

KAKEN**Kaken Test Center** GENERAL INCORPORATED FOUNDATION

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No.1/2

Test report No.: OS-19-014491-2

Date: June 14, 2019

TEST REPORT

Requested : KG MARK co., LTD.

Test sample : Fabric 1 sample

Test items : Antibacterial activity

Received : June 4, 2019

This is to report that the results of laboratory test applied on the sample are as follows:**1. Test results****1.1 *Staphylococcus aureus***

No.	Sample	Common logarithm for the number of bacteria (max-min)		Antibacterial activity value
		Immediately after inoculation	After 18h incubation	
①	Sonovia scale up ZnO fabric After 50-cycle washing	4.49(0.1)	1.30(0.0)	5.7
	Control fabric	4.49(0.0)	6.99(0.1)	Growth value F:2.5

1.2 *Klebsiella pneumoniae*

No.	Sample	Common logarithm for the number of bacteria (max-min)		Antibacterial activity value
		Immediately after inoculation	After 18h incubation	
①	Sonovia scale up ZnO fabric After 50-cycle washing	4.49(0.0)	3.57(1.5)	3.9
	Control fabric	4.50(0.1)	7.44(0.0)	Growth value F:2.9

(To be continued on No.2/2)

Kaken Test Center

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TEST REPORT
 (Continued from No.1/2)

1.3 Methicillin resistant *Staphylococcus aureus*

No.	Sample	Common logarithm for the number of bacteria (max-min)		Antibacterial activity value
		Immediately after inoculation	After 18h incubation	
①	Sonovia scale up ZnO fabric After 50-cycle washing	4.55(0.1)	2.17(1.1)	4.9
	Control fabric	4.54(0.1)	7.05(0.1)	Growth value F:2.5

2. Test method: JIS L 1902:2015 (Absorption method)

Test bacteria : *Staphylococcus aureus* NBRC 12732

Klebsiella pneumoniae NBRC 13277

Methicillin resistant *Staphylococcus aureus* IID 1677

Test bacteria suspension: prepared with surfactant (Tween 80)

Washing : Washing method of SEK mark textile products,
 established by Japan Textile

3. Sample:

①

Kaken Test Center General Incorporated Foundation
 Osaka Laboratories
 Biological Test Laboratory

Inspector : _____
 T.Nakasone

Period.