

Laboratory Report

Client:	Freudenberg Home and Cleaning Solutions GmbH, Regional Technical Centre Europe Hoehnerweg 2-4, Bau 149, 69469 Weinheim Herr Thorsten Gleich		
Your date of order:	23.02.2016	Receipt of samples / sampling:	24.02.2016
Your order no.:	PO: 4500771813	Period of analysis:	01.-06.03.2016
BMA order no.:	AU160223-07	Date of report:	22.03.2016
BMA sample no.:	160224-10/1	Report no.:	BE160223-07/1/K1 Ersatz für BE160223-07/1
Report writing:	U. Stephan		Page 1 of 2

Sample

Cloth: **MicronQuick** (The sample was sent by the customer)

Analyses

Microbiological examination of products

Evaluation of the capability of the cloth MicronQuick to reduce bacteria on floor surfaces

1. Method(s) and material

The present study is based on EN 1174-2, DIN EN ISO 846, method C the customer's instructions and BMA-Laboratory reports of AU141212-07.

The test was performed in a clean bench.

Bacteria test strain: *Pseudomonas aeruginosa* (DSM-Nr. 288)

Neutral cleaner: Tana Green care Neutral-Reiniger 04631 (TANA Chemie GmbH, Mainz, Germany)

Test surface: PVC floor covering, non structured (98 cm x 27 cm), disinfected; subdivided into 39 sample squares (9 cm x 7 cm)

Samples 1.1 to 1.3: Negative control after disinfection, samples 1.4 to 1.9: Positive control after bacteria application, samples 1.10 to 1.39: treated sample squares after bacteria application and cleaning with the test cloth.

Applied bacteria suspension

5 ml of *P. aeruginosa* suspension 7×10^9 cfu (colony forming unit); calculated amount per test sample (9 cm x 7 cm): $1,9 \times 10^8$.

Eluation and determination of bacteria from the sample squares

Samples were incubated in 15 ml 0,9% NaCl solution in a falcon tube and shaken 20 min end to end. The bacteria concentration of the suspension was analysed using the spread plate method (100 µl plating volume of dilution series) and/or the filtration method for samples with expected high or low bacteria contamination respectively. The agar plates were cultivated 5 days at 30°C.

Cleaning procedure

The cloth was fixed in a double layer to lab a testing device (provided by the customer) consisting of a massive plastic block (9 cm x 6 cm) and ensuring a homogenous pressure. It was moistened by spraying 5 ml water with 1% neutral cleaner (without disinfectants). Then the cloth with the block was wiped once across the test surface by moving it in form of an 8 at a speed of approx. 5 cm/s based on instrutions of the manufacturer.

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Anschrift:
BMA-Labor GbR
Technologiezentrum Ruhr
Universitätsstraße 142
D-44799 Bochum

Kommunikation:
Tel.: 0234 / 978 30 - 0
Fax: 0234 / 978 30 - 29
Mail: info@bma-labor.de
http://www.bma-labor.de

Gesellschafter:
Dr. rer. nat. Ute Stephan
Dr. rer. nat. Klaus Klus
UST-IdNr.: DE202600482

Postbank Frankfurt
BLZ 500 100 60
Kto.-Nr.: 117 640 607
IBAN: DE76500100600117640607
SWIFT/BIC: PBNKDEFF

2. Results

2.1 Amount of aerobic mesophilic bacteria after disinfection

The results of the measurements and analyses exclusively refer to the examined sample(s).

Sample / Sample identification	Sample No.	Sample description	Mean concentration of mesophilic bacteria	
			Sample square (63 cm ²) [CFU/15 ml]	[CFU/m ²]
Control 160224-10/1	1.1-1.3	Negative control after disinfection	1 ^(a)	1,6 x 10 ²

^(a) Detection limit filtration: 1 cfu/15 ml

^(b) Detection limit spread plate: 150 cfu/15 ml

2.2 Amount of *Pseudomonas aeruginosa* before and after cleaning

The results of the measurements and analyses exclusively refer to the examined sample(s).

Sample / Sample identification	Sample No.	Sample description	Mean concentration of <i>P. aeruginosa</i>	
			Sample square (63 cm ²) [CFU/15 ml]	[CFU/m ²]
Cloth: MicronQuick 160224-10/1	1.4-1.9	Positive control after bacteria application	2,2 x 10 ⁵ ^(b)	3,5 x 10 ⁷
	1.10-1.39	Treated sample squares after bacteria application and cleaning with the test cloth	16 ^(a)	2,5 x 10 ³
		Reduction [%]	99,99	

^(a) Detection limit filtration: 1 cfu/15 ml

^(b) Detection limit spread plate: 150 cfu/15 ml



Dr. Ute Stephan
 Manager



Stephanie Wollenberg
 QMR