



QFT LABORATORY, LLC.

1041 Glassboro Road Suite E-4, Williamstown NJ 08094

PHONE 856-533-0445 www.enviroteklab.com

EPA ID # NJ01298 IAPMO ID# 000102 NJDEP ID # 08021 ANAB Cert ID AT-2866



Send To:

Project Manager

KLT Filtration

Stuary Road, Kings Lynn

Norfolk, GB 43235

44 (0) 1553-622007

Customer Name: KLT Filtration

Tested To: NSF/ANSI Standard 42 and 53 Salts Reduction PT 100%

Description: Inline Filter #CF521W

Test Type: Research and Development

Project Manager: Jaime Young

Thank you for having your product tested by QFT Laboratory, LLC.

Please contact your Project Manager if you have any questions or concerns pertaining to this report.

Report Authorization

Jaime A. Young
Jaime A. Young
Lab Director

Date: 08/20/2020



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NSF/ANSI Standard 42 and 53 Salts Reduction PT 100%: Failed

Product: Plumbed in without reservoir

Flow Rate: 2.5 Liters/min

Filter Capacity: 10,000 Liters

Cycle: 50/50

Conditioning Procedure: Flush for 5 minutes

Physical Description of Sample: Inline Filter

Performance Indicator Device: No, test to 100% Capacity

Test Description: NSF/ANSI Standard 42 and 53 Salts Reduction Testing

Trade Designation/Model Number: #CF521W

Unit Volume: 0.3 L

Performance Standard: NSF/ANSI Standard 42 and 53- 2019

Pass/Fail Criteria ($\text{NO}_3 + \text{NO}_2$ Maximum Product Water Concentration): Nitrate + Nitrite: 10 $\mu\text{g/L}$ (Nitrite: $\leq 1 \mu\text{g/L}$)

(Sulfate Maximum Product Concentration $< 250 \text{ mg/L}$)

Decision Rule: Simple Acceptance based on the NSF/ANSI standard limit



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Nitrate Filter #1 Data Summary Table

Sample Point	Accumulated Volume Effluent 1	Influent 1 Nitrate (mg/L)	Effluent 1 Nitrate Concentration (mg/L)	% Reduction
10 UV	10 UV	29.2	3.8	86.99%
5%	500 Liters	29.2	15.6	46.58%
10%	1000 Liters	29.2	21.4	26.71%
15%	1500 Liters	29.2	26.7	8.56%
20%	2000 Liters	29.2	35.4	-21.23%
25%	2500 Liters	29.2	23.4	19.86%
30%	3000 Liters	29.2	33.8	-15.75%
35%	3500 Liters	29.2	26.9	7.88%
40%	4000 Liters	29.2	29.3	-0.34%
45%	4500 Liters	29.2	28.0	4.11%
50%	5000 Liters	30.3	29.5	2.64%
55%	5500 Liters	30.3	30.7	-1.32%
60%	6000 Liters	30.3	28.9	4.62%
65%	6500 Liters	30.3	31.4	-3.63%
70%	7000 Liters	30.3	32.6	-7.59%
75%	7500 Liters	30.3	33.4	-10.23%
80%	8000 Liters	30.3	37.1	-22.44%
85%	8500 Liters	31.4	34.3	-9.24%
90%	9000 Liters	31.4	33.8	-7.64%
95%	9500 Liters	31.4	34.9	-11.15%
100%	10,000 Liters	31.4	36.2	-15.29%

Nitrate Reporting Limit: 0.1 mg/L

Nitrite Filter #1 Data Summary Table

Sample Point	Accumulated Volume Effluent 1	Influent 1 Nitrite (mg/L)	Effluent 1 Nitrite Concentration (mg/L)	% Reduction
10 UV	10 UV	2.9	0.42	85.52%
5%	500 Liters	2.9	0.79	72.76%
10%	1000 Liters	2.9	1.61	44.48%
15%	1500 Liters	2.9	2.44	15.86%
20%	2000 Liters	2.9	2.51	13.45%
25%	2500 Liters	2.9	2.57	11.38%
30%	3000 Liters	2.9	2.11	27.24%
35%	3500 Liters	2.9	2.73	5.86%
40%	4000 Liters	3.3	2.89	12.42%
45%	4500 Liters	3.3	2.76	16.36%
50%	5000 Liters	3.3	2.88	12.73%
55%	5500 Liters	3.3	2.54	23.03%
60%	6000 Liters	3.3	2.91	11.82%
65%	6500 Liters	3.3	2.99	9.39%
70%	7000 Liters	3.3	3.06	7.27%
75%	7500 Liters	3.3	3.11	5.76%
80%	8000 Liters	3.1	3.26	-5.16%
85%	8500 Liters	3.1	3.18	-2.58%
90%	9000 Liters	3.1	3.37	-8.71%
95%	9500 Liters	3.1	3.41	-10.00%
100%	10,000 Liters	3.1	3.55	-14.52%

Nitrite Reporting Limit: 0.01 mg/L



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Nitrate and Nitrite Data Summary Filter 1

Sample Point	Accumulated Volume Effluent 1	Influent Total Nitrate +Nitrite Concentration (mg/L)	Effluent 1 Total Nitrate +Nitrite Concentration (mg/L)	Passing Criteria
10 UV	10 UV	32.1	4.22	Passed
5%	500 Liters	32.1	16.39	Failed
10%	1000 Liters	32.1	23.01	Failed
15%	1500 Liters	32.1	29.14	Failed
20%	2000 Liters	32.1	37.91	Failed
25%	2500 Liters	32.1	25.97	Failed
30%	3000 Liters	32.1	35.91	Failed
35%	3500 Liters	32.1	29.63	Failed
40%	4000 Liters	32.5	32.19	Failed
45%	4500 Liters	32.5	30.76	Failed
50%	5000 Liters	33.6	32.38	Failed
55%	5500 Liters	33.6	33.24	Failed
60%	6000 Liters	33.6	31.81	Failed
65%	6500 Liters	33.6	34.39	Failed
70%	7000 Liters	33.6	35.66	Failed
75%	7500 Liters	33.6	36.51	Failed
80%	8000 Liters	33.4	40.36	Failed
85%	8500 Liters	34.5	37.48	Failed
90%	9000 Liters	34.5	37.17	Failed
95%	9500 Liters	34.5	38.31	Failed
100%	10,000 Liters	34.5	39.75	Failed

Sulfate Filter #1 Data Summary Table

Sample Point	Accumulated Volume Effluent 1	Influent 1 Sulfate (mg/L)	Effluent 1 Sulfate Concentration (mg/L)	% Reduction
10 UV	10 UV	790	720	8.86%
5%	500 Liters	790	710	10.13%
10%	1000 Liters	790	730	7.59%
15%	1500 Liters	790	690	12.66%
20%	2000 Liters	790	740	6.33%
25%	2500 Liters	790	730	7.59%
30%	3000 Liters	790	720	8.86%
35%	3500 Liters	790	710	10.13%
40%	4000 Liters	790	730	7.59%
45%	4500 Liters	810	720	11.11%
50%	5000 Liters	810	740	8.64%
55%	5500 Liters	810	760	6.17%
60%	6000 Liters	810	780	3.70%
65%	6500 Liters	810	820	-1.23%
70%	7000 Liters	800	850	-6.25%
75%	7500 Liters	800	870	-8.75%
80%	8000 Liters	800	880	-10.00%
85%	8500 Liters	800	890	-11.25%
90%	9000 Liters	800	910	-13.75%
95%	9500 Liters	800	930	-16.25%
100%	10,000 Liters	800	950	-18.75%

Sulfate Reporting Limit: 1 mg/L



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Water Characteristics

Sample Point	pH (7.5±0.5)	Temperature (20±3°C)	TDS (200-500)	Turbidity (<1 NTU)
10 UV	7.1	19	203	0.2
5%	7.2	20	211	0.1
10%	7.2	20	218	0.2
15%	7.3	20	209	0.2
20%	7.2	21	222	0.3
25%	7.1	21	217	0.2
30%	7.1	22	228	0.1
35%	7.2	22	233	0.2
40%	7.1	22	246	0.2
45%	7.2	22	259	0.3
50%	7.2	22	265	0.4
55%	7.1	22	272	0.4
60%	7.3	22	279	0.5
65%	7.2	22	281	0.4
70%	7.4	22	299	0.4
75%	7.4	22	306	0.6
80%	7.5	22	317	0.5
85%	7.4	22	328	0.6
90%	7.6	22	342	0.6
95%	7.6	22	353	0.5
100%	7.5	22	362	0.6
Average	7.3	21	269	0.4

Disclaimer: The test results are only related to the filter cartridges tested, in the condition received at the laboratory.

Jaime A. Young

Jaime A. Young
Lab Director