

To:
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Test report

Hollabrunn, 14.01.2021

Description: Proof of the mould-reducing effect – 3. Test

According to the order, a further test set-up was carried out to demonstrate the reducing effect regarding mould exposure on the surfaces to be tested. Building on the experience of the previous tests, the sampling intervals were set as in the table below and extended to 8 hours.

The proof of the sterility of the sample materials and the sampling immediately after the application of the mould suspensions was dispensed with in favour of this test duration, which was extended to 8 hours. The method of classical microbiology with the help of contact samples (25cm²) was chosen as the sampling method.

The evaluation was carried out by counting the cultures that have grown. Since the data from this series of experiments are incorporated into the diploma thesis carried out in parallel, the colonies that have grown were counted, differentiated according to moulds (M) and yeasts (Y).

Start of the testing:

11.12.2020 3. Test

Microbiological control	Reference sample		Glass		
	GC / 25cm ²		GC / 25cm ²		
	M	Y	M	Y	
Sample after 1h	6	43	2	22	
Sample after 2h	5	13	6	5	
Sample after 3h	4	7	2	1	
Sample after 4h	2	4	1	0	
Sample after 5h	2	4	0	0	
Sample after 6h	2	4	0	0	
Sample after 7h	2	2	0	0	
Sample after 8h	0	2	0	0	
	GC / ml				
GC of the culture applied	+3,0 (10) 8				

GC Germ count

Result:

The "pure air" coating has a clear mould-reducing effect.

In the experimental setup, the plate was positioned directly in front of the light source. The light source was proven to have a direct influence on the mould-reducing effect!

The decrease in the exposure to mould and yeast on the reference plate can be explained by the relatively high temperature (>30°C) and the dryness resulting from the intensive lighting in the test setup.

As part of a further series of experiments, on the one hand, an experiment without an additional light source and, on the other hand, an experiment with practical, coated wall coverings (tiles) are being considered.

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