



BIOTECH TESTING SERVICES TEST REPORT

LAB NO. : 2002894/ 1 - 2

DATE: 08/09/2020

NAME OF CUSTOMER : M/S. MERINO GROUP.
ADDRESS : 70, KLJ Complex, 2nd Floor,
Moti Nagar, New Delhi - 110015. INDIA
REFERENCE : Your Letter Ref. Nil dated August 14, 2020
Kind Attention: Deepu Thomas Joseph
DATE OF RECEIPT : 14/08/2020
DATE OF INITIATION : 14/08/2020
DATE OF COMPLETION : 08/09/2020
SAMPLE DESCRIPTION : Sample labeled as -

Sr. No.	Sample Code
1.	Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White
2.	Matt Meister – Design No – 25391 -18 mm Thickness - Color Solar White
Untreated lab control	

Name of Test:

Evaluation of Antimicrobial Activity of Sample

Name of Test Protocol:

JIS Z 2801: 2010

Test Organisms used for evaluating Antimicrobial activity:

1. Staphylococcus aureus ATCC 6538
2. Escherichia coli ATCC 8739
3. Klebsiella pneumoniae ATCC 4352
4. Pseudomonas aeruginosa ATCC 9027
5. Streptococcus faecalis ATCC 9790
6. Salmonella typhimurium ATCC 14901
7. Enterococcus faecalis ATCC 29212
8. Meticillin Resistant Staphylococcus Aureus ATCC 43300
9. Candida albicans ATCC 10231

Test Conditions:

Neutraliser used : Buffered Saline with Tween 80 - 0.01 %
Contact Time : 24 hours at 37° C
Incubation Temperature : 37° C for Bacteria; 28° C for Fungi
Media and Reagent : Soyabean-casein digest agar for Bacteria; Sabouraud's dextrose agar for Fungi

• Samples are not drawn by the laboratory • Result relate only to the samples tested
• This report shall not be reproduced except in full without prior permission of this laboratory

Page 1 of 5

Results:

ANTIBACTERIAL ACTIVITY

1. Test Bacteria: Staphylococcus aureus ATCC 6538

Quantitative Assessment of Activity - JIS Z 2801: 2010				
Untreated lab control: Conc. of Inoculum on untreated sample at 0 hours (A): 1.21×10^5				Log = 5.08
Untreated lab control : Conc. of Inoculum on untreated sample after 24 hour (B): 2.71×10^5				Log = 5.43
Sample Identification	No. of Bacteria on treated sample (C)	Log of Bacteria on treated sample	Antimicrobial Activity (R) (Log B-C)	Microbial Kill (% Reduction)
Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White	<10	<1	>4.43	>99.99
Matt Meister - Design No – 25391 - 18 mm Thickness - Color Solar White	80	1.90	3.51	99.97

2. Test Bacteria: Escherichia coli ATCC 8739

Quantitative Assessment of Activity - JIS Z 2801: 2010				
Untreated lab control: Conc. of Inoculum on untreated sample at 0 hours (A): 1.38×10^5				Log = 5.13
Untreated lab control: Conc. of Inoculum on untreated sample after 24 hour (B): 3.60×10^5				Log = 5.55
Sample Identification	No. of Bacteria on treated sample (C)	Log of Bacteria on treated sample	Antimicrobial Activity (R) (Log B-C)	Microbial Kill (% Reduction)
Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White	200	2.30	3.25	99.94
Matt Meister - Design No – 25391 - 18 mm Thickness - Color Solar White	300	2.47	3.08	99.91

3. Test Bacteria: Klebsiella pneumoniae ATCC 4352

Quantitative Assessment of Activity - JIS Z 2801: 2010				
Untreated lab control: Conc. of Inoculum on untreated sample at 0 hours (A): 1.41×10^5				Log = 5.14
Untreated lab control: Conc. of Inoculum on untreated sample after 24 hour (B): 3.20×10^5				Log = 5.50
Sample Identification	No. of Bacteria on treated sample (C)	Log of Bacteria on treated sample	Antimicrobial Activity (R) (Log B-C)	Microbial Kill (% Reduction)
Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White	<10	<1	>4.50	>99.99
Matt Meister - Design No – 25391 -18 mm Thickness - Color Solar White	30	1.47	4.03	99.99

4. Test Bacteria: Pseudomonas aeruginosa ATCC 9027

Quantitative Assessment of Activity - JIS Z 2801: 2010				
Untreated lab control: Conc. of Inoculum on untreated sample at 0 hours (A): 1.59×10^5				Log = 5.20
Untreated lab control: Conc. of Inoculum on untreated sample after 24 hour (B): 2.61×10^5				Log = 5.41
Sample Identification	No. of Bacteria on treated sample (C)	Log of Bacteria on treated sample	Antimicrobial Activity (R) (Log B-C)	Microbial Kill (% Reduction)
Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White	<10	<1	>4.41	>99.99
Matt Meister - Design No – 25391 -18 mm Thickness - Color Solar White	740	2.86	2.55	99.71

5. Test Bacteria: Streptococcus faecalis ATCC 9790

Quantitative Assessment of Activity - JIS Z 2801: 2010				
Untreated lab control: Conc. of Inoculum on untreated sample at 0 hours (A): 1.31×10^5				Log = 5.11
Untreated lab control: Conc. of Inoculum on untreated sample after 24 hour (B): 2.41×10^5				Log = 5.38
Sample Identification	No. of Bacteria on treated sample (C)	Log of Bacteria on treated sample	Antimicrobial Activity (R) (Log B-C)	Microbial Kill (% Reduction)
Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White	30	1.47	3.91	99.98
Matt Meister - Design No – 25391 -18 mm Thickness - Color Solar White	100	2.00	3.38	99.95

6. Test Bacteria: Salmonella typhimurium ATCC 14901

Quantitative Assessment of Activity - JIS Z 2801: 2010				
Untreated lab control: Conc. of Inoculum on untreated sample at 0 hours (A): 1.30×10^5				Log = 5.11
Untreated lab control: Conc. of Inoculum on untreated sample after 24 hour (B): 3.00×10^5				Log = 5.47
Sample Identification	No. of Bacteria on treated sample (C)	Log of Bacteria on treated sample	Antimicrobial Activity (R) (Log B-C)	Microbial Kill (% Reduction)
Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White	10	1.00	4.47	99.99
Matt Meister - Design No – 25391 -18 mm Thickness - Color Solar White	380	2.57	2.90	99.87

7. Test Bacteria: Enterococcus faecalis ATCC 29212

Quantitative Assessment of Activity - JIS Z 2801: 2010				
Untreated lab control: Conc. of Inoculum on untreated sample at 0 hours (A): 1.33×10^5				Log = 5.12
Untreated lab control: Conc. of Inoculum on untreated sample after 24 hour (B): 2.53×10^5				Log = 5.40
Sample Identification	No. of Bacteria on treated sample (C)	Log of Bacteria on treated sample	Antimicrobial Activity (R) (Log B-C)	Microbial Kill (% Reduction)
Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White	<10	<1	>4.40	>99.99
Matt Meister - Design No – 25391 -18 mm Thickness - Color Solar White	1370	3.13	2.26	99.45

8. Test Bacteria: Meticillin Resistant Staphylococcus Aureus ATCC 43300

Quantitative Assessment of Activity - JIS Z 2801: 2010				
Untreated lab control: Conc. of Inoculum on untreated sample at 0 hours (A): 1.76×10^5				Log = 5.24
Untreated lab control: Conc. of Inoculum on untreated sample after 24 hour (B): 2.60×10^5				Log = 5.41
Sample Identification	No. of Bacteria on treated sample (C)	Log of Bacteria on treated sample	Antimicrobial Activity (R) (Log B-C)	Microbial Kill (% Reduction)
Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White	10	1.00	4.41	99.99
Matt Meister - Design No – 25391 -18 mm Thickness - Color Solar White	730	2.86	2.55	99.71

ANTIFUNGAL ACTIVITY

1. Test Bacteria: Candida albicans ATCC 10231

Quantitative Assessment of Activity - JIS Z 2801: 2010				
Untreated lab control: Conc. of Inoculum on untreated sample at 0 hours (A): 1.04×10^5				Log = 5.01
Untreated lab control: Conc. of Inoculum on untreated sample after 24 hour (B): 5.60×10^5				Log = 5.74
Sample Identification	No. of Fungi on treated sample (C)	Log of Fungi on treated sample	Antimicrobial Activity (R) (Log B-C)	Microbial Kill (% Reduction)
Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White	<10	<1	>4.74	>99.99
Matt Meister - Design No – 25391 -18 mm Thickness - Color Solar White	570	2.75	2.99	99.89

The Standard Antimicrobial value of Evaluation $R \geq 2.0$



BIOTECH TESTING SERVICES

COMMENT:

When tested as specified, **Gloss Meister - Design No – 25391 – 18 mm Thickness - Color Solar White** and **Matt Meister – Design No – 25391 -18 mm Thickness - Color Solar White**; **PASSES** the Quantitative Assessment of activity for *Staphylococcus aureus*, *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Streptococcus faecalis*, *Salmonella typhimurium*, *Enterococcus faecalis*, *Meticillin Resistant Staphylococcus Aureus* and *Candida albicans* by **JIS Z 2801: 2010 Test Method**.



For BIOTECH TESTING SERVICES

Dr Shilpa U. Nair
Quality Manager
(Authorized Signatory)

2002894/1-2
Page 5 of 5

- Samples are not drawn by the laboratory • Result relate only to the samples tested
- This report shall not be reproduced except in full without prior permission of this laboratory