



<b>Report Date</b>	<b>29/03/2019</b>
<b>Period of Analysis</b>	<b>26/03/2019-28/03/2019</b>

<b>Name of product</b>	Red MicrAgard Plus Wipe Clean (Test) Red PVC (Control) 600D Red polyester (Control)
<b>Batch number</b>	N/S

<b>Storage Conditions</b>	Ambient
<b>Appearance of the Product</b>	Red fabric
<b>Method</b>	AATCC 100
<b>Temperature of Incubation</b>	Bacteria 37°C ±2°C for 48 hours
<b>Identification test organism strains:</b>	<i>Staphylococcus aureus</i> ATCC 6538 <i>Klebsiella pneumoniae</i> ATCC 4352
<b>Incubation Time</b>	24 hours

### Introduction

The test method is designed to give an assessment of the level of antibacterial activity possessed by antimicrobial finishes on textile material.

### Outline of Test Method

Circular swatches of the test and control material are cut to 4.8 cm. Swatches are stacked as required for the absorption of 1ml of liquid, leaving no free liquid.

Control and test materials are exposed to 1ml of bacterial inoculum, samples were recovered at time points of 0 hours and 24 hours in 100ml of neutralizer, and enumerated to calculate the remaining level of bacteria. Samples were incubated at 37°C ±2°C for the 24 hour test period.

### Deviations from Standard Method

A single swatch of each fabric was tested, the fabrics tested did not absorb liquid or allow it to leach through.

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The product when tested as above shall demonstrate a clear area of interrupted growth underneath and along the sides of the test material indicating antibacterial activity of the specimen.


#### Conclusion

The test fabric **Red MicrAgard Plus Wipe Clean** has shown a **2.13 log reduction (99.26%)** against S.aureus and a **2.53 log reduction (99.7%)** against K.pneumoniae, following a **24 hour** contact time.

Untreated control fabrics 600D red polyester and Red PVC showed no reduction in bacterial counts, both fabrics showed an increase in S.aureus and K.pneumoniae within the 24 hour contact time.

*See raw data tables below for test results.*

The sample will be retained for 1 month unless otherwise requested.

  
Technical Projects Team Leader  
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**Test Results:  
600D red polyester**

			Dil	Cfu/ml	Cfu	Log <sub>10</sub> cfu	Average Log (N <sub>w</sub> /N <sub>d</sub> )	Reduction
Staphylococcus aureus ATCC 6538	0 hours	Repeat 1	2	25	250000	5.40	5.56	-0.96
		Repeat 2	2	39	390000	5.59		
		Repeat 3	2	49	490000	5.69		
	24 Hours	Repeat 1	2	330	3300000	6.52	6.52	
		Repeat 2	2	330	3300000	6.52		
		Repeat 3	2	330	3300000	6.52		

			Dil	Cfu/ml	Cfu	Log <sub>10</sub> cfu	Average Log (N <sub>w</sub> /N <sub>d</sub> )	Reduction
Klebsiella pneumoniae ATCC 4352	0 hours	Repeat 1	1	84	84000	4.92	5.04	-1.48
		Repeat 2	1	141	141000	5.15		
		Repeat 3	1	110	110000	5.04		
	24 Hours	Repeat 1	2	330	3300000	6.52	6.52	
		Repeat 2	2	330	3300000	6.52		
		Repeat 3	2	330	3300000	6.52		

**Test Results:  
Red PVC**

			Dil	Cfu/ml	Cfu	Log <sub>10</sub> cfu	Average Log (N <sub>w</sub> /N <sub>d</sub> )	Reduction
Staphylococcus aureus ATCC 6538	0 hours	Repeat 1	2	49	490000	5.69	5.62	-0.90
		Repeat 2	2	35	350000	5.54		
		Repeat 3	2	42	420000	5.62		
	24 Hours	Repeat 1	2	330	3300000	6.52	6.52	
		Repeat 2	2	330	3300000	6.52		
		Repeat 3	2	330	3300000	6.52		

			Dil	Cfu/ml	Cfu	Log <sub>10</sub> cfu	Average Log (N <sub>w</sub> /N <sub>d</sub> )	Reduction
Klebsiella pneumoniae ATCC 4352	0 hours	Repeat 1	1	84	84000	4.92	5.04	-0.20
		Repeat 2	1	141	141000	5.15		
		Repeat 3	1	110	110000	5.04		
	24 Hours	Repeat 1	1	200	200000	5.30	5.24	
		Repeat 2	1	159	159000	5.20		
		Repeat 3	1	161	161000	5.21		

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**Test Results:**  
**Red MicrAgard Plus Wipe Clean**

			Dil	Cfu/ml	Cfu	Log <sub>10</sub> cfu	Average Log (N <sub>w</sub> /N <sub>d</sub> )	Reduction
Staphylococcus aureus ATCC 6538	0 hours	Repeat 1	2	48	480000	5.68	5.62	2.13
		Repeat 2	2	36	360000	5.56		
		Repeat 3	2	43	430000	5.63		
	24 Hours	Repeat 1	0	29	2900	3.46	3.49	
		Repeat 2	0	29	2900	3.46		
		Repeat 3	0	36	3600	3.56		

			Dil	Cfu/ml	Cfu	Log <sub>10</sub> cfu	Average Log (N <sub>w</sub> /N <sub>d</sub> )	Reduction
Klebsiella pneumoniae ATCC 4352	0 hours	Repeat 1	1	189	189000	5.28	5.29	2.53
		Repeat 2	1	198	198000	5.30		
		Repeat 3	1	194	194000	5.29		
	24 Hours	Repeat 1	0	16	1600	3.20	2.76	
		Repeat 2	0	6	600	2.78		
		Repeat 3	0	2	200	2.30		

**Test images**



Test material inoculated (for 24 hour contact time samples are incubated following this step)



Test material is recovered in neutraliser and vortexed following 0 hour and 24 hour contact times, samples are enumerated following this step.

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