

LOXYDE SUMMARY OF OFFICIAL TEST RESULTS

EU NORM TESTS 5 MINUTES (bacteria & fungus)					
Name of organism tested	Product concentration	Number of M.O.	Count after 5 minutes contact time	Log reduction	Log required to pass test
<i>E.coli</i> ATCC 8739	1% in Hard Water	5.0 X 10 ⁷	<10; <10	6	4
<i>E.coli</i> ATCC 8739	1% in Buffered Ferrous Hard Water	5.0 X 10 ⁷	<10; <10	6	4
<i>S. aureus</i> ATCC 6838P	1% in Hard Water	4.8 X 10 ⁷	<10; <10	6	4
<i>S. aureus</i> ATCC 6838P	1% in Buffered Ferrous Hard Water	4.8 X 10 ⁷	<10; <10	6	4
<i>Aspergillus brasiliensis</i> , ATCC 16404	1% in Hard Water	1.1 X 10 ⁸	1900; 1500	5	4
<i>Aspergillus brasiliensis</i> , ATCC 16404	1% in Buffered Ferrous Hard Water	1.1 X 10 ⁸	4700; 5500	5	4
<i>Legionella pneumophila</i>	1% in Hard Water	4.0 X 10 ⁸	<10; <10	7	4
<i>Legionella pneumophila</i>	1% in Buffered Ferrous Hard Water	4.0 X 10 ⁸	40; <10	6	4
<i>Pseudomonas aeruginosa</i>	1% in Hard Water	3.0 X 10 ⁷	<10; <10	6	4
<i>Pseudomonas aeruginosa</i>	1% in Buffered Ferrous Hard Water	3.0 X 10 ⁷	10; 20	6	4
<i>S. aureus</i> , ATCC 6838P	2% in Clean Conditions	4.8 X 10 ⁷ Log 7.7	< 10	> 5	4
<i>S. aureus</i> , ATCC 6838P	2% in Dirty Conditions	4.8 X 10 ⁷ Log 7.7	< 10	> 5	4
<i>E coli</i> , ATCC 8739	2% in Clean Conditions	5.0 X 10 ⁷ Log 7.7	< 10	> 5	4
<i>E coli</i> , ATCC 8739	2% in Dirty Conditions	5.0 X 10 ⁷ Log 7.7	< 10	> 5	4
<i>E. hirae</i> , ATCC 10541	2% in Clean Conditions	5.3 X 10 ⁷ Log 7.7	< 10	> 5	4
<i>E. hirae</i> , ATCC 10541	2% in Dirty Conditions	5.3 X 10 ⁷ Log 7.7	< 10	> 5	4
<i>P aeruginosa</i> , ATCC 9027	2% in Clean Conditions	3.0 X 10 ⁷ Log 7.5	< 10	> 5	4
<i>P aeruginosa</i> , ATCC 9027	2% in Dirty Conditions	3.0 X 10 ⁷ Log 7.5	< 10	> 5	4
<i>Aspergillus brasiliensis</i> , ATCC 16404	2% in Clean Conditions	4.9 X 10 ⁷ Log 7.7	30	6.2	4
<i>Aspergillus brasiliensis</i> , ATCC 16404	2% in Dirty Conditions	4.9 X 10 ⁷ Log 7.7	100	5.7	4
<i>Candida albicans</i> ATCC 12031	2% in Clean Conditions	2.0 x 10 ⁶ Log 6.3	20	5.0	4
<i>Candida albicans</i> ATCC 12031	2% in Dirty Conditions	2.0 x 10 ⁶ Log 6.3	100	4.3	4

EU NORM TESTS 10 MINUTES (Sporicidal):					
Name of organism tested	Product concentration	Number of M.O.	Count after 10 minutes contact time	Log reduction	Log required to pass test
<i>Bacillus subtilis</i> , ATCC 6633 Test Suspension (cfu/ml)	20% in Clean Conditions	4.2 X 10 ⁷ Log 7.6	0	> 5.0	4
<i>Bacillus subtilis</i> , ATCC 6633 Test Suspension (cfu/ml)	20% in Dirty Conditions	4.2 X 10 ⁷ Log 7.6	0	> 5.0	4

Note: Normal hydrogen peroxide does not kill spores. When we decided to do this test we wanted to see if Loxyde had any effect whatsoever on spores which is why a 20% solution was chosen. The end result clearly shows that 20% was a serious overkill with 100% of the test organisms destroyed. In practical field tests, excellent control of spores was achieved using dosages as low as 0.1%.

VIRUS - FOGGING TEST – EUROPEAN NORM: EN 17272 : 2020					
Name of organism tested	Enveloped / non-enveloped	Product concentration	Test duration: (Fogging and waiting time)	Log reduction	Log required to pass test
Murine hepatitis virus (MHV1) ATCC/VR - 261	Enveloped	Loxyde 5%	45 minutes	4.00	4
Porcine parvovirus (PPV) ATCC/VR - 742	non-enveloped	Loxyde 5%	45 minutes	4.00	4
Herpes Simplex Type 1 ATCC/VR - 733	Enveloped	Loxyde 5%	45 minutes	4.73	4

COVID TEST

Virus Strain	Murine hepatitis virus (MHV1) ATCC/VR-261 – COVID-19 SUBSTITUTE
Test Concentration	3.5% Loxyde solution
Contact Time	5 minutes
Test Condition	Dirty 5% FBS (Fetal Bovine Serum)

RESULTS:
Considering the cytotoxicity and neutralisation test results, the sample has shown virucidal efficacy against MHV1 by achieving greater than **6.53 log reduction** in virus concentration after 5 minutes exposure period at room temperature.

AUSTRALIA TGA Disinfectant Test, Option C - Household/commercial grade disinfectant

Method	TMD 122
Test Concentration	3.5%
Contact Time	8 Minutes

Test Date	Organism	Inoculum CFU/mL	1 st Challenge
05/05/2021	S. aureus	9.90 x 10 ⁸	PASS
28/04/2021	E. coli	1.12 x 10 ⁹	PASS
06/05/2021	S. aureus	8.90 x 10 ⁸	PASS
29/04/2021	E. coli	8.10 x 10 ⁸	PASS
07/05/2021	S. aureus	1.09 x 10 ⁹	PASS
0/04/2021	E. coli	9.10 x 10 ⁸	PASS

FINAL RESULTS:

The sample has passed the AUSTRALIAN TGA Disinfectant Test, Option C when tested under the conditions described above.

BUREAU OF COSMETICS AND HAZARDOUS SUBSTANCES, DEPARTMENT OF MEDICAL SCIENCES, MINISTRY OF HEALTH, THAILAND.

Name of organism tested	Minimum requirement	Test time	Dosage	Result	Conclusion
Salmonella enterica ATCC 10708	59/60 test samples	10 minutes	2% solution	60/60	Loxyde (tested as Oxibon) meets the requirement for a disinfectant under Thai regulations
Staphylococcus aureus ATCC 6538	59/60 test samples	10 minutes	2% solution	60/60	

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	Percentage inhibition (%)				
	Concentrations				
	Control 0%	50 ppm 0.005%	500 ppm 0.05%	5000 ppm 0.5%	10000 ppm 1%
Name of organism tested					
Phytophthora capsici	0	5.7	53.4	100	100
Phytophthora nicotianae	0	33.4	61.4	100	100
Phytophthora cinnamomi	0	0	65.6	100	100