

# Mold: To Test or Not to Test?

## *A really great question!*

### About Mold

Mold is an ever-present organism in our natural environment – both indoors and outdoors. It's neither possible nor desirable to completely eliminate mold from our indoor spaces. Rather, the goal is simply to keep our buildings clean, warm, and dry. Why? Because mold needs moisture in order to grow. Keeping buildings clean and dry is the best defense against mold problems indoors. If we are successful in this endeavor, the mold that is present in our buildings will simply be temporary visitors from the outdoor, natural environment and will be unable to establish permanent colonies inside, thus presenting no greater hazard than the mold that is present in our natural, outdoor environment.

**A mantra to remember: no moisture = no mold!**

For more information about mold, mold prevention, and mold clean-up, visit the **Maine Indoor Air Quality Council** website at [www.maineindoorair.org](http://www.maineindoorair.org) or call (207) 626-8115.

### **What actually happens when mold grows indoors?**

If you do end up with mold growing in your building, it's likely the mold colonies you see are self-contained ecosystems comprised of various species of mold, bacteria, and insects like dust mites; all of which are feeding, metabolizing, reproducing, and dying. The mix of species that are present will change as the colonies evolve with time and changing conditions. These colonies are capable of producing a wide assortment of potential airborne contaminants including mold fragments, mold spores, microbial volatile organic compounds (mVOCs), particulates containing digestive enzymes produced by mold, particulates containing toxins that mold excrete to protect their food source from other species (mycotoxins), toxic particles from certain types of dead bacteria (endotoxins), dust mite body parts, and dust mite feces. The concentrations of any of these potential airborne contaminants will vary significantly over time. Some of them may not be present at all and some may be undetectable in air samples even though they may be present in the air or in the mold colonies.

### **What is mold testing, exactly?**

The most common type of mold testing is an air sample test. Testing for airborne mold involves moving air through collection devices that are then sent to a special "mycology" lab for analysis. After analysis, the lab will send the investigator a report that lists the types and amounts of mold that the lab identified on each collection device. There are several air testing methods that can be used to collect mold samples. Each method has a unique ability to collect certain types of mold and provide us with certain types of information. No one test method or even collection methods can capture and detect all of the mold types and amounts that might be present in the air. It's critical to understand that the lab report lists the types and numbers of mold that were captured and detected on the collection devices and does not necessarily indicate all of the numbers and types of mold that might have been present in the air during testing.

### **Huge Challenge: Mold Testing Cannot Prove the Presence of a Health Hazard**

There is tremendous variability in the numbers and types of contaminants that might be present in a mold-contaminated building and individual sensitivities to these contaminants can vary widely. Several of the contaminants described above can trigger allergic and asthmatic responses. People who suffer from allergies or asthma may have adverse reactions to relatively low concentrations of these airborne contaminants while people who are not affected by allergies and asthma may have no adverse health effects even when the concentrations of these contaminants are relatively high. Other contaminants have the potential to cause a variety of other health effects. All of this variability has prevented scientists from figuring out what constitutes a maximum safe airborne concentration (exposure limit) for the vast majority of these contaminants including mold spores and mold fragments.

This makes mold a very different, and very challenging indoor contaminant, because unlike other pollutants, we just don't know how much mold it takes to make people sick. And without exposure limits, we can't use air testing to determine if airborne mold is a health hazard or if it's the cause of someone's symptoms.

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## Page 2

*Worrying about when or when not to test becomes a moot point when we keep our buildings warm and dry.*

***Remember: no moisture = no mold!***

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### **In Most Cases, You Don't Need to Test**

If you actually see mold growing in your indoor environment, you can spare yourself the time and expense of mold testing and put your resources towards fixing the underlying moisture problem, and conduct proper clean-up and repair (called remediation) in accordance with best practice principles. Why can you skip the testing? Because knowing the species of molds present and in what quantities in a specific sample doesn't give you any information you don't already know: you have a moisture problem that has caused mold to grow indoors. Remember: no moisture = no mold. You or a qualified mold investigator should be able to identify the moisture problem (common ones are plumbing leaks, water intrusion from outside, and condensation on cold surfaces), and determine the extent of the repair and clean-up required. Because we see the mold, we don't need air testing to tell us that we should take action.

### **When is Air Sampling for Mold Useful?**

There are two common reasons to do air sampling for mold. 1) Testing for airborne mold can be very useful when indoor mold growth is suspected but you cannot actually see any obvious mold colonies. Testing can be done in these situations to compare the types and numbers of mold from complaint areas to those from non-complaint areas and the outside. Indoor test results that are similar to outdoor and non-complaint area test results might indicate that the mold found indoors came from outside. Indoor tests that are very different from outdoor and non-complaint area tests might indicate that mold is indeed growing in the building thus justifying more expensive and destructive investigative techniques. 2) Comparative testing following a moisture repair and clean-up is useful to support the decision to "clear" an area for re-occupancy. Mold test results from the remediated area and the outside that are pretty similar might support the hypothesis that any mold that is now present in the remediated area came from the outside. Comparative mold testing should never be used as the only or even primary source of information in a mold investigation or remediation clearance but it can provide valuable information if using an investigator with the skill to interpret the information properly.

### **Summary**

Resources that might be spent on inconsequential air sampling to determine if airborne mold is presenting a hazard to occupants or is causing their symptoms should be diverted toward identifying and eliminating conditions that can support mold growth and remediating areas where indoor mold growth has occurred. Mold tests that compare the types and numbers of mold in complaint areas, non-complaint areas, and the outside can provide valuable information during mold investigations and clearing spaces for re-occupancy following remediation but should never be used as the only or even primary source of information in these situations.

