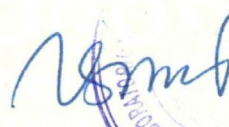




Certificate No. : LT-10-21-1202
Lab. No. : BM/IX/21/3192-3193
Customer : PT PALAR PERSADA SEJAHTERA
Address : Jl. Raya Sukomanunggal Jaya 3. Ruko
Chofa Shop House 1-2 Sukomanunggal,
Surabaya Barat, Jawa Timur 60188
Sample Matrix : Liquid Material
Test for : Quantitative Suspension Test for the
Evaluation of Bactericidal Activity
Received Date : 30-09-2021
Issued Date : 07-10-2021

Head of Laboratory


Dr. Mohammad Khotib, M.Si
NIP. 19781018 200701 1 002



FR-20.2-LT-1.0

LABORATORY TEST REPORT

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Certificate No. : LT-10-21-1202
Laboratory No. : BM/IX/21/3192
Sample Matrix : Liquid Material
Sample Id : Berry C Liquid Sanitizer
Packaging : Plastic Bottle

Received Date : 30-09-2021
Finished Date : 07-10-2021

Microorganism Strains	Test Bacterial Suspension	Result at concentration 80 % (v/v)				Method
Escherichia coli (ATCC 10536)	N = 2.57×10^8 No = 2.57×10^7 Log No = 7.41	Na Log Na	< 140 < 2.15	% R Log R	> 99.9995% > 5.26	EN 1276 : 2019 (dilution- neutralization method)
Staphylococcus aureus (ATCC 6538)	N = 1.88×10^8 No = 1.88×10^7 Log No = 7.27	Na Log Na	< 140 < 2.15	% R Log R	> 99.9995% > 5.26	
Pseudomonas aeruginosa (ATCC 15442)	N = 2.40×10^8 No = 2.40×10^7 Log No = 7.38	Na Log Na	< 140 < 2.15	% R Log R	> 99.9994% > 5.23	
Enterococcus hirae (ATCC 10541)	N = 2.35×10^8 No = 2.35×10^7 Log No = 7.37	Na Log Na	< 140 < 2.15	% R Log R	> 99.9994% > 5.23	

REMARKS

Neutralizer : Peptone from meat 10 g/L, Meat extract 5 g/L, NaCl 5 g/L, Soy lecithin 1 g/L and Polysorbate 80 20 g/L

Interfering Substances : 0.3 g/L bovine albumin (Clean Conditions)

Contact Time : 1 minute Test Temperature : 20°C Incubation Temperature : 36°C

Product concentration resulting in a 10^5 or greater reduction in the number of viable cells are bactericidal (log R ≥ 5 or % R ≥ 99.9999 %)

N = number of cfu/ml of the test bacterial suspension

No = $N/10$

Log No = logarithmic No

Na = number of cfu/ml in the test mix

R = reduction in number of viable cells

Log R = logarithmic reduction in number of viable cells (log No - log Na)

Laboratory is not responsible for the sampling process

Conclusion :

The product **Berry C Liquid Sanitizer** is **bactericidal** on the reference strain: Escherichia coli (ATCC 10536), Staphylococcus aureus (ATCC 6538), Pseudomonas aeruginosa (ATCC 15442) and Enterococcus hirae (ATCC 10541) at the concentration of 80% (v/v) in accordance with European Standard EN 1276 : 2019, for a contact time of 1 minute at 20°C in the presence of a final concentration of 0.3 g/L of bovine albumin during the test (clean conditions).

October 7, 2021
Head of Laboratory,

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FR-20.2-LT-1.0

LABORATORY TEST REPORT

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Certificate No. : LT-10-21-1202
Laboratory No. : BM/IX/21/3192-3193
Sample Matrix : Liquid Material
Packaging : Plastic Bottle

Received Date : 30-09-2021
Finished Date : 07-10-2021

BACTERICIDAL ACTIVITY VALIDATION AND CONTROLS

Microorganism Strains	Test Bacterial Suspension	Validation and Controls				
		Validation Suspension	A	B	C	
					BM 0081	BM 0082
Escherichia coli (ATCC 10536)	N = 2.57×10^8 No = 2.57×10^7 Log No = 7.41	Nv = 1140 Nvo = 114	125	127	130	126
Staphylococcus aureus (ATCC 6538)	N = 1.88×10^8 No = 1.88×10^7 Log No = 7.27	Nv = 1120 Nvo = 112	135	109	123	90
Pseudomonas aeruginosa (ATCC 15442)	N = 2.40×10^8 No = 2.40×10^7 Log No = 7.38	Nv = 930 Nvo = 93	92	90	124	110
Enterococcus hirae (ATCC 10541)	N = 2.35×10^8 No = 2.35×10^7 Log No = 7.37	Nv = 1335 Nvo = 133.5	109	132	119	121

¹⁰⁵
A = Experimental Conditions
B = Non-toxicity of Neutralizer
C = Method Validation

N = number of cfu/ml of test bacterial suspension
No = $N/10$
Nv = number of cfu/ml of validation suspension
Nvo = $N_v/10$

The Method is validated if :

- N is between 1.5×10^8 cfu/ml and 5×10^8 cfu/ml
- No is between 1.5×10^7 cfu/ml and 5×10^7 cfu/ml
- Nv is between 300 cfu/ml and 1600 cfu/ml
- Nvo is between 30 cfu/ml and 160 cfu/ml
- A, B, C are greater than or equal to 0.5Nvo

In the described conditions, the neutralization method is validated for the tested bacterial strains when a concentration of 80% or the highest concentration of the products is used.

October 7, 2021
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