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D-Pl. 14559-01-01  
D-Pl. 14559-01-02

Bad Bocklet, 16 January 2014

## Test Report

(Version 01)

**Sample:**            **Argen Lab Deodorizer Formula 1**            **L+S-No.: 07016033**

**Order:**            **Quantitative suspension test for the evaluation of  
bactericidal activity according to EN 1276 – Screening  
with *Staphylococcus epidermidis***

(Order of 28 June 2013)

The test results apply solely to the analysed sample

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- Test report (Version 01) on Argen Lab Deodorizer Formula 1 (Quantitative suspension test according to EN 1276 – Screening with *Staphylococcus epidermidis*) - L+S-No.: 07016033 - Page 1 of 6 -

Vorstand:  
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Handelsregister HRB 2726 (Amtsgericht Schweinfurt)  
USL-Id.-Nr.: DE 814360374 · D-U-N-S-Nr.: 313 710 642



## Material and Method

### Quantitative suspension test for the evaluation of bactericidal activity according to EN 1276 - Screening (dilution-neutralisation)

#### 1. Identification of the testing laboratory

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#### 2. Identification of the sample

Product name: Argen Lab Deodorizer Formula 1  
Appearance of the product: colourless, liquid, clear  
pH-value (100%): > 10  
Date of delivery: 11 July 2013  
Storage conditions: room temperature

#### 3. Test parameters

Period of testing: 24 July 2013 – 16 August 2013  
Test strain: *Staphylococcus (S.) epidermidis* ATCC 12228  
Contact time: 15 minutes  
Test concentrations: 80% (= undiluted), 40% and 20%  
Organic loading: 0.3% albumin  
Test temperature: 20°C ± 1°C  
Counting method: surface method  
Conditions of incubation: 48 hours, 37°C ± 1°C



#### 4. Test method and its validation

Test method: dilution-neutralisation

Inactivation combination: 10.0% Tween 80, 3.0% lecithin, 0.3% histidin, 0.5% sodium-thiosulfate in caseine soybean broth

The results of all control tests confirmed the validity of the test procedure.

#### 5. Requirements

According to EN 1276 a log reduction of > 5.0 log against bacteria is required.

#### 6. Results

The results are stated in table 1.

#### 7. Conclusion

In accordance with the requirements of EN 1276 the product **Argen Lab Deodorizer Formula 1** showed the required microbial reduction of > 5.0 log under dirty conditions at a test temperature of 20°C with reference to the test strain *S. epidermidis* at concentrations of 80% (= undiluted), 40% and 20% after a contact time of 15 minutes.

The controls demonstrated the validity of the testing method.

16. JAN. 2014

  
Dipl-Biol Anastasija Schlicht  
- Head of Department -

16. JAN. 2014

  
Dr Thomas Meindl  
- Division Manager -



**Table 1: Quantitative suspension test according to EN 1276**

**Product: Argen Lab Deodorizer Formula 1**

**Contact time: 15 min**

**Organic loading: 0.3% albumin**

**Test temperature: 20°C**

TEST					
Test strain	Test suspension	Dil. of TNM	Test concentration: 80% (= undiluted)	Test concentration: 40%	Test concentration: 20%
<i>S. epidermidis</i> ATCC 12228	Vc: 270 N = $2.70 \times 10^6$ N <sub>0</sub> = $2.70 \times 10^7$	10 <sup>0</sup>	Vc: 0/0 Na: $< 1.40 \times 10^2$ R: $> 1.93 \times 10^5$ = $> 5.29 \log$	Vc: 0/0 Na: $< 1.40 \times 10^2$ R: $> 1.93 \times 10^5$ = $> 5.29 \log$	Vc: 0/0 Na: $< 1.40 \times 10^2$ R: $> 1.93 \times 10^5$ = $> 5.29 \log$
		10 <sup>-2</sup>	Vc: 0	Vc: 0	Vc: 0
		10 <sup>-3</sup>	Vc: 0	Vc: 0	Vc: 0

VALIDATION				
Test strain	Suspension	Validation of experimental conditions	Toxicity control	Validation of inactivation
<i>S. epidermidis</i> ATCC 12228	Vc: 35 N <sub>v</sub> = $3.50 \times 10^2$ N <sub>v0</sub> = $3.50 \times 10^1$	Vc: 26/60 A = $4.30 \times 10^1$	Vc: 46/56 B = $5.10 \times 10^1$	Vc: 32/18 C = $2.50 \times 10^1$



**Notes to table 1:**

- CFU** = Colony forming units
- TNM** = Test neutralisation mixture
- Vc** = Viable organism count
- N** = Number of cfu per ml in the test suspension
- N<sub>0</sub>** = Number of cfu per ml in the test suspension at time t = 0
- N<sub>v</sub>** = Number of cfu per ml in the diluted test suspension
- N<sub>v0</sub>** = Number of cfu per ml in the diluted test suspension at time t = 0
- Na** = Number of cfu per ml in the test mixture
- A** = Number of cfu per ml in the control experiment for experimental conditions
- B** = Number of cfu per ml in the control experiment for the toxicity of the neutralisation medium
- C** = Number of cfu per ml in the control experiment for inactivation
- R** = Reduction of viable organism count,  $\frac{N \times 10^{-1}}{Na}$



## Appendix

### QAU Certificate

The results given in the above test report were compared with the raw data of the study and checked for correct transfer. No deviations were found.

  
F. A. M. Neugebauer  
QAU

17. JAN. 2014  
Date