



TEST REPORT

High Performance Mop

Test item:	Bacteria pick-up rate (microorganisms)
ISO standard:	6330:2021
Report no.:	DL-20230713-10
Test date:	05.06.2023
Issue date:	13.07.2023

High Performance Mop



FX-25-80
FX-30-95
FX-40-110
FX-60-145

For test result please see next page

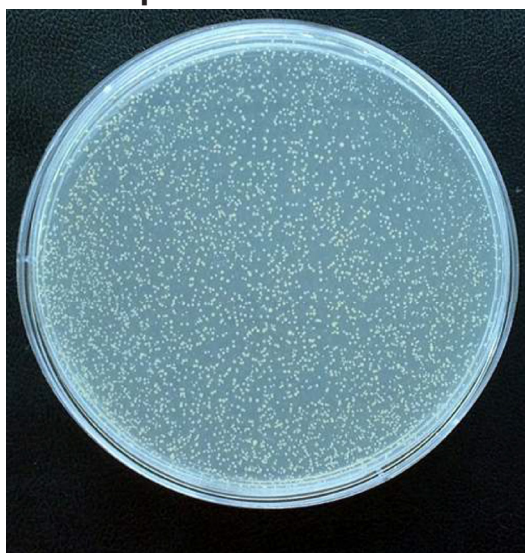


TEST RESULT

High Performance Mop

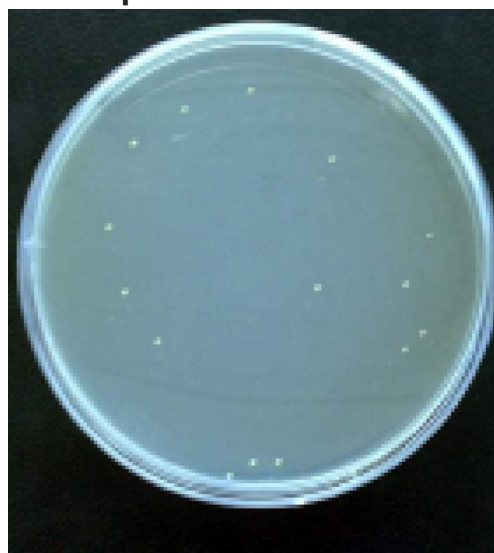
Pick-up rate (%)	Before washing: 99.9% After washing (300 times): 98.9%
Test bacteria	Staphylococcus aureus ATCC 6538 (microorganisms). Exists in e.g. kitchens, on kitchen utensils, in foodstuffs and dairy products. Causes: vomit, food poisoning and diarrhea.
Art. no.	FX-25-80, FX-30-95, FX-40-110, FX-60-145

Before wipe:



Bacteria
Staphylococcus aureus

After wipe:



Bacteria
Staphylococcus aureus

Calculation of the cloth's capacity to pick up bacteria and microorganisms:

$$\text{Pick-up rate} = [(M_b - M_c) / M_b] \times 100$$

M_b = Average of the number of bacteria on the test surface before pick-up.
(The amount of bacteria which was spread on the surface)

M_c = Average of the number of bacteria on the test surface after pick-up.
(The amount of bacteria on the surface after the wipe)



TEST METHOD

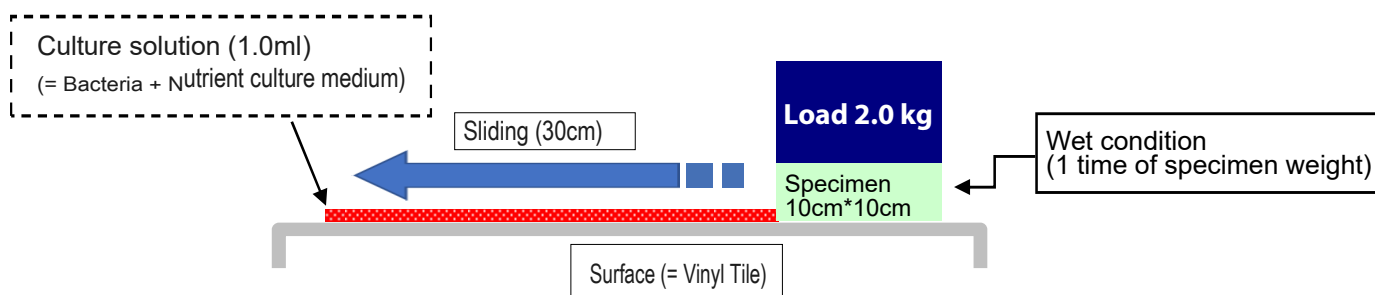
High Performance Mop



Test conditions:

Amount of water	1 time of specimen weight
Load weight	2 kg
Surface	Vinyl tile (wax coated)
Sliding range	30 cm
Washing condition	Industry washing machine, 90 °C Alkali detergent Washing times: 300 times

Illustration of the test method:



CONCLUSION

High Performance Mop has a documented pickup of microorganisms of min. 98.9%.

The test result is based on test with bacteria within the group of microorganisms, where viruses also are included as a part of this group because of their sizes.

When microfiber product's ability to pick up microorganisms is tested, the size of the test object is pivotal. Thus, it is not important whether the microorganism is a bacterium or a virus. Microfiber does not distinguish between the types of microorganisms when they pick them up. Microfiber's ability to pick up microorganisms varies from product to product.

The tests are always conducted with bacteria within the art of microorganisms because of two reasons:

- 1) Bacteria constitute the most extensive health risk because they multiply and evolve with time.
Viruses disappear after a certain amount of hours.
- 2) Bacteria are more safe to use in tests and they are more accessible as test objects.



TEST REPORT

High performance Mop

Test item:	Removal of dust and dirt
Report no.:	DL-20230714-11
Test date:	11.07.2023
Issue date:	14.07.223

High Performance Mop



FX-25-80
FX-30-95
FX-40-110
FX-60-145

For test result please see next page



TEST RESULT

High performance Mop

Test surface	Wooden floor			
Art. no.	FX-25-80 FX-30-95 FX-40-110 FX-60-145 Before washing		FX-25-80 FX-30-95 FX-40-110 FX-60-145 After washing (300 times)	
Condition	Dry	Damp	Dry	Damp
Turbidity before clean (Md)	1.56 NTU	1.15 NTU	2.05 NTU	1.69 NTU
Turbidity after clean (Mc)	47.71 NTU	50.08 NTU	28.1 NTU	25.97 NTU
Dust and dirt removal rate (%)	96.7%	97.7%	92.7%	93.5%

NTU = Nephelometric Turbidity Unit

The unit used to describe turbidity,
in other words the haziness of the water.

Nephelometric refers to the way the instrument,
a nephelometer, measures how much light is
scattered by suspended particles in the water.

The greater the scattering, the higher the turbidity.

Therefore, low NTU values indicate high water clarity,
while high NTU values indicate low water clarity. D



TEST METHOD

High performance Mop



Test conditions:

Test surface	Wooden floor
Sliding range	10x30 cm
Washing	Household washing machine, 90 °C Weak alkali detergent 0.2% Washing times: 300 times

Calculation of the removal rate:

$$\text{Removal rate (\%)} = \frac{\text{Turbidity of before clean (Md)} - \text{Turbidity of after clean (Mc)}}{\text{Turbidity before clean (Md)}} \times 100$$



TEST REPORT

High Performance Mop

Test item: Autoclave
Report no.: DL-191030-4
Test date: 30.10.2019
Issue date: 30.10.2019

High Performance Mop



FX-25-80
FX-30-95
FX-40-110
FX-60-145

For test results please see next page



TEST METHOD

High Performance Mop

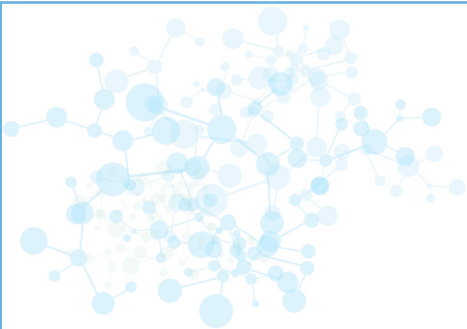


Test conditions:

Procedure	1 x wash + 1 x autoclave (= 1 cycle) Test result after 3 cycles
Wash	Industrial washing machine, 11 kg: 60 °C Load: 60% (6.6 kg) Detergent: pH 11 No dry tumbling
Autoclave	Is used right after wash 121 °C 30 min.

**Autoclave is a specially developed machine for sterilisation of products.
The machine is filled with steam under pressure.
The product is being exposed to saturated steam
with a temperature of 121 °C in 30 minutes.**





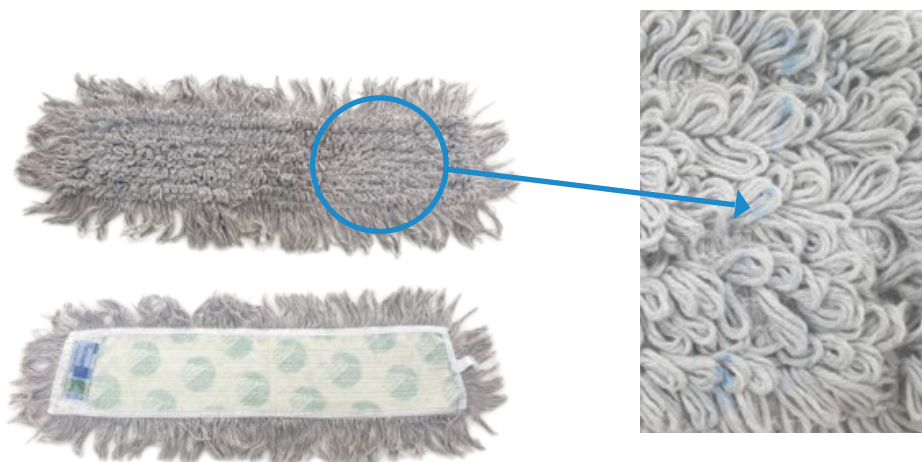
TEST RESULT

High Performance Mop

Test result 1 (-) decrease (+) increase	Width	Length
Shrinkage	+1.7%	-4.5%
Art. no.	FX-25-80 FX-30-95 FX-40-110 FX-60-145	

Test result 2

Visual check after autoclaving:



- No damage on the pile or the edge fringes
- No change in the adhesive power of the velcro
- Color bleeding on the pile may happen when autoclaving with products in other colors
- Yellow color phenomenon can occur on the velcro
- Please note: use of autoclave reduces the washing guarantee with ca 50%
(Nordic Swan eco-labelled products tolerate +500 washes when washed correctly)