



M & L LABS

Certificate/Report

RESULTS REPORTED RELATED ONLY TO ITEMS TESTED

Ref. No : ML-2023-00323 R

Issued at : Johannesburg

Date : 17/02/2023

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RE-TEST

COMPANY NAME : HEALTH AND HYGIENE (PTY) LTD
ADDRESS : CNR LEADER & HOEF SMID ROAD, STORMILL EXT 10,
ROODEPOORT
SUBJECT : QUANTITATIVE SUSPENSION TEST FOR THE EVALUATION OF
BACTERICIDAL ACTIVITY OF CHEMICAL DISINFECTANTS
AND ANTISEPTICS USED IN FOOD, INDUSTRIAL, DOMESTIC AND
INSTITUTIONAL AREAS SANS 51276:2011 (EN1276): DILUTION-
NEUTRALIZATION METHOD
MARKED : F10 SUPER CONCENTRATE DISINFECTANT, MAN: 01/2023,
EXP: 01/2025
BATCH : G001
ACTIVE INGREDIENT : QUATERNARY AMMONIUM COMPOUNDS
DILUENT RECOMMENDED : POTABLE WATER
APPEARANCE : COLOURLESS LIQUID
DILUENT USED : STANDARDIZED HARD WATER
CONCENTRATIONS TESTED : 1:500, 1:1000 AND 1:1500
APPEARANCE OF DILUTIONS : COLOURLESS, HOMOGENOUS, NO PRECIPITATE OBSERVED
NEUTRALIZING AGENT : NEUTRALIZING FLUID
SOILING CONDITIONS : PRODUCT NOT TESTED ON SOILED CONDITIONS
STORAGE CONDITIONS : STORE IN A COOL DRY PLACE, AWAY FROM DIRECT SUNLIGHT
INSTRUCTED BY : LIANA
LAB NO. : 1098764
RECEIVED ON : 17/01/2023
DATE ANALYSED : 14/02/2023

EXPERIMENTAL CONDITIONS:

Obligatory conditions
test organisms:

Enterococcus hirae ATCC 10541

Escherichia coli ATCC 10536

Pseudomonas aeruginosa ATCC 15442

Staphylococcus aureus ATCC 6538

Test temperature:

20°C

Contact time:

5 minutes

Interfering substance:

0.3g/l Bovine serum albumin (Clean conditions)

Test incubation temperature:

37°C

A Pa Pont

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PASS REQUIREMENTS:

The product shall demonstrate at least a 5 decimal log reduction when diluted with hard water/or undiluted and tested under obligatory test conditions. At least one of the test concentrations will demonstrate a log reduction of less than 5 log.

TEST VALIDITY

For each test organism:

- N is between 1.5×10^8 and 5.0×10^8 ($8.17 \leq \log N \leq 8.70$)
- N_0 is between 1.5×10^7 and 5.0×10^7 ($7.17 \leq \log N_0 \leq 7.70$)
- N_{V0} is between 30 and 160 (3.0×10^1 and 1.6×10^2)
- A, B, C are equal to or greater than $0.5 \times N_{V0}$
- Control of weighted mean counts: quotient is not lower than 5 and not higher than 15

RESULTS:

Escherichia coli ATCC 10536

Table 1: N and N_0 values

Dilution	Vc1	Vc2	Average N(wm)	Log N	N ₀ (N/10)	Log N ₀
10 ⁻⁶	184	170	2.2x10 ⁸	8.34	2.2x10 ⁷	7.34
10 ⁻⁷	24	28				
Is Log <i>N</i> between 8.17 and 8.70: Yes						
Is Log <i>N</i> ₀ between 7.17 and 7.70: Yes						
Control of weighted mean counts: 6.81						

Table 2: Test Log Reduction Values

Product Concentration	Vc1	Vc2	Na (Ave Vc1&Vc2x10)	Log Na	Log Reduction (No: 7.34)
1:500	<14	<14	<140	<2.15	>5.189
1:1000	<14	<14	<140	<2.15	>5.189
1:1500	<14	<14	<140	<2.15	>5.189

Pseudomonas aeruginosa ATCC 15442

Table 3: N and N_0 values

Dilution	Vc1	Vc2	Average N(wm)	Log N	N ₀ (N/10)	Log N ₀
10 ⁻⁶	280	239	3.0x10 ⁸	8.48	3.0x10 ⁷	7.48
10 ⁻⁷	36	34				
Is Log N between 8.17 and 8.70: Yes						
Is Log N ₀ between 7.17 and 7.70: Yes						
Control of weighted mean counts: 7.41						

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Table 4: Test Log Reduction Values

Product Concentration	Vc1	Vc2	Na (Ave Vc1&Vc2x10)	Log Na	Log Reduction (No:7.48)
1:500	<14	<14	<140	<2.15	>5.34
1:1000	<14	<14	<140	<2.15	>5.34
1:1500	<14	<14	<140	<2.15	>5.34

Staphylococcus aureus ATCC 6538

Table 5: N and N₀ values

Dilution	Vc1	Vc2	Average N(wm)	Log N	N ₀ (N/10)	Log N ₀
10 ⁻⁶	213	220	2.7x10 ⁸	8.43	2.7x10 ⁷	7.43
10 ⁻⁷	30	35				
Is Log <i>N</i> between 8.17 and 8.70: Yes						
Is Log N ₀ between 7.17 and 7.70: Yes						
Control of weighted mean counts: 6.66						

Table 6: Test Log Reduction Values

Product Concentration	Vc1	Vc2	Na (Ave Vc1&Vc2x10)	Log Na	Log Reduction (No:7.48)
1:500	<14	<14	<140	<2.15	>5.283
1:1000	<14	<14	<140	<2.15	>5.283
1:1500	<14	<14	<140	<2.15	>5.283

Enterococcus hirae ATCC 10541

Table 7: N and N₀ values

Dilution	Vc1	Vc2	Average N(wm)	Log N	N ₀ (N/10)	Log N ₀
10 ⁻⁶	191	182	2.6x10 ⁸	8.41	2.6x10 ⁷	7.41
10 ⁻⁷	39	27				
Is Log Nbetween 8.17 and 8.70: Yes						
Is Log N ₀ between 7.17and 7.70: Yes						
Control of weighted mean counts: 5.65						

Table 8: Test Log Reduction Values

Product Concentration	Vc1	Vc2	Na (Ave Vc1&Vc2x10)	Log Na	Log Reduction (No:7.27)
1:500	<14	<14	<140	<2.15	>5.262
1:1000	<14	<14	<140	<2.15	>5.262
1:1500	<14	<14	<140	<2.15	>5.262

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VALIDATIONS AND CONTROLS

Table 9: *Enterococcus hirae* ATCC 10541

Validation suspension			Experimental Conditions Control A			Neutralizer Control B			Method Validation C		
		Ave			Ave			Ave			Ave
Vc1	95	92	Vc1	77	75.5	Vc1	80	81.5	Vc1	82	83
Vc2	89		Vc2	74		Vc2	83		Vc2	84	
0.5x92=46											
Is the Nvo value between 30-160: YES											
Is the Experimental Condition A≥0.5xNvo value: YES											
Is the Neutralizer Condition B≥0.5xNvo value: YES											
Is the Method Validation C≥0.5xNvo value: YES											

Table 10: *Escherichia coli* ATCC 10536

Validation suspension			Experimental Conditions Control A			Neutralizer Control B			Method Validation C		
		Ave			Ave			Ave			Ave
Vc1	90	86	Vc1	78	76	Vc1	84	82	Vc1	87	85
Vc2	82		Vc2	74		Vc2	80		Vc2	83	
0.5x86=43											
Is the Nvo value between 30-160: YES											
Is the Experimental Condition A≥0.5xNvo value: YES											
Is the Neutralizer Condition B≥0.5xNvo value: YES											
Is the Method Validation C≥0.5xNvo value: YES											

Table 11: *Pseudomonas aeruginosa* ATCC 15442

Validation suspension			Experimental Conditions Control A			Neutralizer Control B			Method Validation C		
		Ave			Ave			Ave			Ave
Vc1	92	86	Vc1	80	77.5	Vc1	84	82	Vc1	87	86
Vc2	80		Vc2	75		Vc2	80		Vc2	85	
0.5x86=43											
Is the Nvo value between 30-160: YES											
Is the Experimental Condition A≥0.5xNvo value: YES											
Is the Neutralizer Condition B≥0.5xNvo value: YES											
Is the Method Validation C≥0.5xNvo value: YES											

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Table 12: *Staphylococcus aureus* ATCC 6538

Validation suspension		Experimental Conditions Control A			Neutralizer Control B			Method Validation C			
		Ave			Ave			Ave			
Vc1	102	103.5	Vc1	96	93	Vc1	79	80	Vc1	66	67.5
Vc2	105		Vc2	90		Vc2	81		Vc2	69	
0.5x103.5=51.75											
Is the Nvo value between 30-160: YES											
Is the Experimental Condition A≥0.5xNvo value: YES											
Is the Neutralizer Condition B≥0.5xNvo value: YES											
Is the Method Validation C≥0.5xNvo value: YES											

Conclusion

- The product tested at a dilution of **1:500; 1:1000; 1:1500** **complied** with the criteria indicated under the "Pass Requirements" of SANS 51276:2011 (EN 1276) standard (obligatory conditions) which requires at least a 99.999% kill (5 log reduction).

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EXTRACT OF THE BUREAU VERITAS GENERAL TERMS AND CONDITIONS OF BUSINESS

This extract of the Bureau Veritas general terms and conditions of business ("General Conditions") shall govern all services, including (but not limited to) laboratory test work, surveys, sampling, site investigations, consultations and opinions, performed for any individual or juristic person (the "Client") by M and L Laboratory Services Proprietary Limited, its subsidiary companies and their employees, agents, consultants and subcontractors (collectively referred to as the "Company"), whether in terms of a specified contract or not. For the purpose of these General Conditions, the Company and the Client shall collectively be referred to as the "Parties" and individually as a "Party".

1. QUOTATIONS

Any quotations for Services submitted by the Company to the Client shall be based on information supplied to the Company by the Client and will not under any circumstances be binding on the Company if such information is incorrect or incomplete in any manner.

2. INSTRUCTIONS

The Client will provide the Company with clear and precise written instructions, documents, information and samples prior to the performance of the Services. The Company will not be liable for any error, omission or inaccuracy in the reports or certificates produced by it to the extent that the Company has been given erroneous or incomplete information by the Client. The reports and certificates produced by the Company reflect the findings of the Company at the time of performance of the Services only.

3. SAMPLE MATERIAL

The Client will ensure that all samples/materials submitted by it for test work of any nature are clearly marked and identifiable. Should it be necessary for the Company to carry out any sample preparation, preliminary experimental work, or research prior to carrying out the Services, the Client will be liable for any charges in respect thereof. Unless the Client otherwise instructs in writing, the Company may retain, return to the Client, destroy or dispose of all excess samples, material, specimens or exhibits provided by the Client to the Company as soon as the Services are completed and the results have been reported to the Client. Any destruction or disposal shall exclude normal amounts of reserve sample material which the Company shall retain for a period of three months from date of completion of the Services. If the Client requires the Company to return any samples or materials to it or a third party, all costs associated therewith, including associated telecommunication costs, will be borne and paid for the Client.

4. FEES AND TERMS OF PAYMENT

In consideration for the provision of the Services by the Company, the Client shall pay the fees calculated in accordance with the Company's tariff of fees at the time, copies of which may be requested by the Client at any time. In the event of any changes in the Company's fees, the Company shall provide written notification thereof to the Client within a reasonable time prior to such new fees becoming effective. If the Client does not have an account with the Company, the Client shall be required to pay the whole or part of the fees before the Company will commence the Services or release the results, as the case may be. The Client will pay each valid invoice submitted to it by the Company in full and in cleared funds within 30 days of the date of the invoice. The Company shall be entitled to charge Interest at 2% per month on any amounts not paid on the due date.

5. LIABILITY AND INDEMNITY

Neither Party shall be liable to the other Party for any consequential, indirect, incidental or special losses or damages of any nature whatsoever and howsoever arising. Without prejudice to the foregoing, the total liability of the Company arising out of or in connection with this Agreement or in relation to the Services shall be limited to the fee paid or payable by the Client to the Company for the Services that gave rise to the Company's liability to the Client, if any. The Client indemnifies the Company and holds it harmless against all claims made by third parties for losses, damages or expenses of whatsoever nature and howsoever arising relating to the performance, purported performance or non-performance of any Services to the extent that the aggregate of such claims for any one Service exceeds the limitation of liability set out in this clause 5.

6. PROVISION OF THE SERVICES

The Company shall provide the Services with reasonable care, skill and diligence as expected of a competent body experienced in performing services of a similar nature and under similar circumstances. If the Client is aware of any apparent inaccuracy in any results reported by the Company in respect of the Services, the Client shall immediately advise the Company accordingly, and allow the Company a reasonable opportunity to check such results and amend them if necessary.

7. PUBLICATION OF RESULTS

Any reports or certificates issued by the Company are intended for the exclusive use of the Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any person or entity or otherwise publicly disclosed without the prior written consent of the Company.

8. ALTERATIONS OF TERMS

No employee, agent or representative of the Company is authorised to alter or waive any of the terms contained in these General Conditions unless in writing and signed by or on behalf of the Parties. The performance of any test shall further be subject to any additional special conditions as the Company may impose from time to time. If such special conditions differ from any provisions set out herein, such special conditions shall, to the extent of such difference, take precedence.

9. LAW OF SOUTH AFRICA

These General Conditions shall be governed by and construed in accordance with the laws of the Republic of South Africa. The Parties irrevocably consent to the jurisdiction of the South Gauteng High Court, Johannesburg, if any dispute or claim arises out of or in connection with this Agreement.

For full business terms and conditions please click or visit http://portal.bureauveritas.co.za/downloads/conditions_ml.pdf