

# Microbe Investigations AG

## LS20-00606

Report date: April 17, 2020

Customer: Carl Meiser GmbH & Co.

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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](http://www.microbe-investigations.com)

## Test report overview

General Info	Name	Contact	HeiQ KAM
Customer	Carl Meiser GmbH & Co.	J. Meiser	C. Centonze
Distributor	-	-	-
Brand owner	-	-	-
Brand label	-	Application at	Client
Reason for testing	-	Application by	Padding (dry-in-wet)
HeiQ Effects	Others	Scale	Pilot plant

### Test methods carried out in this report

Effect / Property	Testing standard	Test parameter
Antibacterial test (hydrophobic fabrics)	ISO 22196:2011	Bacterium: Staphylococcus aureus (ATCC 6538P)

**Test results:** Excellent - Perfect application // no adjustment on recipe or application needed

### Test summary / comments:

- HeiQ standard PES woven fabric treated with Cleanzone shows excellent antimicrobial activity
- Treated plastic film shows excellent antimicrobial activity, whereas untreated film shows insufficient activity.

## Samples, finishing process and textile information

Sample number	Sample description
1	HeiQ STD PES; Cleanzone unverdünnt
2	Folie behandelt; Cleanzone
3	Folie unbehandelt;

Recipe	Sample number		
	1	2	3
Product	1	2	3
Other [g/l]	1000	---	---
Parameters	1		
Pick-up [%]	-		
Drying Temp. [°C]	120		
Drying Time [s]	120		
Curing Air Temp. [°C]	140		
Curing Time [s]	60		
Substrates	1		
Polyester [%]	100		
Textile information	1	2	3
Weight [g/m <sup>2</sup> ]	-	-	-
Construction	WOV	OTR	OTR
Structure	-	-	-

Legend:

Construction process	Textile structure
WOV = Woven	
OTR = Others	

## Antimicrobial Testing

Recipe	Sample number		
Product	1	2	3
Other [g/l]	1000	---	---
ISO 6330 parameters	1-1	2-1	3-1
Tabellarischer Bericht	0	0	0
Drying conditions			

### ISO 22196: Staphylococcus aureus (ATCC 6538P)

Control	Initial	After 24 hours	
Log cfu	4.8	5.6	
Sub-Samples	1-1	2-1	3-1
Log cfu Sample (staph)	2.0	2.0	3.7
Percent reduction Sample (staph) [%]	99.9754	99.9754	98.6870
Log reduction Sample (staph)	3.6	3.6	1.9
Activity Sample (staph)	++	++	o

## Test costs information (Pro-Forma invoice)

Item	Price per item	No item	Costs
LIMS license + reporting	250	1	250
ISO 22196: Staphylococcus aureus (ATCC 6538P)	150	3	450
HeiQ laboratory: padding dry-in-wet	80	1	80

Total value of this report: USD 780.-