IAPMO INDIA PRIVATE LIMITED	Document No.	IAPMO/ILAB/TR/02
	Test Report No.	IAPMO/ILAB/20501/25-26
	Date	31/07/2025
	Revision No.	01
	Reference	NSF/ANSI 53-2023
TEST REPORT		

CUSTOMER DETAILS	SAMPLE DETAILS	TEST DETAILS
Name & Address: Mr. Abdul Azim **RFT C/O Kajah Marketing Company,** Madurai, India, 625103	Submitted By: **RFT C/O Kajah Marketing Company**	**Protocol:** NSF/ ANSI 53 - 2023
	Sample Code No.: IAPMO/ILAB/20501/25-26	
	Sample Description: Purita System	
	Sample Received Date: 30.06.2025	
	Date Of Analysis Started: 09.07.2025	
	Date Of Analysis Completed: 31.07.2025	
	Sample Quantity for Testing: 1 No.	
	Sample Condition When Received: Intact	

EXECUTIVE SUMMARY:

RFT C/O Kajah Marketing Company submitted their Purita system for evaluation of PFAS reduction performance in accordance with NSF/ANSI Standard 53. Initially testing was conducted for target volume of 2,500 litres at a constant flow rate of 2.1 Liter per minute, maintaining a pressure of 60 psi throughout, Later Target volume was increased to 5000L with inlet pressure of 60psi. The filters were initially flushed with chlorinated water to verify integrity, during which no chlorine breakthrough was observed (0 ppm), confirming the system was leak-free. Prior to PFAS testing, the water quality parameters—including Total Dissolved Solids (TDS) and pH—were adjusted to meet the specified requirements.

A total PFAS solution was introduced to achieve a challenge concentration of 2160 ppt. Samples were collected at every 10% of the total test volume to monitor performance. The filters effectively reduced PFAS levels throughout the entire test volume, confirming compliance with the required standards.

CONCLUSION:

The tested carbon filter **meets** the requirements specified by NSF/ANSI 53 for PFAS reduction. According to the standard, the permissible effluent concentration limit is less than 20 ppt.

AIM OF THE EXPERIMENT:

The primary aim of this evaluation was to assess the performance of the carbon filters in reducing the PFAS in accordance with the **NSF/ANSI – 53** standard.

FEED WATER COMPOSITION

Test parameters	Maintained concentration during the test
pH	7.5 ± 0.5
TDS (ppm)	250 ± 10%
Temperature (°C)	25 °C

TEST COMPOSITION AND PERFORMANCE CRITERIA FOR PFAS IN CHALLENGE WATER

S. No.	PFAS Compounds	CAS#	Input Concentration (ppt)	Output Limits (ppt)
1	Tridecafluoroheptonoic acid (PFHPA)	375-85-9	40	20
2	Nonadecafluorodecanoic acid (PFDA)	335-76-2	10	20
3	Pentadecafluorooctanoic acid (PFOA)	335-67-1	500	20
4	Heptadecafluorononanoic acid (PFNA)	375-95-1	50	6
5	Perfluorohexane sulfonic acid (PFHXS)	355-46-4	300	20
6	Perfluorooctanesulfonic acid (PFOS)	1763-23-1	1000	20
7	perfluorobutanesulfonic acid (PFBS)	375-73-5	260	20
Total PFAS			**2160**	**20**

TEST DATA:

Volume		% of Sampling	Inlet Pressure (psi)	Total PFAS Input Concentration (ppt)	Total Effluent Concentration (ppt)	Flow Rate (LPM)
Liter	Gallons					
0	0	Initial	60.1	2127.5	ND	2.15
250	66	10%	59.5	2123.1	ND	2.17
500	132	20%	60.1	2150.3	ND	2.18
750	198	30%	60.2	2230.1	ND	2.22
1000	264	40%	59.6	2201.7	ND	2.17
1250	330	50%	59.9	2210.7	ND	2.15
1500	396	60%	60.2	2230.7	ND	2.14
1750	462	70%	60.1	2170.6	ND	2.16
2000	528	80%	60.4	2176.4	ND	2.16
2250	594	90%	59.6	2167.0	ND	2.14
2500	661	100%	59.7	2167.0	ND	2.19
2750	727	110%	60.3	1930.0	ND	2.14
3000	793	120%	60.4	1930.0	ND	2.15
3250	859	130%	59.6	1978.7	ND	2.18
3500	925	140%	59.7	1978.5	ND	2.11
3750	991	150%	60.5	1935.2	ND	2.06
4000	1057	160%	60.3	1935.2	ND	2.05
4250	1123	170%	60.1	2163.3	ND	1.92
4500	1189	180%	60.6	2163.3	ND	1.72
4750	1255	190%	59.5	2251.7	ND	1.54
5000	1321	200%	60.1	2251.7	ND	1.36
			Total PFAS	**2117.7**		

INDIVIDUAL PFAS REDUCTION EFFICACY

1. PFOA Removal data

Volume		% of Sampling	Input Concentration (ppt)	Effluent (ppt)
Liter	Gallons			
0	0	Initial	535	<5
250	66	10%	502	<5
500	132	20%	497.1	<5
750	198	30%	572.37	<5
1000	264	40%	558.16	<5
1250	330	50%	558.16	<5
1500	396	60%	513.05	<5
1750	462	70%	513.05	<5
2000	528	80%	528.7	<5
2250	594	90%	528.7	<5
2500	661	100%	528.7	<5
2750	727	110%	437.7	<5
3000	793	120%	437.7	<5
3250	859	130%	460.4	<5
3500	925	140%	460.4	<5
3750	991	150%	438.3	<5
4000	1057	160%	438.3	<5
4250	1123	170%	530	<5
4500	1189	180%	530	<5
4750	1255	190%	502.3	<5
5000	1321	200%	502.3	<5
		Average Input	503.4	

2. PFOS Removal data

Volume		% of Sampling	Input Concentration (ppt)	Effluent (ppt)
Liter	Gallons			
0	0	Initial	931	<5
250	66	10%	1019	<5
500	132	20%	1052	<5
750	198	30%	969.17	<5
1000	264	40%	954.92	<5
1250	330	50%	954.9	<5
1500	396	60%	1020.1	<5
1750	462	70%	1020.1	<5
2000	528	80%	1010.3	<5
2250	594	90%	1010.3	<5
2500	661	100%	1010.3	<5
2750	727	110%	911.1	<5
3000	793	120%	911.1	<5
3250	859	130%	920.3	<5
3500	925	140%	920.1	<5
3750	991	150%	893.2	<5
4000	1057	160%	893.2	<5
4250	1123	170%	900.3	<5
4500	1189	180%	900.3	<5
4750	1255	190%	1065.7	<5
5000	1321	200%	1065.7	<5
		Average Input	968.2	

3. PFHxS Removal data

Volume		% of Sampling	Input Concentration (ppt)	Effluent (ppt)
Liter	Gallons			
0	0	Initial	299.39	<5
250	66	10%	260.4	<5
500	132	20%	261.04	<5
750	198	30%	322.13	<5
1000	264	40%	322.12	<5
1250	330	50%	339.16	<5
1500	396	60%	339.16	<5
1750	462	70%	314.9	<5
2000	528	80%	314.9	<5
2250	594	90%	296.3	<5
2500	661	100%	296.3	<5
2750	727	110%	263.4	<5
3000	793	120%	263.4	<5
3250	859	130%	275.5	<5
3500	925	140%	275.5	<5
3750	991	150%	280.9	<5
4000	1057	160%	280.9	<5
4250	1123	170%	356.4	<5
4500	1189	180%	356.4	<5
4750	1255	190%	317.7	<5
5000	1321	200%	317.7	<5
		Average Input	302.6	

4. PFNA Removal data

Volume		% of Sampling	Input Concentration (ppt)	Effluent (ppt)
Liter	Gallons			
0	0	Initial	49.19	<5
250	66	10%	43.37	<5
500	132	20%	43.14	<5
750	198	30%	53.95	<5
1000	264	40%	53.95	<5
1250	330	50%	53.65	<5
1500	396	60%	53.65	<5
1750	462	70%	50.02	<5
2000	528	80%	50.02	<5
2250	594	90%	52.26	<5
2500	661	100%	52.26	<5
2750	727	110%	50.7	<5
3000	793	120%	50.7	<5
3250	859	130%	45.2	<5
3500	925	140%	45.2	<5
3750	991	150%	44.72	<5
4000	1057	160%	44.72	<5
4250	1123	170%	50.6	<5
4500	1189	180%	50.6	<5
4750	1255	190%	49.8	<5
5000	1321	200%	49.8	<5
		Average Input	49.4	

5. PFHpA Removal Data

Volume		% of Sampling	Input Concentration (ppt)	Effluent (ppt)
Liter	Gallons			
0	0	Initial	43.53	<5
250	66	10%	32.13	<5
500	132	20%	33.83	<5
750	198	30%	38.32	<5
1000	264	40%	38.32	<5
1250	330	50%	39.24	<5
1500	396	60%	39.24	<5
1750	462	70%	34.69	<5
2000	528	80%	34.69	<5
2250	594	90%	36.08	<5
2500	661	100%	36.08	<5
2750	727	110%	34.9	<5
3000	793	120%	34.9	<5
3250	859	130%	37.1	<5
3500	925	140%	37.1	<5
3750	991	150%	34.4	<5
4000	1057	160%	34.4	<5
4250	1123	170%	39.07	<5
4500	1189	180%	39.07	<5
4750	1255	190%	36.85	<5
5000	1321	200%	36.85	<5
		Average Input	36.7	

6. PFBS Removal data

Volume		% of Sampling	Input Concentration (ppt)	Effluent (ppt)
Liter	Gallons			
0	0	Initial	260.25	<5
250	66	10%	254.87	<5
500	132	20%	249.91	<5
750	198	30%	264.04	<5
1000	264	40%	264.04	<5
1250	330	50%	255.02	<5
1500	396	60%	255.02	<5
1750	462	70%	227.36	<5
2000	528	80%	227.36	<5
2250	594	90%	231.95	<5
2500	661	100%	231.95	<5
2750	727	110%	223.9	<5
3000	793	120%	223.9	<5
3250	859	130%	229.2	<5
3500	925	140%	229.2	<5
3750	991	150%	233.9	<5
4000	1057	160%	233.9	<5
4250	1123	170%	279.1	<5
4500	1189	180%	279.1	<5
4750	1255	190%	271.4	<5
5000	1321	200%	271.4	<5
		Average Input	247.5	

7. PFDA Removal Data

Volume		% of Sampling	Input Concentration (ppt)	Effluent (ppt)
Liter	Gallons			
0	0	Initial	9.15	<5
250	66	10%	11.32	<5
500	132	20%	13.31	<5
750	198	30%	10.15	<5
1000	264	40%	10.15	<5
1250	330	50%	10.52	<5
1500	396	60%	10.52	<5
1750	462	70%	10.44	<5
2000	528	80%	10.44	<5
2250	594	90%	11.42	<5
2500	661	100%	11.42	<5
2750	727	110%	8.26	<5
3000	793	120%	8.26	<5
3250	859	130%	10.97	<5
3500	925	140%	10.97	<5
3750	991	150%	9.82	<5
4000	1057	160%	9.82	<5
4250	1123	170%	7.8	<5
4500	1189	180%	7.8	<5
4750	1255	190%	7.92	<5
5000	1321	200%	7.92	<5
		Average Input	9.9	

PICTURE OF THE PRODUCT

20501

Reviewed & Issued By

Mukthesh Pathi
Vice President - Laboratory

---END OF THE TEST REPORT ---