Laborbericht / Laboratory Report

Auftraggeber / Client:	Freudenberg Home and Cleaning Solutions GmbH, Regional Technical Centre Europe Hoehnerweg 2-4, Bau 149, 69469 Weinheim Frau Sigrid Jung		
Auftragsdatum / Date of order:	24.05.2019	BMA-Auftragsnr. / BMA order no.:	AU190524-05
Ihre Auftragsnr. / Your order no.:		BMA-Probennr. / BMA sample no.:	190529-01/1
Probeneingang/-nahme / Sample receipt/sampling:	29.05.2019	Analysenzeitraum / Period of analysis:	11. – 17.06.2019
Probennehmer / Sampler:	Auftraggeber / Client	Berichtsnr. / Report no.:	BE190524-05/1
		Ansprechpartner / Contact:	U. Stephan
		Berichtsdatum / Date of report:	01.07.2019

1. Prüfgegenstand / Specimen

Produkt/Material / Product/Material:
wiping cloth **"MicroOne Breazy Mop"**, shortened with compatible clasp UltraSpeed Pro

2. Untersuchung / Examination

Microbiological examination of products
Examination of the reducing effect of wiping cloth "MicroOne Breazy Mop" moistioned with sterile water on one bacteria strain.

3. Prüfverfahren und Normverweis / Test method and standard

Sterilisation von Medizinprodukten – Mikrobiologische Verfahren – Teil 1: Bestimmung der Population von Mikroorganismen auf Produkten, DIN EN ISO 11737-1: 2009-09 /
Sterilization of medical devices – Microbiological methods – Part 1: Determination of a population of microorganisms on products, DIN EN ISO 11737-1: 2009-09

Bestimmung der Einwirkung von Mikroorganismen auf Kunststoffe, DIN EN ISO 846: 1997-06. /
Evaluation of the action of microorganisms on plastics, DIN EN ISO 846: 1997-06

Customer's instructions (see cover letter/purchase order 24.05.2019). The test was performed in a clean bench on a pre-cleaned and disinfected test surface.

Wiping cloth: "MicroOne Breazy Mop" Vileda Professional
Sterile water: applied volume 16 ml according to the customer's instruction
Bacteria test strain: *Pseudomonas aeruginosa* (DSM-Nr. 288)
Test surface: PVC flooring, non-structured (98 cm x 27 cm), disinfected; devided into 39 squares 9 cm x 7 cm each.
Applied bacteria suspension (*P. aeruginosa*): 5 ml with 1 x 10^8 cfu (colony forming unit); calculated amount per test square (9 cm x 7 cm): 2,4 x 10^6.
Samples 1.1 to 1.3: Negative control, test squares after pre-cleaning
Samples 1.4 to 1.9: Positive control, test squares contaminated with bacteria suspension
Samples 1.10 to 1.39: test squares contaminated with bacteria suspension and cleaned with "MicroOne Breazy Mop" moistioned with sterile water

Cleaning procedure: the wiping cloth was put on to the clasp (provided by the customer) and moistened by spraying with 16 ml sterile water. Then the cloth with clasp was wiped once across the test surface by moving it in form of an 8 at a speed of approx. 5 cm/s.

Elution and determination of bacteria from the sample squares: samples were incubated in 15 ml 0,9% NaCl solution in a falcon tube and shaked 20 min end to end. The bacteria concentration of the suspension was analysed using smear method (100 µl plating volume of dilution series) or pouring method for samples with expected high or low bacteria contamination respectively. The agar plates were cultivated 3-5 days at 30°C.

DAkkS Deutsche Akkreditierungsstelle D-PL-18029-01-00

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4. Untersuchungsergebnisse / Test results

Die Ergebnisse der Messungen und Analysen beziehen sich ausschließlich auf die untersuchte Probe. /
The results of the measurements and analyses exclusively refer to the examined sample.

4.1 Amount of bacteria on flooring without treatment

Probe/Identifikation / Sample/Identification	Proben-Nr. / Sample no.	Durchschnittl. Bakterienkonz. / Mean bacteria conc. (*P. aeruginosa*)	
		Rechteck [KBE/63 cm²] / Square [cfu/63 cm²]	[KBE/m²] / [cfu/m²]
Flooring (negative control) 190529-01/1	1.1-1.3	7 [(b)]	**1,1 x 10^3**

Nachweisgrenze Agargussmethode: 1 KBE/15 ml (Rechteck) / Detection limit pouring methode: 1 cfu/15 ml (square)

4.2 Amount of bacteria (*P. aeruginosa*) before and after cleaning

Probe/Identifikation / Sample/Identification	Proben-Nr. / Sample no.	Durchschnittl. Bakterienkonz. / Mean bacteria conc. (*P. aeruginosa*)	
		Rechteck [KBE/63 cm²] / Square [cfu/63 cm²]	[KBE/m²] / [cfu/m²]
Flooring after bacteria application (positive control) 190529-01/1	1.4-1.9	3,9 x 10^6 [(a)]	**6,2 x 10^8**
Flooring after bacteria application and **cleaning with MicroOne Breazy + sterile water** 190529-01/1	1.10-1.39	1,5 x 10^1 [(b)]	**2,4 x 10^3**
Reduction [%]	≥ 99,999		

[(a)] Nachweisgrenze Ausstrichmethode: 150 cfu/15 ml (square), [(b)] Nachweisgrenze Agargussmethode: 1 KBE/15 ml (Rechteck) /
[(a)] Detection limit smear method: 150 cfu/15 ml (square), [(b)] Detection limit pouring methode: 1 cfu/15 ml (square)

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