30	0.00
Average U	75805.20	66938.30	74864.20	65290.20	32516.80	10168.50	5866.00	15490.90	1084.80	143.30	90.90	56.30
StdDev Ub	272.34	74.15	28.96	12.99	6.56	1.90	0.88	3.68	0.84	0.67	0.67	0.00
95% Ub,ucl	1148.3078	367.3401	140.9173	50.3926	14.8942	3.7572	1.5263	5.4293	1.2032	0.7828	0.7828	0.0000

Downstream	17021	14685	10733	6538	949	192	117	232	10	0	0	0
Downstream	14359	11826	8761	5306	859	211	104	190	0	0	0	0
Downstream	17631	13985	10267	6220	964	191	114	234	4	1	0	0
Downstream	21358	16539	12114	7219	1088	255	134	278	4	0	0	0
Downstream	25738	20315	14420	8583	1428	271	171	304	4	0	0	0
Downstream	30649	23334	16943	9796	1505	313	193	349	7	0	0	0
Downstream	28499	21754	15738	9323	1583	315	148	347	3	0	0	0
Downstream	23582	17850	13082	7494	1246	264	148	322	5	0	0	0
Downstream	19745	15023	10889	6299	1055	230	129	260	3	0	0	0
Downstream	16911	12976	9283	5636	937	203	105	270	3	0	0	0
Average Db	131.10	42.30	13.70	4.60	0.40	0.10	0.10	0.00	0.00	0.00	0.00	0.00
Average D	21549.30	16828.70	12223.00	7241.40	1161.40	244.50	136.30	278.60	4.30	0.10	0.00	0.00
StdDev Db	39.87	17.10	6.73	4.09	0.52	0.32	0.32	0.00	0.00	0.00	0.00	0.00
95% Db,ucl	159.6216	54.5327	18.5168	7.5241	0.7694	0.3262	0.3262	0.0000	0.0000	0.0000	0.0000	0.0000

Average R	0.878	1.014	0.961	1.150	0.689	0.750	0.874	1.098	0.795	1.025	1.199	0.840
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Average P	0.2831	0.2497	0.1620	0.1104	0.0356	0.0241	0.0231	0.0180	0.0040	0.0007	0.0000	0.0000
StdDev P	0.0227	0.0178	0.0105	0.0050	0.0030	0.0023	0.0015	0.0013	0.0028	0.0023	0.0000	0.0000
Corrected P	0.3223	0.2461	0.1686	0.0960	0.0516	0.0321	0.0264	0.0164	0.0050	0.0007	0.0000	0.0000

PSE	67.77	75.39	83.14	90.40	94.84	96.79	97.36	98.36	99.50	99.93	100.00	100.00
E1	79.18											
E2	96.84											
E3	99.86											

Liquid 3

Test No. 12-0733Rev1
Date: 22-May-12

Geo. Mean Dia. (uM)	0.350 Up	0.475 Up	0.625 Up	0.850 Up	1.150 Up	1.450 Up	1.900 Up	2.600 Up	3.500 Up	4.750 Up	6.250 Up	8.500 Up
bin #	bin 1	bin 2	bin 3	bin 4	bin 5	bin 6	bin 7	bin 8	bin 9	bin 10	bin 11	bin 12
Upstream	52072	49960	55806	47129	24823	7550	4390	10634	813	114	88	56
Upstream	61379	56972	64297	54453	27464	8550	5044	12415	938	115	86	52
Upstream	79076	72340	80487	69700	35300	10883	6435	15985	1111	123	89	52
Upstream	89715	80602	90420	78892	40080	12312	7144	18019	1198	136	93	53
Upstream	84740	73894	82308	71279	34972	10986	6293	16510	1134	158	89	59
Upstream	78709	67001	74000	64858	31634	9770	5652	14981	1006	109	81	60
Upstream	72068	59579	65968	57408	27114	8830	5013	13617	1019	113	79	55
Upstream	64695	53923	58811	51034	24275	7793	4431	12032	910	94	76	61
Upstream	65218	53948	59524	51482	24337	7836	4476	12246	882	128	80	54
Upstream	82102	69137	76400	66898	31796	10004	5680	15413	1082	125	83	55
Average Ub	14235.00	13089.80	14718.00	12718.20	6694.00	1981.30	1133.10	2765.80	188.90	22.60	3.80	1.10
Average U	72977.40	63735.60	70802.10	61313.30	30179.50	9451.40	5455.80	14185.20	1009.30	121.50	84.40	55.70
StdDev Ub	28866.70	27715.20	31760.80	27639.19	14719.52	4310.41	2455.53	5970.79	398.84	47.45	7.44	2.42
95% Ub,ucl	34883.5589	32914.6827	37436.7292	32488.7124	17222.9755	5064.5668	2889.5599	7036.7461	474.1962	56.5437	9.1188	2.8342

Downstream	14251	11997	8665	5181	709	161	98	166	5	0	0	0
Downstream	15602	12746	9300	5560	884	181	119	212	2	0	0	0
Downstream	22275	18205	12865	7549	1185	236	155	282	2	0	0	0
Downstream	28375	22460	16046	9242	1397	284	150	323	2	1	0	0
Downstream	25337	19726	14154	8232	1331	283	197	285	1	0	0	0
Downstream	22408	16890	12364	6994	1177	234	133	262	4	1	0	0
Downstream	19801	15350	10864	6168	1028	225	116	258	2	0	0	0
Downstream	17130	13094	9303	5426	926	230	128	237	5	0	0	0
Downstream	16660	12246	8868	5253	822	181	105	223	2	0	0	0
Downstream	23000	17086	12046	7207	1153	224	126	269	5	0	0	0
Average Db	5025.70	3982.00	2825.10	1639.50	241.80	45.30	29.00	52.90	0.30	0.00	0.00	0.00
Average D	20483.90	15980.00	11447.50	6681.20	1061.20	223.90	132.70	251.70	3.00	0.20	0.00	0.00
StdDev Db	10809.46	8760.73	6231.61	3608.20	520.75	95.86	63.91	112.20	0.67	0.00	0.00	0.00
95% Db,ucl	12757.7823	10248.6124	7282.6138	4220.4741	614.2957	113.8668	74.7175	133.1601	0.7828	0.0000	0.0000	0.0000

Average R	0.878	1.014	0.961	1.150	0.689	0.750	0.874	1.098	0.795	1.025	1.199	0.840
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Average P	0.2785	0.2488	0.1606	0.1084	0.0347	0.0240	0.0240	0.0174	0.0035	0.0020	0.0000	0.0000
StdDev P	0.0190	0.0168	0.0100	0.0049	0.0042	0.0034	0.0040	0.0015	0.0023	0.0043	0.0000	0.0000
Corrected P	0.3170	0.2452	0.1671	0.0943	0.0503	0.0320	0.0275	0.0158	0.0044	0.0020	0.0000	0.0000

PSE	68.30	75.48	83.29	90.57	94.97	96.80	97.25	98.42	99.56	99.80	100.00	100.00
E1	79.41											
E2	96.86											
E3	99.84											