

**Test Report**

Applicant: METAL MAX TEXTILE Co.,Ltd.  
4F.-6, No. 5, Sec. 3, New Taipei Blvd.,  
Xinzhuang Dist., New Taipei City 242,  
Taiwan, R.O.C.

Number : TWNC01160963

Date Issued : Mar 21, 2023

Sample Description:

One (1) piece of submitted sample said to be :

Item Name : MetalMax Black Antibacterial Fabric  
Color : Black  
Country of Origin : Taiwan  
Manufacturer : METAL MAX TEXTILE Co.,Ltd.  
Date Sample Received : Feb 03, 2023  
Date Test Started : Feb 03, 2023

Remarks: This is to supersede report no. TWNC01150230 dated Feb 18, 2023.

This report was translated from report TWNC01150230-S1 dated Mar 10, 2023.

Test Conducted:


As requested by the applicant, for details please refer to attached pages.

Authorized By:  
On behalf of Intertek Testing Services  
Taiwan Limited

  
Anna Jing  
Assistant General Manager



Signed by:

  
Thomas Chou  
Manager



Page 1 of 4

**Intertek Testing Services Taiwan Ltd.**

8F., No. 423, Ruiguang Rd., Neihu District, Taipei 114690, Taiwan, R.O.C.

全國公證檢驗股份有限公司

114690 台北市內湖區瑞光路 423 號 8 樓

Tel: (+886-2) 6602-2888 · 2797-8885 Fax: (+886-2) 6602-2405



Test Conducted :

1. Antibacterial Activity Test

As per applicant's request with reference to AATCC TM100-2019.

Prewash for 150 cycles as per AATCC TM135-2018t, machine wash at 27±3°C, normal cycle, and prewash for 6 cycles with clear water, tumble dry low.

Test Organism : *Escherichia coli* (ATCC 8739)  
*Staphylococcus aureus* (ATCC 6538)  
*Klebsiella pneumoniae* (ATCC 4352)

Sterilization Of Sample Before Test : Autoclave At 121°C, 15 Minutes

Neutralizing Solution : Dey Engley Broth

Concentration Of Surfactant : 0.05% Triton X-100

Contact Time : 24 Hours

Incubation Temperature : 37±2°C

Incubation Period : 24-48 Hours

Agar Medium : Nutrient Agar

Swatches Weight : 1.0±0.1 g

Tested Specimen : Submitted Sample (Swatches with 3.8 X 3.8±0.1 cm)

Result :

<u>Name Of Test Bacteria</u> <u>(Strain Number)</u>	<i>Escherichia coli</i> (ATCC 8739)
The number of bacteria recovered from the inoculated viability control fabric swatches immediately after inoculation ("0" contact time) (D)	1.4 x 10 <sup>5</sup> CFU/Sample
The number of bacteria recovered from the inoculated viability control fabric swatches incubated over 24 hours contact period (B')	6.9 x 10 <sup>8</sup> CFU/Sample
The number of bacteria recovered from the inoculated untreated control sample swatches incubated over 24 hours contact period (B)	6.5 x 10 <sup>8</sup> CFU/Sample
The number of bacteria recovered from the inoculated tested sample swatches immediately after inoculation ("0" contact time) (C)	1.3 x 10 <sup>5</sup> CFU/Sample
The number of bacteria recovered from the inoculated tested sample swatches incubated over 24 hours contact period (A)	<100 CFU/Sample
Growth value (F)	3.69
Percent reduction of Bacteria (R)	>99.99%



Test Conducted :

Antibacterial Activity Test (Cont'd)

Name Of Test Bacteria (Strain Number)	<i>Staphylococcus aureus</i> (ATCC 6538)	<i>Klebsiella pneumoniae</i> (ATCC 4352)
The number of bacteria recovered from the inoculated viability control fabric swatches immediately after inoculation ("0" contact time) (D)	2.1 x 10 <sup>5</sup> CFU/Sample	2.3 x 10 <sup>5</sup> CFU/Sample
The number of bacteria recovered from the inoculated viability control fabric swatches incubated over 24 hours contact period (B')	5.6 x 10 <sup>7</sup> CFU/Sample	6.3 x 10 <sup>7</sup> CFU/Sample
The number of bacteria recovered from the inoculated untreated control sample swatches incubated over 24 hours contact period (B)	2.7 x 10 <sup>5</sup> CFU/Sample	6.4 x 10 <sup>7</sup> CFU/Sample
The number of bacteria recovered from the inoculated tested sample swatches immediately after inoculation ("0" contact time) (C)	2.0 x 10 <sup>5</sup> CFU/Sample	1.9 x 10 <sup>5</sup> CFU/Sample
The number of bacteria recovered from the inoculated tested sample swatches incubated over 24 hours contact period (A)	<100 CFU/Sample	<100 CFU/Sample
Growth value (F)	2.43	2.44
Percent reduction of Bacteria (R)	>99.99%	>99.99%

Calculation of percent reduction of Bacteria:

$$R = (B-A)/B \times 100\%$$

$$F = \text{Log } B' - \text{Log } D$$

Remarks : CFU = Colony forming unit

< = Less than

> = More than

Viability control fabric = Cotton standard adjacent fabric(cotton No.3) specified in JIS L0803

The untreated control sample was submitted by applicant.





End of Report

Except where explicitly agreed in writing, all work and services performed by Intertek is subject to our standard Terms and Conditions which can be obtained at our website: <http://www.intertek-twn.com/terms/>. Intertek's responsibility and liability are limited to the terms and conditions of the agreement.

This report is made solely on the basis of your instructions and / or information and materials supplied by you and provide no warranty on the tested sample(s) be truly representative of the sample source. The report is not intended to be a recommendation for any particular course of action, you are responsible for acting as you see fit on the basis of the report results. Intertek is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received and accepts no responsibility to any parties whatsoever, following the issue of the report, for any matters arising outside the agreed scope of the works. This report does not discharge or release you from your legal obligations and duties to any other person. You are the only one authorized to permit copying or distribution of this report (and then only in its entirety). Any such third parties to whom this report may be circulated rely on the content of the report solely at their own risk.

**Reporting Statements of Conformity:** Please note that the test results contain statement of conformity with the decision rules which are based on the specifications of customers, regulations and standards, and does not consider measurement uncertainty.

