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TEST REPORT

Customer:	PARROT PRODUCTS (Pty) Ltd
Contact Person:	Tiaan Pretorius
Phone Number:	
Email:	TiaanP@parrotproducts.biz

Sample Type:	Chemical Analysis	**Date Received:**	22/01/2025
Sample Description:	Chemical Analysis	**Date Reported:**	20/03/2025
Sample Condition:	Acceptable	**Sample Weight:**	5L
Sample Container:	Plastic Jerry Can	**Sample ID:**	Janitorial Dish Wash Liquid
Batch No:	96	**Lab Identification No:**	003224
Test Type:	Chemical Tests	**Re-test Date:**	

PRODUCT DESCRIPTION:

ACTIVE INGREDIENT	14% Sodium Lauryl Ethyl Sulphate
APPEARANCE	Green
METHOD REFERENCE	SANS 51276:2021
METHOD	Dilution-neutralization
DILUENT USED	Standardized Hard Water
APPEARANCE OF DILUTIONS	Light green
NEUTRALIZING AGENT	Neutralizing fluid

EXPERIMENTAL CONDITIONS:

TEST ORGANISM(S)	*Pseudomonas aeruginosa* ATCC 15442; *Escherichia coli* ATCC 10536; *Staphylococcus aureus* ATCC 6538; *Enterococcus hirae* ATCC 10541
TEST TEMPERATURE	20°C
CONTACT TIME	45 minutes
INTERFERING SUBSTANCE	0.3g/l Bovine serum albumin (Clean conditions)
TEST INCUBATION TEMPERATURE	36°C±1°C

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 ($7.17 \leq \log N \leq 7.70$)
N_{v0} is between 30 and 160 (3.0×10^1 and 1.6×10^2)
N_v is between 300 and 1600 (3.0×10^2 and 1.6×10^3)
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:

***Pseudomonas aeruginosa* ATCC 15442**

Table 1: *N* and N_o values

Dilution	*Vc1*	*Vc2*	Average N (x̄wm)	Log *N*	N_o (N/10)	Log N_o
10^{-6}	288	291	3.0×10^8	8.48	3.0×10^7	7.48
10^{-7}	37	45				
Is Log *N* between 8.17 and 8.70: Yes						
Is Log N_o between 7.17and 7.70: Yes						
Control of weighted mean counts: 7.06						

Table 2: Test Log Reduction Values (***Pseudomonas aeruginosa*** ATCC 15442)

Product Concentration	*Vc1*	*Vc2*	N_a= (x̄wm x 10)	Log N_a	Log Reduction (N_o = 7.48)
Neat (80%)	>330	>330	>3300	>3.52	<3.96
50%	>330	>330	>3300	>3.52	<3.96
1%	>330	>330	>3300	>3.52	<3.96

***Escherichia coli* ATCC 10536**

Table 3: *N* and N_o values

Dilution	*Vc1*	*Vc2*	Average N (x̄wm)	Log *N*	N_o (N/10)	Log N_o
10^{-6}	301	277	3.1×10^8	8.5	3.1×10^7	7.49
10^{-7}	61	50				
Is Log *N* between 8.17 and 8.70: Yes						
Is Log N_o between 7.17and 7.70: Yes						
Control of weighted mean counts: 5.21						

Table 4: Test Log Reduction Values *(**Escherichia coli* ATCC 10536**)

Product Concentration	*Vc1*	*Vc2*	N_a= (x̄wm x 10)	Log N_a	Log Reduction (N_o = 7.49)
Neat (80%)	>330	>330	>3300	>3.52	<3.97
50%	>330	>330	>3300	>3.52	<3.97
1%	>330	>330	>3300	>3.52	<3.97

***Staphylococcus aureus* ATCC 6538**

Table 5: *N* and N_o values

Dilution	*Vc1*	*Vc2*	Average N (x̄wm)	Log *N*	N_o (N/10)	Log N_o
10^{-6}	296	307	3.2×10^8	8.5	3.2×10^7	7.51
10^{-7}	53	42				

Is Log *N* between 8.17 and 8.70: Yes
Is Log N_o between 7.17and 7.70: Yes
Control of weighted mean counts: 6.35

Table 6: Test Log Reduction Values **(*Staphylococcus aureus* ATCC 6538)**

Product Concentration	*Vc1*	*Vc2*	N_a= (x̄wm x 10)	Log N_a	Log Reduction (N_o = 7.49)
Neat (80%)	>330	>330	>3300	>3.52	<3.99
50%	>330	>330	>3300	>3.52	<3.99
1%	>330	>330	>3300	>3.52	<3.99

***Enterococcus hirae* ATCC 10541**

Table 7: *N* and N_o values

Dilution	*Vc1*	*Vc2*	Average N (x̄wm)	Log *N*	N_o (N/10)	Log N_o
10^{-6}	268	273	2.9×10^8	8.46	2.9×10^7	7.46
10^{-7}	33	57				
Is Log *N* between 8.17 and 8.70: Yes						
Is Log N_o between 7.17and 7.70: Yes						
Control of weighted mean counts: 6.01						

Table 8: Test Log Reduction Values **(*Enterococcus hirae* ATCC 10541)**

Product Concentration	*Vc1*	*Vc2*	N_a= (x̄wm x 10)	Log N_a	Log Reduction (N_o = 7.49)
Neat (80%)	>330	>330	>3300	>3.52	<3.94
50%	>330	>330	>3300	>3.52	<3.94
1%	>330	>330	>3300	>3.52	<3.94

VALIDATIONS AND CONTROLS:

Table 9: *Pseudomonas aeruginosa* ATCC 15442

Validation Suspension			Experimental Condition (A)			Neutraliser Control (B)			Method Validation (C)		
		Ave			Ave			Ave			Ave
Vc1	133	137	*Vc1*	149	146	*Vc1*	152	148	*Vc1*	98	106
Vc2	141		*Vc2*	142		*Vc2*	143		*Vc2*	113	
0.5 x 137(N_{vo}) = 69											
Is the N_{vo} value between 30-160: **YES**											
Is the Experimental Condition A ≥ 0.5 x N_{vo} value: **YES**											
Is the Neutralizer Condition B ≥ 0.5 x N_{vo} value: **YES**											
Is the Method Validation C ≥ 0.5 x N_{vo} value: **YES**											

Table 10: *Escherichia coli* ATCC 10536

Validation Suspension		Experimental Condition (A)		Neutraliser Control (B)		Method Validation (C)	
	Ave		Ave		Ave		Ave

Vc1	59	62	***Vc1***	68	60	***Vc1***	72	64	***Vc1***	47	43
Vc2	64		***Vc2***	52		***Vc2***	56		***Vc2***	39	
0.5 x 62($N_{v\sigma}$) = 31											
Is the $N_{v\sigma}$ value between 30-160: **YES**											
Is the Experimental Condition A ≥ 0.5 x $N_{v\sigma}$ value: **YES**											
Is the Neutralizer Condition B ≥ 0.5 x $N_{v\sigma}$ value: **YES**											
Is the Method Validation C ≥ 0.5 x $N_{v\sigma}$ value: **YES**											

Table 11: *Staphylococcus aureus* ATCC 6538

Validation Suspension			**Experimental Condition (A)**			**Neutraliser Control (B)**			**Method Validation (C)**		
		Ave			**Ave**			**Ave**			**Ave**
Vc1	159	151	***Vc1***	105	115	***Vc1***	110	113	***Vc1***	111	104
Vc2	143		***Vc2***	125		***Vc2***	115		***Vc2***	97	
0.5 x 151($N_{v\sigma}$) = 76											
Is the $N_{v\sigma}$ value between 30-160: **YES**											
Is the Experimental Condition A ≥ 0.5 x $N_{v\sigma}$ value: **YES**											
Is the Neutralizer Condition B ≥ 0.5 x $N_{v\sigma}$ value: **YES**											
Is the Method Validation C ≥ 0.5 x $N_{v\sigma}$ value: **YES**											

Table 12: *Enterococcus hirae* ATCC 10541

Validation Suspension			**Experimental Condition (A)**			**Neutraliser Control (B)**			**Method Validation (C)**		
		Ave			**Ave**			**Ave**			**Ave**
Vc1	278	281	***Vc1***	233	237	***Vc1***	192	190	***Vc1***	98	95
Vc2	283		***Vc2***	241		***Vc2***	187		***Vc2***	92	
0.5 x 281($N_{v\sigma}$) = 141											
Is the $N_{v\sigma}$ value between 30-160: **YES**											
Is the Experimental Condition A ≥ 0.5 x $N_{v\sigma}$ value: **YES**											
Is the Neutralizer Condition B ≥ 0.5 x $N_{v\sigma}$ value: **YES**											
Is the Method Validation C ≥ 0.5 x $N_{v\sigma}$ value: **YES**											

CONCLUSION:

The product, Janitorial Dish Wash Liquid (BN: 96, EXP: 26/07/26), achieved a log reduction of less than 5 under the minimum test conditions. This does not comply with the pass requirements of SAN 51276:2021 standard, which required a minimum log reduction of greater than equal to 5 (≥99.999%) under obligatory test conditions. Product requires the addition of an anti-microbial agent to be effective against bacteria.

Technical Signature

Analyst Name: Irene Finnegan Bsc (Hons) PhD

Signed: 

Date Issued: 3/20/2025

Version 2.2 07-06-23