

## Textiles — Determination of antibacterial activity of textile products (ISO 20743:2013)

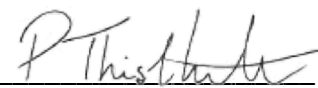
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Report Date: 22/03/2021  
Issue Number:1



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Test information		Deviation
Name of Product	Greenscreen Sea-Tex	/
Batch Number & Expiry Date	N/S	
Date of Delivery	19/02/2021	
Period of Analysis	18/03/2021	
Manufacturer / Supplier	Hunter Douglas Europe B.V.	
Storage Conditions	Ambient	
Appearance of the Product	Grey Textile	
Neutralisation Method	Dilution	
Test Concentrations	As supplied	
Method used	<b>Absorption</b>	
Temperature of Incubation	37°C ±1°C	
Identification of the bacterial Strains:	<i>Methicillin-resistant Staphylococcus aureus (MRSA)</i> NCTC 12493 <i>Vancomycin-resistant Enterococcus</i>	<b>1</b>
Contact Times	24 Hours	

**Deviations**

1 - The product was tested against 2 non standard organisms – MRSA and VRE. Therefore test requirement 10.1.4.1 (b) the difference in extremes for the three control fabrics immediately after inoculation and after incubation respectively shall be ≤1 log was not applied to this testing.

**Test Result Summary**

The test product received has shown the following log reductions:  
**VRE – 3.15log**  
**MRSA – 2.57log**

The test results on this report refer only to the items tested as supplied by the customer. This report shall not be reproduced except in full and with written approval of Microbiological Solutions Ltd. All reports are archived for a minimum of 2 years.  
 The sample will be retained for 1 month unless otherwise requested in writing.

**Scope**

This International Standard specifies quantitative test methods to determine the antibacterial activity of all antibacterial textile products including nonwovens.

This International Standard is applicable to all textile products, including cloth, wadding, thread and material for clothing, bedclothes, home furnishings and miscellaneous goods, regardless of the type of antibacterial agent used (organic, inorganic, natural or man-made) or the method of application (built-in, after-treatment or grafting).

Based on the intended application and on the environment in which the textile product is to be used and also on the surface properties of the textile properties, the user can select the most suitable of the following three inoculation methods on determination of antibacterial activity:

- a) Absorption method (an evaluation method in which the test bacterial suspension is inoculated directly onto specimens);
- b) Transfer method (an evaluation method in which test bacteria are placed on an agar plate and transferred onto specimens);
- c) Printing method (an evaluation method in which test bacteria are placed on a filter and printed onto specimens).

The colony plate count method and the ATP (ATP = Adenosine Tri-phosphate) luminescence method are also specified for measuring the enumeration of bacteria.

**Acceptance Criteria**

The acceptance criteria for efficacy of antibacterial property (A) in the standard is given as  $2 < A < 3$  is a significant level of efficacy,  $A > 3$  is a strong level of efficacy.

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**Test Results**

**VRE**

	R1				R2				R3				Average log recovery
	Dilution	Count 1	Count 2	Log recovery	Dilution	Count 1	Count 2	Log recovery	Dilution	Count 1	Count 2	Log recovery	
<b>Co</b>	1	69	70	4.14	1	66	78	4.16	1	80	79	4.20	4.17
<b>Ct</b>	0	80	50	3.11	0	88	21	3.04	0	66	74	3.15	3.10
<b>TO</b>	1	74	70	4.16	1	90	99	4.28	1	80	88	4.23	4.22
<b>Tt</b>	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0.00

A VALUE	
Log reduction	Percentage reduction
3.15	99.93%

**Test results**

**MRSA**

	R1				R2				R3				Average log recovery
	Dilution	Count 1	Count 2	Log recovery	Dilution	Count 1	Count 2	Log recovery	Dilution	Count 1	Count 2	Log recovery	
<b>Co</b>	3	26	31	5.76	2	28	30	4.76	2	34	36	4.85	5.12
<b>Ct</b>	0	50	44	2.97	0	42	30	2.86	0	21	20	2.61	2.81
<b>TO</b>	2	41	41	4.91	2	32	41	4.86	2	36	36	4.86	4.88
<b>Tt</b>	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0.00

A VALUE	
Log reduction	Percentage reduction
2.57	99.73%

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**Key**

C0 – Log10 cfu/cm2 recovered from control at time point 0h

Ct – Log10 cfu/cm2 recovered from control at time point t

T0– Log10 cfu/cm2 recovered from test sample at time point 0h

Tt– Log10 cfu/cm2 recovered from test sample at time point t

A – Antibacterial activity value (Ct-Tt)