ISO 18184:2019 Textiles- Determination of antiviral activity of textile products

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PO/Quote number: Q002579
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Test identification Reference: **J001699** ISO 18184:2019

Test information		Deviation
Name of Product	N/S	
Batch Number & Expiry Date	N/S	
Date of Delivery	05/05/2020	
Period of Analysis	26/06/2020-30/06/2020	
Storage Conditions	Ambient	
Appearance of the Product	Black Fabric	
Neutralisation Method	Dilution	
Test Concentrations	As supplied	
Test Temperature	25^{0}C ± 1°C	
Temperature of Incubation	37°C ±1°C	
Identification of the Viral Strains:	Influenza H1N1 ATCC VR-1683	
Contact Times	2 hours ± 10s	

Test Result Summary

The test fabric showed an overall log reduction of 1.40 (96.045) when tested against Influenza H1N1, when tested with a 2 hour contact time.

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Scope

This standard outlines the test method for the determination of the antiviral activity of the textile products against specified viruses.

Method

A 20mmx20mm sample of test material is cut (overall mass should be 0.40g and can be made up with extra material if required). 9 control pieces are required and 6 test pieces.

3 pieces of each material are used to test the effect of the fabric on cells without virus (cytotoxicity), 3 control pieces are used to recover the starting titre of virus. The remaining pieces ate inoculated with 200µl of virus at a concentration of ~10^7 $TCID^{50}$ (giving a final concentration of 10^5) and left for the contact time.

Following the contact time, the fabric is recovered in 20ml of cell culture media and enumerated onto an appropriate cell line. TCID50 is calculated following the appropriate incubation time. Antiviral activity is calculated by comparison of the antiviral test material to the immediate recover from the control fabric.

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Test Results

0 hours		
Sample	Log recovery	Average
Control 1	6.00	
Control 2	6.04	
Control 3	5.96	6.00

Controls		
Initial inoculum	7.88	Valid
Cytotoxicity Test	4.29	Valid
Cytotoxicity Control	4.38	Valid

Contact time:2 hour				
Sample	Log recovery	Average	Reduction	Percentage
Control 1	5.75			
Control 2	5.95			
Control 3	5.71	5.80	0.20	36.42%
Test 1	4.63			
Test 2	4.63			
Test 3	4.54	4.60	1.40	96.04%

*Control fabric must not show >1 log reduction

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