

TEST REPORT: 7191112342-CHM15-RC

Date: 30 APR 2015

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Client's Ref:

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SUBJECT

Antimicrobial Activity Evaluation

CLIENT

ProMedUSA Pte Ltd
116 Middle Road
#09-01E, ICB Enterprise House
Singapore 188972

SAMPLE SUBMISSION DATE/ TEST DATE

20 Mar 2015 / 20 Mar 2015

DESCRIPTION OF SAMPLE

One liquid sample obtained from "ProMedUSA SG-CSS Ozonated Water Generator" was submitted.

METHOD OF TEST

BS EN 1040 : 2005

"Chemical disinfectants and antiseptics – Quantitative suspension test for the evaluation of basic bactericidal activity of chemical disinfectants and antiseptics – Test method and requirements (Phase 1)".

The test microorganisms used were :

Staphylococcus aureus (ATCC 6538)
Listeria monocytogenes (ATCC 15313)
Salmonella typhimurium (ATCC 14028)
Escherichia coli (ATCC 8739)
Methicilin Resistant *Staphylococcus aureus* (MRSA) (NCTC 12493)

Ozone Concentration : 5 ppm
Contact time: 1 mins, 2 mins and 5 mins



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TEST REPORT: 7191112342-CHM15-RC

30 APR 2015



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RESULTS

Product Name : Liquid sample from "ProMedUSA SG-CSS Ozonated Water Generator"

Test Microorganism : *Staphylococcus aureus* (ATCC 6538)

Concentration / Contact Time	Initial Count of Test Microorganism per ml of Test Mixture		Count of Surviving Test Microorganism per ml		Log Reduction	Percentage Kill of Test Microorganism
	CFU per ml	Log ₁₀	CFU per ml	Log ₁₀		
5 ppm						
1 Minutes	33 000 000	7.52	150	2.18	5.34	99.9995
2 Minutes	33 000 000	7.52	100	2.00	5.52	99.9997
5 Minutes	33 000 000	7.52	Less than 10	Less than 1.00	More than 6.52	More than 99.99997

Test Microorganism : *Listeria monocytogenes* (ATCC 15313)

Concentration / Contact Time	Initial Count of Test Microorganism per ml of Test Mixture		Count of Surviving Test Microorganism per ml		Log Reduction	Percentage Kill of Test Microorganism
	CFU per ml	Log ₁₀	CFU per ml	Log ₁₀		
5 ppm						
1 Minutes	180 000 000	8.26	2 300	3.36	4.89	99.999
2 Minutes	180 000 000	8.26	1 900	3.28	4.98	99.999
5 Minutes	180 000 000	8.26	1 500	3.18	5.08	99.9992

Test Microorganism : Methicillin Resistant *Staphylococcus aureus* (NCTC 12493)

Concentration / Contact Time	Initial Count of Test Microorganism per ml of Test Mixture		Count of Surviving Test Microorganism per ml		Log Reduction	Percentage Kill of Test Microorganism
	CFU per ml	Log ₁₀	CFU per ml	Log ₁₀		
5 ppm						
1 Minutes	150 000 000	8.18	2 000	3.30	4.88	99.999
2 Minutes	150 000 000	8.18	1 900	3.28	4.90	99.999
5 Minutes	150 000 000	8.18	1 600	3.20	4.97	99.999

TEST REPORT: 7191112342-CHM15-RC
30 APR 2015



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RESULTS

Product Name : Liquid sample from "Water Ozone Generator"

Test Microorganism : *Escherichia coli* (ATCC 8739)

Concentration / Contact Time	Initial Count of Test Microorganism per ml of Test Mixture		Count of Surviving Test Microorganism per ml		Log Reduction	Percentage Kill of Test Microorganism
	CFU per ml	Log ₁₀	CFU per ml	Log ₁₀		
5 ppm						
1 Minutes	160 000 000	8.20	1 800	3.26	4.95	99.999
2 Minutes	160 000 000	8.20	2 500	3.40	4.81	99.998
5 Minutes	160 000 000	8.20	2 300	3.36	4.84	99.999

Test Microorganism : *Salmonella typhimurium* (ATCC 14028)

Concentration / Contact Time	Initial Count of Test Microorganism per ml of Test Mixture		Count of Surviving Test Microorganism per ml		Log Reduction	Percentage Kill of Test Microorganism
	CFU per ml	Log ₁₀	CFU per ml	Log ₁₀		
5 ppm						
1 Minutes	130 000 000	8.11	240	2.38	5.73	99.9998
2 Minutes	130 000 000	8.11	260	2.41	5.70	99.9998
5 Minutes	130 000 000	8.11	30	1.48	6.64	99.99998

TEST REPORT: 7191112342-CHM15-RC

30 APR 2015



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Remarks :

The product shall be deemed to have passed the test if it demonstrates a **5 Log reduction or more** (at least >99.999% kill) in viability within 5 minutes or less under the conditions defined by this test when the test organisms are *Staphylococcus aureus* and *Pseudomonas aeruginosa*.

This test method evaluates the basic bactericidal activity of chemical disinfectants with no specific application. It does not evaluate the activity of a product for an intended use. More specific test methods are used for further assessment of the efficacy of chemical disinfectants and antiseptics for a defined purpose.

The liquid sample from ProMedUSA SG-CSS Ozonated Water Generator was tested and found to comply with the requirements of the above standard.

The above test results relate to the sample as received.

Handwritten signature of MS AW HWEE YING in black ink.

MS AW HWEE YING
HIGHER TECHNICAL EXECUTIVE

Handwritten signature of MR RANDY CHIN KOK FEI in black ink.

MR RANDY CHIN KOK FEI
ASSISTANT PRODUCT MANAGER
MICROBIOLOGY
CHEMICAL & MATERIALS



TEST REPORT: 7191112342-CHM15-RC

30 APR 2015



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July 2011

