 IAPMO INDIA PRIVATE LIMITED	Document No.	IAPMO/ILAB/TR/02
	Test Report No.	IAPMO/ILAB/ 20222 /24-25
	Date	26.06.2024
	Revision No.	01
	Revision Date	01/06/2024
	Reference	IS 16240:2023
TEST REPORT		

CUSTOMER DETAILS	SAMPLE DETAILS	TEST DETAILS
Name & Address: Mr. Supriyo Mukherjee M/s A.O Smith India Water Products Pvt Ltd #300, Phase -II, KIADB Industrial Area, Harohalli, Kanakapura (TQ) Ramanagara District-562112	Submitted By: M/s A O Smith India Water Products Pvt Ltd	Protocol: As per IS 16240:2023
	Sample Code No.: IAPMO/ILAB/20222/24-25	
	Sample Description: Kent Grand Plus from Kent RO Systems Ltd	
	Sample Received Date: 08.06.2024	
	Date Of Analysis Started: 12.06.2024	
	Date Of Analysis Completed: 18.06.2024	
	Sample Quantity for Testing: 1 No.	
Sample Condition When Received: Intact		

EXECUTIVE SUMMARY:

AO Smith India Pvt Ltd submitted one Kent RO based water purifier for % Rejection, % Recovery, Heavy metals, Inorganics, Pesticides and Microbial Reduction test.

For conducting these tests, the TDS control mechanism blending valve was fully kept opened to pass maximum water flow in the bypass line except for the % recovery where the blending valve was kept closed and the product water was collected from the tank as mentioned in the standard.

The system effectively reduced Arsenic, Copper, Lead, Mercury and failed to reduce Cadmium, Chromium, Nitrate and Fluoride.

The tested microbiological parameter was conducted with 100L of spiked water . Five days of screening tests were conducted, and the samples were collected after passing 20L of permeate water analyzing microbiological tests in accordance with IS 16240 standards.

CONCLUSION:


The tested RO based water purifier **does not meet** the specific requirements as per IS 16240:2023 for Chemical parameters. Pesticides and Microbiological Parameters **meets** the requirements as per IS 16240:2023

AIM OF THE EXPERIMENT:

The primary aim of this evaluation was to assess the performance of RO based water purifier in reducing the concentrations of specific heavy metals, inorganic compounds, pesticides and microbial contaminants in accordance with the IS 16240;2023 standard.

RECOGNISED BY IAPMO R&T - USA

- The results pertain only to the tested samples and applicable parameters.
- This report is not to be reproduced either wholly or in parts and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission.

 IAPMO INDIA PRIVATE LIMITED	Document No.	IAPMO/ILAB/TR/02
	Test Report No.	IAPMO/ILAB/ 20222 /24-25
	Date	26.06.2024
	Revision No.	01
	Revision Date	01/06/2024
	Reference	IS 16240:2023
TEST REPORT		

FEED WATER COMPOSITION FOR METALS, INORGANICS, % SALT REJECTION & % RECOVERY:

Test parameters	Maintained concentration during the test
pH	7.5 ± 0.5
TDS (ppm)	1500 ± 10%
Turbidity (NTU)	<1
Pressure (psi)	15
Temperature (°C)	25° C

FEED WATER COMPOSITION FOR PESTICIDES:


Test parameters	Maintained concentration during the test
pH	7.5 ± 0.5
TDS (ppm)	200-300
Turbidity (NTU)	<1
Pressure (psi)	15
Temperature (°C)	25° C

TEST COMPOSITION FOR METALS AND INORGANIC CONTAMINANTS IN INFLUENT CHALLENGE WATER

Contaminant	Influent Challenge Level (mg/L)	Maximum Allowable Product Water Level (mg/L)
Arsenic	0.10 ± 10 %	0.01
Cadmium	0.03 ± 10 %	0.003
Chromium	0.30 ± 10 %	0.05
Copper	3.00 ± 10 %	1.00
Lead	0.15 ± 10 %	0.01
Mercury	0.006 ± 10 %	0.001
Nitrate	150.00 ± 10 %	45.00
Fluoride	8.00 ± 10 %	1.00

RECOGNISED BY IAPMO R&T - USA

- The results pertain only to the tested samples and applicable parameters.
- This report is not to be reproduced either wholly or in parts and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission.

 IAPMO INDIA PRIVATE LIMITED	Document No.	IAPMO/ILAB/TR/02
	Test Report No.	IAPMO/ILAB/ 20222 /24-25
	Date	26.06.2024
	Revision No.	01
	Revision Date	01/06/2024
	Reference	IS 16240:2023
TEST REPORT		

TEST DATA: 5 DAYS METALS & INORGANIC CONTAMINANTS EVALUATION

Contaminant	Influent Challenge Range (mg/L)	Result Day 1 (mg/L)	Result Day 2 (mg/L)	Result Day 3 (mg/L)	Result Day 4 (mg/L)	Result Day 5 (mg/L)	Remarks
Arsenic	0.094 - 0.100	<0.005	<0.005	<0.005	<0.005	<0.005	Pass
Cadmium	0.029 - 0.0297	0.0147	0.019	0.020	0.021	0.020	Fail
Chromium	0.297 - 0.304	0.140	0.158	0.198	0.194	0.191	Fail
Copper	2.815 - 3.037	0.065	0.148	0.112	0.215	0.215	Pass
Lead	0.141 - 0.150	<0.005	<0.005	<0.005	<0.005	<0.005	Pass
Mercury	0.0053-0.0059	<0.001	<0.001	<0.001	<0.001	<0.001	Pass
Nitrate	140.0 - 145.83	47.65	47.21	47.58	48.68	48.50	Fail
Fluoride	7.190 - 7.890	1.298	1.392	1.330	1.365	1.308	Fail

DRAFT REPORT

TEST DATA:5 DAYS PESTICIDES REDUCTION TEST

RECOGNISED BY IAPMO R&T - USA

- The results pertain only to the tested samples and applicable parameters.
- This report is not to be reproduced either wholly or in parts and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission.



Document No.	IAPMO/ILAB/TR/02
Test Report No.	IAPMO/ILAB/ 20222 /24-25
Date	26.06.2024
Revision No.	01
Revision Date	01/06/2024
Reference	IS 16240:2023

TEST REPORT

Sl. No.	Test Parameters	Input water Pesticides (µg/L)	Output Day1 Pesticides (µg/L)	Output Day2 Pesticides (µg/L)	Output Day3 Pesticides (µg/L)	Output Day4 Pesticides (µg/L)	Output Day5 Pesticides (µg/L)
1	Alachlor	0.299	<0.01	<0.01	<0.01	<0.01	<0.01
2	Aldrin	0.297	<0.01	<0.01	<0.01	<0.01	<0.01
3	HCH (alpha-isomer)	0.298	<0.01	<0.01	<0.01	<0.01	<0.01
4	HCH (beta-isomer)	0.297	<0.01	<0.01	<0.01	<0.01	<0.01
5	HCH (gamma-isomer)	0.312	<0.01	<0.01	<0.01	<0.01	<0.01
6	HCH (delta-isomer)	0.317	<0.01	<0.01	<0.01	<0.01	<0.01
7	Butachlor	0.290	<0.01	<0.01	<0.01	<0.01	<0.01
8	Chlorpyrifos	0.295	<0.01	<0.01	<0.01	<0.01	<0.01
9	DDD, o,p"	0.294	<0.01	<0.01	<0.01	<0.01	<0.01
10	DDD, p,p"	0.314	<0.01	<0.01	<0.01	<0.01	<0.01
11	DDE, o,p"	0.311	<0.01	<0.01	<0.01	<0.01	<0.01
12	DDE, p,p"	0.294	<0.01	<0.01	<0.01	<0.01	<0.01
13	DDT, o,p"	0.308	<0.01	<0.01	<0.01	<0.01	<0.01
14	DDT, p,p"	0.291	<0.01	<0.01	<0.01	<0.01	<0.01
15	Endosulfan (alpha-isomer)	0.294	<0.01	<0.01	<0.01	<0.01	<0.01
16	Endosulfan (beta- isomer)	0.307	<0.01	<0.01	<0.01	<0.01	<0.01
17	Endosulfan sulfate	0.294	<0.01	<0.01	<0.01	<0.01	<0.01
18	Ethion	0.289	<0.01	<0.01	<0.01	<0.01	<0.01
19	Malathion	0.297	<0.01	<0.01	<0.01	<0.01	<0.01
20	Monocrotophos	0.307	<0.01	<0.01	<0.01	<0.01	<0.01
21	Parathion Methyl	0.287	<0.01	<0.01	<0.01	<0.01	<0.01
22	Atrazine	0.293	<0.01	<0.01	<0.01	<0.01	<0.01
23	Dieldrin	0.295	<0.01	<0.01	<0.01	<0.01	<0.01
24	Phorate	0.289	<0.01	<0.01	<0.01	<0.01	<0.01
25	2,4- Dichlorophenoxyacetic acid	0.304	<0.01	<0.01	<0.01	<0.01	<0.01
26	Isoproturon	0.278	<0.01	<0.01	<0.01	<0.01	<0.01

Note: BLQ[LOQ-0.01]

BLQ-Below Limit of Quantification


LOQ-Limit of Quantification

Maximum Allowable Product Water Level 0.1 µg/L (of each pesticide) and 0.5 (total pesticides)

TEST COMPOSITION FOR MICROBIAL CONTAMINANTS IN INFLUENT CHALLENGE WATER

RECOGNISED BY IAPMO R&T - USA

- The results pertain only to the tested samples and applicable parameters.
- This report is not to be reproduced either wholly or in parts and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission.

 IAPMO INDIA PRIVATE LIMITED	Document No.	IAPMO/ILAB/TR/02
	Test Report No.	IAPMO/ILAB/ 20222 /24-25
	Date	26.06.2024
	Revision No.	01
	Revision Date	01/06/2024
	Reference	IS 16240:2023
TEST REPORT		

Contaminant	Influent Challenge Level	Result
<i>E.coli</i>	1.0 × 10 ⁷ cfu/100 ml to 1.0 × 10 ⁸ cfu/100 ml	99.9999% reduction (LRV 6)
MS2 Coliphage	1.0 × 10 ⁴ pfu/ ml to 1.0 × 10 ⁵ pfu/ ml	99.99% reduction (LRV 4)

cfu: colony forming units.
 pfu: plaque forming units.
 NVC: No Viable counts
 NPFU: No plaque forming units

TEST DATA: 5 DAYS MICROBIAL CONTAMINANTS EVALUATION

Days	<i>E.coli</i>				MS2 Phage			
	Influent water concentration cfu/100ml	Effluent water concentration cfu/100ml	% reduction	LRV	Influent water concentration pfu/ml	Effluent water concentration pfu/ml	% reduction	LRV
Day 1	5x10 ⁷	NVC	99.99999	7.69	4x10 ⁴	NPFU	99.99	4.6
Day 2	4x10 ⁷	NVC	99.99999	7.60	4x10 ⁴	NPFU	99.99	4.6
Day 3	5x10 ⁷	NVC	99.99999	7.69	4x10 ⁴	NPFU	99.99	4.6
Day 4	5x10 ⁷	NVC	99.99999	7.69	4x10 ⁴	NPFU	99.99	4.6
Day 5	5x10 ⁷	NVC	99.99999	7.69	4x10 ⁴	NPFU	99.99	4.6

PICTURE OF THE PRODUCT

RECOGNISED BY IAPMO R&T - USA

- The results pertain only to the tested samples and applicable parameters.
- This report is not to be reproduced either wholly or in parts and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission.

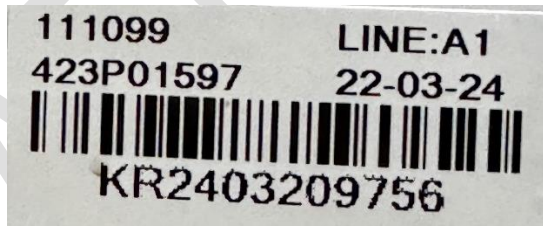


Document No.	IAPMO/ILAB/TR/02
Test Report No.	IAPMO/ILAB/ 20222 /24-25
Date	26.06.2024
Revision No.	01
Revision Date	01/06/2024
Reference	IS 16240:2023

TEST REPORT



SERIAL NO. AND BAR CODE



Reviewed & Issued By

Dr. Vishwanath N H
Technical Manager

---END OF THE TEST REPORT ---

RECOGNISED BY IAPMO R&T - USA

1. The results pertain only to the tested samples and applicable parameters.
2. This report is not to be reproduced either wholly or in parts and cannot be used as evidence in the court of law and should not be used in any advertising media without prior written permission.