

Nature Research Centre Institute of Botany, Biodeterioration Research Laboratory

Assessment of Paint „Argentum 20“ antimicrobial effect

Report

Vilnius

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Aim: to assess the antimicrobial effect of Paint Argentum 20 against bacteria and microscopic fungi.

Methods: tests on the paint effect against bacteria *Escherichia coli* and *Staphylococcus aureus* were conducted following the standard „ISO 22196. Plastics – Measurements of antibacterial activity on plastic surfaces“. The effect against microscopic fungi *Candida albicans* and *Aspergillus brasiliensis* was evaluated based on the same standard applying incubation time of the Paint effect 48 h.

Results

The results are showed in the Table.

Table. Effect of Paint Argentum 20 on microorganisms

Microorganisms	Incubation time	Count of microorganisms after incubation (CFU*/cm ² , average)	
		Unpainted surface (control)	Painted surface
<i>Escherichia coli</i>	24 h	259,7	0,2
<i>Staphylococcus aureus</i>	24 h	166,7	1,2
<i>Candida albicans</i>	48 h	930,6	0,3
<i>Aspergillus brasiliensis</i>	48 h	151,4	0

* CFU – colony forming units

Conclusion

The assessment of the Paint Argentum 20 antimicrobial effect on microorganisms showed that the paint effectively prevented growth of the tested microorganisms. Survived alive cells of *S. aureus* were 1,2 CFU/cm², whereas those of the other microorganisms were < 1.

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