Test Report

Report No.....:	SHES241202460871	**Issued Date ..... :**	2025-01-14
Applicant's Name.....:	Kingclean Electric Co., Ltd.		
	1 Xiangyang Road, Suzhou New District, Suzhou, 215009, Jiangsu, China		
Manufacturer .....:	Same as applicant		
Factory .....:	Same as applicant		
Laboratory .....:	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.		
	588 West Jindu Road, Xinqiao, Songjiang, Shanghai 201612, China		
Product Description .....:	Reverse Osmosis Water Purifier		
Supplier Model No .....:	R9, R9 Pro, R9 Max		
Date of Sample Received .:	2024-12-13	**No. of Samples :**	1
Date of Test .....:	2024-12-13 to 2025-01-13		
Test Standard .....:	According to client's requirement		
Test Clause.....:	-		
Conclusion .....:	See below pages		
Remark / Note .....:	1. Test data in this report is only responsible for submitted test samples.		
	2. The report shall not be reproduced except in full, without approval of the laboratory.		
	3. The test report shall only be used for client's scientific research, teaching, internal quality control, product research and development, etc., and just for client's internal reference.		
	4. The test report takes R9 as the main test model. R9, R9 Pro and R9 Max have identical appearance colors, materials and production process parameters, except for the model (numbering) rules.		
	5. The tests were performed in SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch.		

Prepared by: Michael Tang — Michael Tang

Approved by: David Sun

Technical Data:

Trademark.....:	N/A
Type of Appliance .....:	Reverse Osmosis Water Purifier
Type / Model .....:	R9
Rated Voltage (V) .....:	120V
Rated Current (A).....:	12A
Rated Frequency (Hz) .....:	60Hz
Rated Power (W) .....:	1500W

Copy of Marking Plate:

The test report takes R9 as the main test model. R9, R9 Pro and R9 Max have identical appearance colors, materials and production process parameters, except for the model (numbering) rules.

Table of Results:

Reverse Osmosis Water Purifier (R9) was tested as requested and the following results were obtained:

Test Requested:

Selected test(s) as requested by applicant:

Challenge Testing: Removal rates of Colority, Turbidity, Total dissolved solids (TDS), Arsenic (pentavalent) (As^{5+}), Arsenic (trivalent) (As^{3+}), Mercury (Hg), Cadmium (Cd), Lead (Pb), Copper (Cu), Barium (Ba), Selenium (Se), Chromium (Cr), Free chlorine, Nitrate (as N), Fluoride, Chlorate (ClO_3^-), Perfluorooctane Sulfonate, Perfluorooctanoic Acid, Total coliforms, *Escherichia coli* bacteriophage MS2, Monochloroacetic Acid (MCAA), Dichloroacetic Acid (DCAA), Trichloroacetic Acid (TCAA), Monobromoacetic Acid (MBAA) and Dibromoacetic Acid (DBAA) at the start point of operating life.

Test Environment Condition:

NO	Item(s)	Unit(s)	Requirement(s)
1	TDS	mg/L	200-500
2	Turbidity	NTU	<1
3	pH	/	7.5±0.5
4	Temperature	°C	25±1

Test Strain(s):

Escherichia coli ATCC 25922

Escherichia coli bacteriophage MS2 ATCC 15597-B1 - Coliphage

Escherichia coli ATCC 700891 - Host bacteria

Test Method:

Challenge Testing (Turbidity, Total dissolved solids (TDS), Arsenic (pentavalent) (As^{5+}), Arsenic (trivalent) (As^{3+}), Mercury (Hg), Cadmium (Cd), Lead (Pb), Copper (Cu), Barium (Ba), Selenium (Se), Chromium (Cr), Nitrate (as N), Fluoride, Perfluorooctane Sulfonate, Perfluorooctanoic Acid): Refer to NSF/ANSI 58-2023 Reverse Osmosis Drinking Water Treatment Systems.

Challenge Testing (Free chlorine): Refer to NSF/ANSI 42-2023: Drinking Water Treatment Units – Aesthetic Effects.

Challenge Testing (Colority, Chlorate (ClO_3^-), Total coliforms, *Escherichia coli* bacteriophage MS2, Monochloroacetic Acid (MCAA), Dichloroacetic Acid (DCAA), Trichloroacetic Acid (TCAA), Monobromoacetic Acid (MBAA), Dibromoacetic Acid (DBAA)): Refer to Ministry of Health of the People's Republic of China Standards for Drinking Water Quality Sanitary Standard for Hygienic Safety and Function Evaluation on Treatment Devices of Drinking Water – Reverse Osmosis Device.

Colority, Turbidity, Total dissolved solids (TDS): GB/T 5750.4-2023 Standard examination methods for drinking water – Part 4: Organoleptic and physical indices.

Total coliforms: GB/T 5750.12-2023 Standard examination methods for drinking water – Part 12: Microbiological indices.

Arsenic (pentavalent) (As^{5+}), Arsenic (trivalent) (As^{3+}), Mercury (Hg), Cadmium (Cd), Lead (Pb), Chromium (Cr), Copper (Cu), Barium (Ba), Selenium (Se): USEPA 200.8 Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma – Mass Spectrometry.

Free chlorine: GB/T 5750.11-2023 Standard examination methods for drinking water – Part 11: Disinfectants indices.

Nitrate (as N), Fluoride, Chlorate (ClO_3^-): USEPA 300.0 Determination of Inorganic Anions by Ion Chromatography.

Perfluorooctane Sulfonate (PFOS), Perfluorooctanoic acid (PFOA): Refer to USEPA 537.1-2020 Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography / Tandem Mass Spectrometry (LC/MS/MS).

Escherichia coli bacteriophage MS2: Refer to EPA method 1602 Male-specific (F^+) and Somatic Coliphage in Water by Single Agar Layer (SAL) Procedure.

Monochloroacetic Acid (MCAA), Dichloroacetic Acid (DCAA), Trichloroacetic Acid (TCAA), Monobromoacetic Acid (MBAA), Dibromoacetic Acid (DBAA): EPA method 552.2 Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-Liquid Extraction, Derivatization and Gas Chromatography with Electron Capture Detection.

Test Result(s):

Table 1

No	Test item(s)	Unit(s)	Test method(s)	Test result(s)		*Removal rate(s)%	Requirement(s)
				Influent spiked water	Effluent filtrated water		Maximum effluent concentration according to NSF/ANSI 58 (mg/L)
1	Turbidity	NTU	GB/T 5750.4-2023	10.2	0.18	98.24	0.5
2	Total dissolved solids (TDS)	mg/L	GB/T 5750.4-2023	796	13	98.37	187
3	Nitrate (as N)	mg/L	EPA 300.0	32.256	0.025	99.92	10.0
4	Fluoride	mg/L	EPA 300.0	8.958	0.042	99.53	1.5
5	Arsenic (pentavalent) (As^{5+})	mg/L	EPA 200.8	0.3777	<0.0002	>99.94	0.010
6	Arsenic (trivalent) (As^{3+})	mg/L	EPA 200.8	0.3568	0.0003	99.92	0.010
7	Cadmium (Cd)	mg/L	EPA 200.8	0.0772	<0.0002	>99.74	0.005
8	Chromium (Cr)	mg/L	EPA 200.8	0.346	<0.001	>99.71	0.1
9	Lead (Pb)	mg/L	EPA 200.8	0.1787	<0.0002	>99.88	0.005
10	Mercury (Hg)	mg/L	EPA 200.8	0.0142	<0.0002	>98.59	0.002
11	Copper (Cu)	mg/L	EPA 200.8	3.316	<0.005	>99.84	1.3
12	Barium (Ba)	mg/L	EPA 200.8	10.515	<0.005	>99.95	2.0
13	Selenium (Se)	mg/L	EPA 200.8	0.120	<0.001	>99.16	0.05
14	Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic acid (PFOA)	mg/L	EPA 537.1	0.002567	<0.000008	>99.68	0.00002

Table 2

No	Test item(s)	Unit(s)	Test method(s)	Test result(s)		*Removal rate(s)%	Requirement(s)
				Influent spiked water	Effluent filtrated water		Percent reduction requirement according to NSF/ANSI 42 (%)
15	Free chlorine	mg/L	GB/T 5750.11-2023	1.89	<0.01	>99.47	≥50.00

Table 3

No	Test item(s)	Unit(s)	Test method(s)	Test result(s)		*Removal rate(s)%	Requirement(s)
				Influent spiked water	Effluent filtrated water		Percent reduction requirement (%) according to #Sanitary Standards for Drinking Water (2001) Appendix 4C
16	Chlorate (ClO_3^-)	mg/L	EPA 300.0	3.585	<0.005	>99.86	≥80
17	Colority	-	GB/T 5750.4-2023	75	<5	>93.33	≥80
18	Total coliforms	CFU/100mL	GB/T 5750.12-2023	1.2×10^6	<1	>99.99	/
19	*Escherichia coli* bacteriophage MS2	PFU/mL	EPA Method 1602	6.0×10^5	<1	>99.99	/
20	Monochloroacetic Acid (MCAA)	mg/L	EPA 552.2	0.4981	<0.010	>97.99	/
21	Dichloroacetic Acid (DCAA)	mg/L	EPA 552.2	0.4856	<0.010	>97.94	/
22	Trichloroacetic Acid (TCAA)	mg/L	EPA 552.2	0.4784	<0.010	>97.90	/
23	Monobromoacetic Acid (MBAA)	mg/L	EPA 552.2	0.4932	<0.010	>97.97	/
24	Dibromoacetic Acid (DBAA)	mg/L	EPA 552.2	0.4752	<0.010	>97.89	/

Remark:

1. *Removal rate (%) = (test result of Influent spiked water – test result of Effluent filtrated water) / test result of Influent spiked water × 100%.
2. #Sanitary Standards for Drinking Water (2001) Appendix 4C: Sanitary Standard for Hygienic Safety and Function Evaluation on Treatment Devices of Drinking Water – Reverse Osmosis Device.

Photo Documents：

Reverse Osmosis Water Purifier (R9)


***** End of Report *****