



EKOTEKS

**EKOTEKS LABORATUVAR ve GÖZETİM
HİZMETLERİ A. Ş.**
Esenyurt Firuzköy Bulvarı No:29 34325 Avcılar
İstanbul/ TÜRKİYE



TEST REPORT
DENEY RAPORU

AB-0583-T
20012983
04-20

Customer name: ALTINSU TEKSTİL ENERJİ SAN. VE TİC. LTD. ŞTİ.
Address: BOSAB Barakfakih Mah. 5. Cad. No: 2 Kestel /BURSA
Buyer name: -
Contact Person: HAMZA BAKAN
Order No: -
Article No: -
Name and identity of test item: One sample of white fiber (Claimed to be; 180/76 DRW)
The date of receipt of test item: 14.04.2020
Re-submitted/re-confirmation date: -
Date of test: 14.04.2020-20.04.2020
Remarks: -
Sampling: The results given in this report belong to the received sample by vendor.
End-Use: -
Care Label: -
Number of pages of the report: 4

The Turkish Accreditation Agency (TURKAK) is signatory to the multilateral agreements of the European co-operation for the Accreditation (EA) and of the International Laboratory Accreditation (ILAC) for the Mutual recognition of test reports.

EKOTEKS LABORATUVAR ve GÖZETİM HİZMETLERİ A.Ş. accredited by TÜRKAK under registration number [AB-0583-T] for ISO 17025:2017 as test laboratory.

The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

Seal

Date
20.04.2020

Customer Representative
Hatice ACARALP

Head of Testing Laboratory
Sevim A. RAZAK
20.04.2020

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REQUIRED TESTS	RESULT	COMMENTS
MICROBIOLOGICAL TEST		
Antibacterial Activity / Staphylococcus aureus (ATCC 6538 (Gram(+)))	-	
Antibacterial Activity / Klebsiella pneumonia (ATCC 4352 (Gram (-)))	-	
No requirements were given by the customer		

REMARK: Original samples are kept for 3 months and all technical records are kept for 5 years unless otherwise specified. If requested, measurement uncertainty will be reported. But unless otherwise specified, measurement uncertainty is not considered while stating compliance with specification or limit values. The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95 %. Tests marked (*) in this report are not included in the accreditation schedule.

Gen.f136-2/03



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TEST RESULTS

Test Method : **ASTM E2149:2013a** Standard Test Method for Determining the Antimicrobial Activity of Antimicrobial Agents Under Dynamic Contact Conditions

RESULTS	
Untreated (Control) Sample	Treated (Test) Sample
after specified contact time*	after specified contact time*
8.8x10 ⁵ cfu/ml	< 30 cfu/ml
5.94 log	-

*The amount of growing bacteria on fabric
cfu: colony forming units

Antimicrobial Activity	RESULT	Evaluation
Reduction, %	% 99.99	Effective

Mikroorganism	<i>Staphylococcus aureus</i> (ATCC 6538 (Gram(+)))
Bacterial concentration (cfu/ ml)	2.33 x10 ⁵
Inoculum volume	50 ml
Size of sample	1g
Number of washing	-
Washing method	-
Incubation time, temperature	24 hours, 35 °C ± 2 °C
Contact time	(x) 24 hours (as per client's request)

R %= Reduction is calculated by the following formula;

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

A = CFU per millilitre for the flask containing the treated substrate after the specified contact time.

C = CFU per millilitre for the flask containing the untreated substrate after the specified contact time.

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TEST RESULTS

Test Method : **ASTM E2149:2013a** Standard Test Method for Determining the Antimicrobial Activity of Antimicrobial Agents Under Dynamic Contact Conditions

RESULTS	
Untreated (Control) Sample	Treated (Test) Sample
after specified contact time*	after specified contact time*
2.22×10^6 cfu/ml	3×10^4 cfu/ml
6.35 log	4.48 log

*The amount of growing bacteria on fabric
cfu: colony forming units

Antimicrobial Activity	RESULT	Evaluation
Reduction, %	% 98.65	Effective

Mikroorganism	<i>Klebsiella pneumonia</i> (ATCC 4352 (Gram (-))
Bacterial concentration (cfu/ ml)	2.51×10^5
Inoculum volume	50 ml
Size of sample	1g
Number of washing	-
Washing method	-
Incubation time, temperature	24 hours, $35^\circ \text{C} \pm 2^\circ \text{C}$
Contact time	(x) 24 hours (as per client's request)

R %= Reduction is calculated by the following formula;

$$\%R = \frac{(B-A)}{B} \times 100$$

A = CFU per millilitre for the flask containing the treated substrate after the specified contact time.

B= CFU per millilitre for the 'inoculum only' flask after the specified contact time.