

## **THE MOLD TEST, FINLAND**

The mold test was performed at a location damaged by water. A warm water line had leaked causing water to run down a particle board/painted brick wall damaging both surfaces. The size of the damaged area was about 500 square feet. It was located in the middle of a building and didn't have a window. The accident caused serious odor problems affecting practically the entire building. The odors were removed with Biozone assuring an uninterrupted use of the building by the rest of the tenants.

The mold test was performed about three weeks after the area had been dried. The test samples were taken from concrete (painted brick?) and particle board surfaces. Using a normal swipe method, a 4 by 4 inch area of each surface was swiped with a cotton swap and a liquid developed for testing purposes. Test certificate 2004-4814 was taken before using Biozone Powerzone II unit. The Powerzone II was in use for about 12 hours with mechanical ventilation system running the whole time.

The swipe test was repeated the next day; its' results can be read in test certificate 2004-4982. Mold spore counts were reduced very dramatically making the seriously damaged area mold free in a matter of hours. The results were analysed by Kokkola Area Food Stuff and Environmental Laboratory. The analyses was performed by microbiologist Kirsi Vedenpää. In discussions, after the analysis, Ms. Vedenpää explained mold to be a problem if the mold spore counts exceeds 100,000 units. As can be seen from test certificate 2004-4982 mold was no longer a problem.

We are convinced that Biozone units are very effective at dealing with mold damage.

In Kokkola September 15th. 2004.

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**Kiviaho Tero**

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<b>Sample information</b>	<b>Sample</b>	Surface cleanliness, swipe		
	Sample Collected	09.08.2004	Sample Collected by	Customer
	Arrival	09.08.2004		
	Test began	10.08.2004		
	Test Completed	26.08.2004		

Sample	Analysis Unit of Measure Method	Actinomycetes pmy/100cm <sup>2</sup> Sis.menet.	Molds pmy/100cm <sup>2</sup> Sis.menet.
4814-1, Surface cleanliness, swipe, test 1			22 000
4814-2, Surface cleanliness, swipe, test 2			120 000
4814-3, Surface cleanliness, swipe, test 3			>1 300 000 Est.
4814-4, Surface cleanliness, swipe, test 4			450 Est.
4814-5, Surface cleanliness, swipe, test 5		<10 Est.	150 Est.

**Statement**

The interpretation of test results is based on Dwelling Health Guideline (Finland's Ministry of Health guide booklet: 2003:1). Surface sample test result interpretation must always be based on the comparison of microbial counts on the test sample and the control sample. Fungi-spore counts, or in other words, the mold and yeast amounts on dry, damage free surfaces are usually under 1000 pmy/100 cm<sup>2</sup>. If the fungi-spore count on a surface test sample exceeds 100 000 pmy/100 cm<sup>2</sup>, and the surface test sample fungi-spore count is at least 100 times greater than on the surface control sample, it is safe to say that the surface test sample has fungi growth. If the surface test sample actinomycetes count is at least 10 times greater than on the control sample, it is safe to say that the test sample contains actinomycetes growth.

Sample 1 did not contain an elevated mold-spore count. However, the presence of Penicillium- ja Coelomycetes-mold families were found.

Sample 2 did contain an elevated mold-spore count. Acremonium- , Penicillium- ja Aspergillus-mold families were present. The sample also contained an unidentified mold family.

Sample 3 did contain an elevated mold-spore count. Acremonium-mold family was dominant. Cladosporium- ja Penicillium-mold families were also found. The sample also contained an unidentified mold family.

Sample 4 did not contain an elevated mold-spore count. However, the presence of Acremonium- ja Aspergillus-mold families were found.

The results of the analysis only apply to the samples analysed.

The certificate of the analysis can only be copied in whole. In all other instances a prior written permission must be obtained.

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Sample 5 did not contain an elevated mold-spore count. No actinomycetes were found. The presence of Penicillium-mold family was found. The sample also contained an unidentified family of mold.

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Kirsi Vedenpää  
Microbiologist

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**Kiviaho Tero**

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<b>Näytetiedot</b>	<b>Sample</b>	Surface cleanliness, swipe		
	Sample Collected	13.08.2004	Sample collected by	Customer
	Arrival	13.08.2004	Reason for sample	Moisture damage
	Test began	16.08.2004		
	Test Completed	30.08.2004		

Sample	Analysis Unit of Measure Method	Actinomycetes pmy/100cm2 Sis.menet.	Molds pmy/100cm2 Sis.menet.
4982-1, Surface cleanliness, swipe , concrete I			6 000
4982-2, Surface cleanliness, swipe , concrete II			700 Est.
4982-3, Surface cleanliness, swipe , concrete III			17 000
4982-4, Surface cleanliness, swipe , concrete IV		<10 Est.	
4982-5, Surface cleanliness, swipe , concrete V			<10 Est.

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Sample 1 did not contain an elevated mold-spore count. However, the presence of Penicillium- ja Phoma-mold families were found.

Sample 2 did not contain an elevated mold-spore count. However, the presence of Penicillium- , Aspergillus- ja Phoma-mold families were found

Sample 3 did not contain an elevated mold-spore count. However, the presence of Acremonium- , Penicillium- ja Cladosporium-mold families were found.

Sample 4 did not contain an actinomycetes growth.

Sample 5 did not contain mold growth.

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Kirsi Vedenpää  
Microbiologist

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