



IAPMO INDIA PRIVATE LIMITED

Document No.	IAPMO/ILAB/TR/02
Test Report No.	IAPMO/ILAB/20752/26-27
Date	25.05.2026
Revision No.	01
Reference	NSF/ANSI 42-2023

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	As per the NSF/ANSI 42- 2023
	Sample Code No.: IAPMO/ILAB/20752/26-27	
	Sample Description: Carbon filter	
	Sample Received Date: 06.05.2026	
	Date Of Analysis Started: 14.05.2026	
	Date Of Analysis Completed: 25.05.2026	
	Sample Quantity for Testing: 1 No	
	Sample Condition When Received: Intact	

EXECUTIVE SUMMARY:

RFT C/O Kajah marketing company submitted a carbon filter for bacteriological performance evaluation for one week in accordance with NSF/ANSI 42-2023. The filter was conditioned according to the manufacturer's instructions using the specified influent challenge water. Testing was conducted at a flow rate of 1.5 LPM. The filter was operated on a cyclic pattern of 1 minute ON and 59 minutes OFF for 16 hours daily over a period of 5 days, followed by a 56-hour stagnation period. Following conditioning, influent challenge water and product water samples were collected for heterotrophic bacteriological analysis at test startup, after 8 hours of operation during the first 24-hour cycle, and before and after each 56-hour stagnation period.

CONCLUSION:

The tested carbon filter **meets** the required specifications. The geometric mean of the heterotrophic plate counts of the product water samples are less than the geometric mean of input water, within a measurement precision of $\pm 20\%$.

AIM OF THE EXPERIMENT:

The primary objective of this evaluation was to assess the bacteriological performance of the carbon filter in accordance with NSF/ANSI 42-2023.

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TEST COMPOSITION OF INFLUENT CHALLENGE WATER

Test parameters	Required concentration	Maintained concentration during the test
pH	7.5±0.5	7.23
Temperature (°C)	20±3	20.9
TDS mg/L	200-600	340
Total organic carbon mg/L	≥2.0	2.5
Total residual chlorine mg/L	≤0.2	<0.2
Bacterial contaminant	10 ¹ - 10 ⁶ cfu/ml	5x10 ⁵ - 6.5x10 ⁵ cfu/ml

TEST DATA 1: Reduction of Heterotrophic bacterial counts of carbon filter (20752)

Sampling point	Influent challenge water count	Effluent water count	Flow rate LPM
Start	6x10 ⁵ cfu/ml	5x10 ⁵ cfu/ml	1.5
	4x10 ⁵ cfu/ml	4x10 ⁵ cfu/ml	
Average	5x10⁵ cfu/ml	4.5x10⁵ cfu/ml	
8 hr run	6x10 ⁵ cfu/ml	4x10 ⁵ cfu/ml	1.5
	6x10 ⁵ cfu/ml	5x10 ⁵ cfu/ml	
Average	6x10⁵ cfu/ml	4.5x10⁵ cfu/ml	
Before 56 hr stagnation	6.3x10 ⁵ cfu/ml	5x10 ⁵ cfu/ml	1.5
	6.5x10 ⁵ cfu/ml	5x10 ⁵ cfu/ml	
Average	6.4x10⁵ cfu/ml	5x10⁵ cfu/ml	
After 56 hr stagnation	6.5x10 ⁵ cfu/ml	5.5x10 ⁵ cfu/ml	1.5
	7x10 ⁵ cfu/ml	6x10 ⁵ cfu/ml	
Average	6.75x10⁵ cfu/ml	5.75x10⁵ cfu/ml	

CALCULATION:

Geometric mean calculation

N Root of (X1X X2.....N)

Where,

X1.....N = Individual data points (microbial counts)

N = No. of data points

Geometric mean of Influent water = 6.01x10⁵ cfu/ml

Geometric mean of Effluent water = 4.92x10⁵ cfu/ml

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TEST REPORT

PICTURE OF THE PRODUCT



Reviewed & Issued By

Mukthesh Pathi
Vice president -Laboratory

---END OF THE TEST REPORT ---

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