

Air Sampling and Analysis for Mold in Hills Building UMass

Christine Rogers, PhD
Environmental Health Science
SPHHS

Room 122 Hills North

Introduction

Upon request, room 122 of Hills North was sampled for airborne mold on October 24, 2011.

Methods

Air samples were collected for mold analysis using a BioPump Plus sampler that operated at a verified flow rate of 15 L/min and a 5-minute sample (0.075 m³ total volume) was collected in an Air-O-Cell cassette. One sample was taken outdoors for comparison with indoor air samples. Collection media in the cassettes were analyzed microscopically by PAACB certified spore analysts at 400X magnification. The whole trace was enumerated and counts were converted to concentration and expressed as the number of spores per cubic meter of air (spores/m³). The lower limit of detection was 13.3 spores/m³ of air

Results

Outdoors

Basidiospores	2,893
Ascospores	147
<i>Penicillium/Aspergillus</i> -like	66.7
<i>Epicoccum</i>	26.7
<u>Unknown</u>	<u>93.3</u>
Total	3,226.7 spores/m ³

Moderate amount of airborne particles

Room 122

Basidiospores	707
<i>Penicillium/Aspergillus</i> -like	467
<i>Cladosporium</i>	107
Smut	53.3
<i>Curvularia</i>	13.3
<i>Alternaria</i>	13.3
<i>Nigrospora</i>	13.3
Unknown	66.6
<u>Hyphal fragments</u>	<u>80</u> * not included in total
Total	1,440.8 spores/m ³

Moderate amount of airborne particles

Interpretation

Total spore concentrations are below outdoor levels, however, the concentration of *Penicillium/Aspergillus*-like spores exceeds outdoor levels and is approaching 500 spores/m³ which could indicate a potential moisture source and possible mold growth. This level of *Penicillium/Aspergillus*-like spore concentration likely does not pose a health threat to normal healthy individuals. Even in previously sensitized individuals exacerbation of symptoms would be uncommon.

Recommendation

Re-evaluate the airborne mold concentration in this space and do a visual inspection.