

Microbe Investigations AG

LS20-01275

Report date: July 17, 2020

Customer: Cifra

Brand: Cifra

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Microbe Investigations AG (MIS) is a spin-off company of ETH Zürich

MIS provides microbiological testing services primarily for industrial customers assessing the characteristics of developmental products. MIS also provides a depth of expertise in fundamental aspects of microbiology gained throughout many years of world-leading research. Target customers are primarily companies working with antimicrobial treatments on textiles, plastics, and coatings.

More information: www.microbe-investigations.com

Test report overview

General Info	Name	Contact	HeiQ KAM
Customer	Cifra	-	S. Taruselli
Distributor	-	-	-
Brand owner	Cifra	-	S. Taruselli
Brand label	Cifra WKS	Application at	Client
Reason for testing	Quality validation	Application by	Exhaust application
HeiQ Effects	HeiQ Eco Dry / HeiQ Viroblock	Scale	3 - bulk trial

Test methods carried out in this report		
Effect / Property	Testing standard	Test parameter
Quantitative antibacterial test method ("shake flask" test)	ASTM E 2149-13a	Bacterium: Staphylococcus aureus (ATCC 6538P)

Test results: Attention needed - Acceptable // but consider attention to application parameters

Test summary / comments:

- Red T-SHIRT (hydrophobic) Shows good antimicrobial activity at ASTM E2149 test after 30 x washes by customer.
Since red T-shirt fabric is strongly hydrophobic Yogurt test does not work.
- Black face mask shows good antimicrobial activity at ASTM E2149 test after 20 x washes by client.

Goes together with LS20-01284

Samples, finishing process and textile information

Sample	Sample description
1	T-SHIRT Red T-SHIRT (hydrophobic); NPJ03 8%
5	FACE MASK VB+ECO; NPJ03 8%, ECO DRY 5%

Recipe	Sample number	
Product	1	5
Viroblock NPJ03 (17200) [%]	8	8
Barrier ECO-DRY [%]		5
Parameters	1	5
Liquor ratio [none]	10	10
pH [-	-
Heating rate [°C/min]	-	-
Temperature [°C]	-	-
Time [min]	-	-
Drying Temp. [°C]	-	-
Drying Time [min]	-	-
Substrates	1	5
Polyamid [%]	90	
Elastane (Polyurethane) [%]	10	
Textile information	1	5
Weight [g/m2]	-	-
Construction	CKN	CKN
Structure	-	-

Legend:

Construction process	Textile structure
CKN = Circular Knit	

Antimicrobial Testing

Recipe	Sample number	
Product	1	
Viroblock NPJ03 (17200) [%]	8	
ISO 6330 parameters	1-4	
unknown washing procedure	30	
Drying conditions		

ASTM E 2149: Staphylococcus aureus (ATCC 6538P)

Control	Initial	After 1 hour
Log cfu	$6.5 \cdot 10^0$	$7.0 \cdot 10^0$
Sub-Samples	1-4	
Log cfu Sample (staph) [Bacteria]	$5.0 \cdot 10^0$	
Percent reduction Sample (staph) [%]	98.998 8	
Log reduction Sample (staph)	2.0	
Activity Sample (staph)	+	

Antimicrobial Testing

Recipe	Sample number
Product	5
Viroblock NPJ03 (17200) [%]	8
Barrier ECO-DRY [%]	5
ISO 6330 parameters	5-1
unknown washing procedure	20
Drying conditions	

ASTM E 2149: Staphylococcus aureus (ATCC 6538P)

Sub-Samples	5-1
Log cfu Sample (staph) [Bacteria]	4.9*10 ⁰
Percent reduction Sample (staph) [%]	99.0531
Log reduction Sample (staph)	2.0
Activity Sample (staph)	+

Test costs information (Pro-Forma invoice)

Item	Price per item	No item	Costs
washing	8	30	240
LIMS license + reporting	250	1	250
ASTM E2149: Staphylococcus aureus (ATCC 6538P)	200	2	400

Total value of this report: USD 890.-