Air Exam Frequently Asked Questions

This report contains the following sections: Chain of Custody, Report (and optionally Frequently Asked Questions, and Glossary).

How do I know if the results are normal?

The general guideline is that the concentration and types of spores in the inside sample should be similar to or lower than the concentration in the baseline/reference sample. Due to the high variability in results, this test is mainly used to alert one to potential problems that may have been missed by visual inspection. Accurate measurements of true airborne concentrations require multiple samples taken during different times, and it can involve complex statistical analysis. The category Aspergillus / Penicillium are small (1-3 microns), round, colorless spores that may include Gliocladium, Trichoderma, other morphologically consistent with Aspergillus / Penicillium spore types. A culture sample would be necessary to differentiate between them. Currently there are no dose response relationship statistics for allowable or safe levels of aeroallergens. However, if spores of Aspergillus / Penicillium are found at higher levels than outside, or Stachybotrys are found inside at even low concentrations, further investigation of the source should be conducted by a IAQ professional.

What is the Calculated Concentration ?

The Calculated Concentration is a measure of the concentration of mold spores in the air, and is listed as spores per cubic meter of air. It is useful for comparing samples and understanding how many spores are in a given section of air. This is calculated based on the air flow rate of the pump, the time the pump was run for, the proportion of the sample enumerated, and the raw count. It is calculated as ((100/Proportion of Sample Analyzed)/(Air Flow Rate * Pump Run Time)*(Raw Count). This number is then rounded to two significant figures. The calculated concentration is useful for comparing samples with different volumes, sample types, and counting methods. It is also useful for understanding how many spores there are in a given section of air. If you believe that the air flow rate and pump run time may be incorrect for some or all of your samples, please contact the lab and we can correct this for you.

What is the Raw count on the report?

The ‘raw’ count is how many spores the technician actually viewed on your sample while looking through the microscope. We use this number to generate the calculated concentration. Moldlab stops counting spores at 100 and reports as ">100."

Can you tell me a little more about Airborne Mold Spore samples?

This type of sample is a non-cultured air sample. Results are reported in concentrations of spores per cubic meter (spores/m3). This test is referred to as a "snapshot" of the air at the exact time of sampling. The test works by pumping a controlled volume of air through a spore trap. The spore trap has a sticky substance on its surface which captures any particles from the air, including mold spores. Results account for both live and dead spores as well as pollen, skin, insect parts etc. (if a full profile analysis is requested).

What is the ‘debris field rating’ ?

The 'debris field rating' is a visual estimate made by the technician of how much non-fungal debris there is on the sample. The rating includes all non fungal particulate (fibers, debris, pollen, insects, skin, etc.). The scale includes ratings of 'None Detected, 'trace,' 'minor,' 'moderate,' 'heavy,' and 'occluded'. 'None detected'= no sample was detected on the slide(possibly due to equipment failure or user error). 'Trace'= trace amounts of debris are present. 'Minor'= small amounts of debris are present. 'Moderate'= an average amount of debris present. 'Heavy'=indicates a high concentration of debris particulate. Lastly, 'occluded'= indicates the amount of particulate on the sample is so concentrated that the technician could not see through it to count and identify accurately. This is a common occurrence in wall cavities, construction areas, crawlspaces or other particularly dusty environments. The higher the debris rating, the greater the negative bias of results.

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What is a "significant figure?"

Significant figures are used in science to give a better representation of the accuracy of a number. All non-zero digits in a number are significant. Additionally, any digits to the right of a decimal are significant, whether they are zero or not, and all digits in between non-zero digits are also significant. Significant figures give an understanding of what decimal place a number is accurate to. For example, if 43 is given as 43.0, it is assumed that the "true" value is somewhere between 42.95 and 43.049. If it is given as 43.00, it is assumed the "true" value is somewhere between 42.995 and 43.0049, which is much more precise. Similarly, if 431 is shown as 431, it is assumed that the analysis is accurate to between 430.5 and 431.49, while if it is given as 430, it is only assumed to be accurate to between 425 and 434.9. In this report, all calculated numbers, such as the minimum reporting limit and the calculated concentration, are rounded to two significant figures. All numbers that were not calculated are given without rounding.

What is the "minimum reporting limit?"

A minimum reporting limit is exactly what it sounds like- the minimum number that must be reported for the calculated concentration if any spores are detected. This is calculated as (100/Proportion of Sample Analyzed)/(Air Flow Rate * Pump Run Time). This number is essentially the amount a single spore increases the calculated concentration by. All spores types that are not listed as having a raw count of 1 or greater have a calculated concentration of less than the minimum reporting limit. It cannot be said based upon a raw count of zero that the true concentration of that spore type is 0, however, because the testing procedure is not sufficiently accurate. For this reason, the minimum reporting limit gives a useful measure of the minimum detectable concentration of mold types. Bear in mind that any negative bias due to the debris field rating IS NOT accounted for in this minimum reporting limit.

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