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Aschaffenburg, 2 April 2009

From: Dr. Riedlinger
hu

REPORT

Order No.: 5524/1 **Page 1 of 3 pages**

Client: S.C. KÖBER S.R.L.
Turturesti-Girov
617221 Neamt
Romania


Date of order: 6 March 2009

Receipt of sample material: 9 March 2009

Origin of sample material: From the client

Purpose: Analysis of paint for its antibacterial efficacy


(Dr. Zechmann)


(Dr. Riedlinger)
Microbiologist

The present report refers exclusively to the samples as laid out therein. Information and statistical data on the results can be obtained on request.

Non-accredited determinations have not been validated at the date of the accreditation. Individual determinations were not intended for accreditation owing to their restricted field of application. In these cases, the necessary accuracy for the evaluation is ensured by the internal quality management system.

Sample Material

For analysis the following sample material was in hand:

Sample 1: Blank (reference sample)
Sample 2: Equipped sample

Carrying out of the tests

Examination period: 10 March 2009 to 30 March 2009

1. Test for Antibacterial Efficacy *

The test was performed by analogy with the method ASTM E 2180-07.

Specimen of 4.5 cm x 4.5 cm were inoculated with a contaminated artificial biofilm (agar slurry with the test germ). Immediately after inoculation the agar layer of a part of the samples was removed by means of ultrasonic and vortexed and the number of germs was determined. The other inoculated samples were stored in a moist chamber at 36 °C for 24 h. Subsequently, the agar layer was removed from those samples, too, and the germ number was determined.

Test organisms: *Staphylococcus aureus* (ATCC 6538)
Escherichia coli (ATCC 8739)

Storage conditions: 36 °C, 24 h

The reduction of the germ number was calculated according to the following equation:

referring to the original germ number: $\% \text{ reduction} = \frac{(T_0 - T_{24,Pr})}{T_0} \times 100$

referring to the reference material: $\text{log. reduction} = \log\left(\frac{T_{24,Ref}}{T_{24,Pr}}\right)$

T_0 = germ number/test specimen, immediately after inoculation
 $T_{24, Pr}$ = germ number/test specimen, after 24 h incubation, on the sample
 $T_{24, Ref}$ = germ number/test specimen, after 24 h incubation, on the reference material
log. reduction = value of the antimicrobial activity according to JIS Z 2801:2000

Result:

Testgerm	% reduction		log. reduction (according to JIS Z 2801)
	Sample 1	Sample 2	Sample 2
<i>Staphylococcus aureus</i>			
Average value	96.59	> 99.99	> 3.26
Standard deviation	1.36	0.0	0.18

Testgerm	% reduction		log. reduction (according to JIS Z 2801)
	Sample 1	Sample 2	Sample 2
<i>Escherichia coli</i>			
Average value	- 721.21	> 99.99	> 6.21
Standard deviation	723.92	0.0	0.60

Evaluation:

The sample material submitted for examination was analysed against *S. aureus* and *E. coli* for its antimicrobial efficacy by analogy with ASTM E 2180-01. According to JIS Z 2801:2000, section 4, there is no antimicrobial efficacy at a log. reduction value of less than 2.0.

The accreditation applies to the methods marked with * in the test report (Register no. DAC-P-0035-97-20).

End of report