

## TEST REPORT

**LAB NO.:** 2300703/1-2

**DATE:** 17/04/2023

**NAME OF CUSTOMER** : M/S. Allwin Rotoplast (Mr.Salim Pissuwala)

**ADDRESS** : 753/B, B/h. Cadila Corporate Campus,  
Sarkhej-Dholka Road, Vill: Bhat, Tal: Daskroi,  
Dist: Ahmedabad-382210, India

**REFERENCE** : Letter Ref: Nil dated March,29 2023  
Kind Attention: Mr. Srimant Anne

**DATE OF RECEIPT** : 30/03/2023

**DATE OF INITIATION** : 30/03/2023 & 10/04/2023

**DATE OF COMPLETION** : 05/04/2023 & 17/04/2023

**SAMPLE DESCRIPTION** : Plastic sample labeled as-

Sr No.	Description
1	Sample AW - Treated (Red colour)
2	Untreated
Untreated lab control	



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- Samples are not drawn by the laboratory • Result relate only to the samples tested
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## BIOTECH TESTING SERVICES

### Test Method:

JIS Z 2801: 2010; Amendment 1: 2012

Antibacterial products - Test for antibacterial activity and efficacy

### Test Organisms:

1. Staphylococcus aureus ATCC 6538
2. Escherichia coli ATCC 8739

### Experimental Conditions:

Sample type & Size	: 5cm x 5cm
Lab Control	: LDPE Film
Cover Film	: LDPE Film
Pre-treatment of sample	: ETO Sterilisation
Inoculum Carrier	: 1: 500 Nutrient broth + 0.05% Triton X-100
Volume of Inoculum	: 0.1 ml
Contact Time	: 24 hours at 37 <sup>0</sup> C
Media and Reagent	: Soyabean-casein digest agar
Incubation Temperature	: 37 <sup>0</sup> C for 24 hours
Neutraliser used	: SCDLP Broth

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**Results:**

**ANTIBACTERIAL ACTIVITY**

1. Test Bacteria: Staphylococcus aureus ATCC 6538

<b>Quantitative Assessment of Activity - JIS Z 2801: 2010; Amendment 1: 2012</b>				
<b>Untreated lab control:</b> Conc. of Inoculum on untreated sample at 0 hours ( $U_0$ ): $2.40 \times 10^4$				Log = 4.38
<b>Untreated lab control:</b> Conc. of Inoculum on untreated sample after 24 hours ( $U_t$ ): $1.29 \times 10^6$				Log = 6.11
<b>Sample Identification</b>	<b>No. Bacteria on treated sample (<math>A_t</math>)</b>	<b>Log of Bacteria on treated sample</b>	<b>Antimicrobial Activity (R)(Log <math>U_t - A_t</math>)</b>	<b>Microbial Kill (% Reduction)</b>
Sample AW - Treated (Red colour)	50000	4.69	<b>1.42</b>	<b>96.12</b>
Untreated	244000	5.38	<b>0.73</b>	<b>81.08</b>

2. Test Bacteria: Escherichia coli ATCC 8739

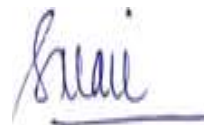
<b>Quantitative Assessment of Activity - JIS Z 2801: 2010; Amendment 1: 2012</b>				
<b>Untreated lab control:</b> Conc. of Inoculum on untreated sample at 0 hours ( $U_0$ ): $1.24 \times 10^5$				Log = 5.09
<b>Untreated lab control:</b> Conc. of Inoculum on untreated sample after 24 hours ( $U_t$ ): $4.30 \times 10^6$				Log = 6.63
<b>Sample Identification</b>	<b>No. Bacteria on treated sample (<math>A_t</math>)</b>	<b>Log of Bacteria on treated sample</b>	<b>Antimicrobial Activity (R)(Log <math>U_t - A_t</math>)</b>	<b>Microbial Kill (% Reduction)</b>
Sample AW - Treated (Red colour)	272000	5.43	<b>1.20</b>	<b>93.67</b>
Untreated	880000	5.94	<b>0.69</b>	<b>79.53</b>

**The Standard Bacterial Effectiveness  $R \geq 2$  log reduction**

**COMMENT:**

When tested as specified, Sample labeled **Sample AW - Treated (Red colour)** has shown **96.12%** and **93.67%** reduction of Staphylococcus aureus and Escherichia coli by the Quantitative Assessment of Activity by JIS Z 2801: 2010; Amendment 1: 2012 Test Method.

**For BIOTECH TESTING SERVICES**

Dr Shilpa U. Nair  
Quality Manager  
(Authorized Signatory)