

## **Every Home Inspection is a Preliminary Mold Inspection** Even if the Home Inspector Doesn't Believe it!

There have been some developments in the Mold Industry that is of interests to home inspectors and real estate agents. Three prominent mold related associations, IAQA, the Indoor Air Quality Association, [www.iaqa.org](http://www.iaqa.org) IESO, the Indoor Environmental Standards Organization, [www.iestandards.org](http://www.iestandards.org) and the AmIAQ, the American Indoor Air Quality Council [www.AmIAQ.org](http://www.AmIAQ.org) have combined as of January 1, 2006 to form the largest air quality association in the nation. With a membership of over 5,000; the new association, which is using the name "Indoor Air Quality Association" or "IAQA" for short is finally bringing some common sense to the mold industry. Every CREIA member understands the importance of the Standards of Practice for protection from frivolous lawsuits and now the IAQA now incorporates the IESO's "Standards of Practice for the Assessment of Indoor Environmental Quality" to provide a basis for a common sense approach to residential mold sampling.

In order to use these standards of practice, just like our CREIA standards, one must belong to IAQA and must attend a course that lays out proper procedures and sampling practices. There is a closed book exam at the end of the course that must be passed with an 80% to become a "Council-Certified Residential Mold Inspector." After passing the exam, theoretically the mold inspector is qualified to visually inspect a home and take samples of suspected mold infested areas. The IESO "Level 2 Assessment: Standard Guide for Inspecting Residential Structures for Mold Contamination" provides standardized procedures to be used for the inspection and sampling of residential structures. The mold inspector is not qualified to offer any advice or opinions as to the cause of any mold condition, or how to remediate the condition or to offer any health related advice to the occupants of the home. Their training is clear and does not allow a mold inspector to comment on issues for which they are not qualified. This is only an entry level certification.

The purpose of the sampling protocol is to determine if there is a mold condition present or a defect that may lead to a mold condition in the home so that the occupant can make an informed decision on whether a problem really exists. The Standards require using a laboratory that follows the ISO (International Standardization Organization) #10725 Standard for performing analysis for mold. Just like everything else there are many laboratories with varying degrees of certification. I was surprised to learn that there was one laboratory that operated out of a garage at the owner's home. Following the 10725 laboratory standard insures the client of using a highly qualified laboratory.

Based on the laboratory results a decision can be made if a more qualified specialist, like a Council Certified Indoor Environmentalist "CCIE" or even a more qualified Certified Indoor Hygienist "CIH," should evaluate the condition of the home. The CCIE or the CIH can then more completely evaluate the home's condition and advise the occupants on how to remediate the damage.

Remediate and the Remediation Specifications are terms applied to the mold industry. "Remediate" means to repair a mold condition, and "Remediation Specifications" are the plans and specifications prepared by the CCIE or CIH that should be followed by the remediators to

remove the damaged materials out of a home. The scope of remediation does not necessarily include rebuilding the areas that are removed. Many times the repairs are left up to conventional contractors. Usually the remediation portion of the job is performed by the “Certified Mold Remediators” or CMR’s. These are the guys in the moon suits; if you see one coming then get out your check book because their services are not cheap! And these guys earn every penny. Just try wearing a PPE or Personal Protection Equipment, a “moon suit,” with a respirator for a few minutes and you will appreciate the home inspection business that much more. It takes a healthy young man in good shape to withstand the rigors of wearing PPE. That is why they get paid so much.

The standard also allows for acceptable levels of contamination: they follow the recommendations in the Bioaerosols: Assessment and Control, one of the prevailing publications in the mold industry. A 10 times level of indoor airborne mold compared to the outdoor airborne level is an automatic health safety issue. There is a grey area from the 10 times level to the “Natural Fungal Ecology” of the home that takes interpretation. Typically if the outside airborne mold is 2 times the indoor level it is a concern. In these lower level cases the types of mold become more important as to the recommendations. Just from a matter of liability, if the level of mold at the interior is higher than the exterior then there will need to be some cleaning or possible remediation necessary. Sometimes just a good whole house cleaning will resolve the issue. Sometimes the home needs to be rebuilt.

The IESO Standard includes the visual inspection of the various systems in a home very much like the CREIA Standards. It is readily apparent that there was some collaboration between IESO and ASHI (American Society of Home Inspectors) in regards to developing the inspection portion of the standards:

### 3. Inspection

3.1 Inspect the following areas for visible suspect conditions and record these conditions,

3.2 Grading and drainage within 10 feet of the structure

3.2.2 Exterior wall coverings and all penetrations

3.2.3 Decks and other attached structures

3.2.4 Adjacent potential sources of water that might impact the exterior of the structure (e.g. water features)

### 3.3 Foundation

3.3.1 Stem Wall/Foundation

3.3.2 Basement

3.3.3 Crawlspace

3.3.4 Ventilation Systems

### 3.4 Roof

3.4.1 Penetrations

3.4.2 Drainage and flashing

3.4.3 Type and condition of roof covering

### 3.5 Attic

3.5.1 Insulation

3.5.2 Ventilation

- 3.5.3 Condensation drainage
- 3.5.4 Framing and sheathing
- 3.6 Interior
  - 3.6.1 Walls, Ceilings, floors and floor coverings
  - 3.6.2 Carpets, rugs, and fleecy furnishings
  - 3.6.3 Doors and windows
  - 3.6.4 High moisture areas-laundry, bathroom, kitchen
- 3.7 Plumbing
  - 3.7.1 Relevant fixtures supply and drain lines
- 3.8 Heating, Ventilation, and Air Conditioning Systems
  - 3.8.1 Visible duct work
  - 3.8.2 Air handling unit (if accessible)
  - 3.8.3 Filters
  - 3.8.4 Fans

It is immediately apparent by these standards that a residential mold inspection is an abbreviated home inspection; only the moisture related areas are addressed and all the mechanical areas are exempted. Both inspections are concerned with moisture and moisture intrusion. The difference is that the home inspector does not sample any areas of likely contamination. Accordingly by default every home inspection is a preliminary mold inspection.

Home Inspectors are uniquely qualified to perform a level 2 mold inspection. Their home inspection training makes the visual portion of the inspection just a continuation of their regular business. Only the sampling requires some education. The only weakness I can see in the standards is that it does not address any safety issues that may be encountered while performing a Level 2 Inspection. If a mold inspector finds a safety issue like a disconnected vent or a missing TPR valve on a water heater then I am sure some attorney will try to hold them responsible for damages should an occupant be harmed by an unreported issue. I would add a clause to the final report that states, "This is not a Home Inspection and I recommend that you obtain a home inspection for a Certified Home Inspector."

The class I attended was a very diverse group of individuals. A few were trying to obtain their certification, while others were attending to get their continuing education credits or to gain first hand knowledge of the new Standards. Some of these guys were highly educated: one was a scientist who worked only in a laboratory, and one was a chemist who spoke well above my level of education. All the students had varying degrees of education in mold related industries but I was the only home inspector in the class. All these people were experienced, highly educated in their own fields but it was very quickly apparent they did not understand the home inspection business and were probably not qualified to assess water intrusion issues when compared to a Certified Home Inspector.

All home inspectors are aware of the enormous amount of education that the business requires. I would bet my paycheck that not one of the students could correctly identify a "headwall" flashing or "PEX" plumbing. The list goes on and on. But these guys did not

bat an eye while reviewing the inspection standards. Every one of these students would be greatly improved by studying the home inspection industry but I suspect this is unlikely to happen.

When I discover a suspicious growth during a home inspection I do not call it mold. It could be bacteria, or just an unusual stain. I say, "There is a suspicious area that could be a biological growth. I recommend further evaluation by a qualified mold specialist to determine the nature of the suspect area." I then comment on the source of the water. As a CIE I do not try to characterize the suspect biological growth. Even with advanced training you cannot be sure of the nature of the growth without laboratory analysis.

Most Home Inspectors are circumspect in regards to mold. We have all heard the horror stories about high payout law suits and mis-characterizing staining issues. Mold is not so mysterious. When I describe mold to Realtors I describe mold as a microscopic field of mushrooms. Some of these mushrooms can be poisonous just like the full size version and they reproduce by giving off spores very much like flowers give off pollen. These spores can be allergenic, just like pollen. Some spores can be more allergenic than others; depending on the individual, the symptoms can range from a runny nose all the way up to neurological damage. The symptoms are dependant on the "dose," or the amount of mold present in the air, the length of time a person is exposed to the "dose," the specie of the mold present in the "dose," and the susceptibility of the individuals exposed to the "dose."

In addition, it depends if the mold is "happy" and comfortable in its environment, or if the mold "unhappy" and is in competition with other molds or bacteria. When a mold is stressed by something in their environment then they produce poisons to attack the other organisms that are competing for the same food source. These poisons or "mycotoxins" can be extremely toxic, depending upon the type of mold and the way the mold is forced to compete with the surrounding organisms. These poisons can accompany the spores into the air thereby greatly changing the symptoms in the exposed individuals. And lastly, even when a mold goes dormant from the lack of water or is killed with a biocide, the debris is friable and is allergenic. This airborne debris can still affect the occupants; all the poisons are still present and can become airborne by the disturbance of the mold debris. So under the proper conditions any mold can be toxigenic. I warn the Realtors not to make distinctions between so called toxic molds and safe molds; it just depends on the conditions.

Lastly, I explain that the EPA does not recommend sampling mold when it is visible. The reasoning being that if you can see it then it really does not matter what kind of mold is present, only that it needs to be cleaned up. **But these recommendations are for home owners only, not for home buyers!** The consequences for buying or selling a home that is infected with mold can be dramatic and fraught with liability. Any mold issue on a resale home must be properly mitigated to protect the buyer. Do not be misled by improperly interpreting the EPA's recommendations.

When a spore lands in a suitable location it will begin to grow. Mold needs three things to grow: a food source, free water, and a surface. Our houses are mostly built out of cardboard and the paper in the cardboard is an excellent food source. So when there is a water leak there will be mold sooner or later. The key is that mold needs water to grow and that is why a home inspection is so important. Home Inspectors are uniquely trained to locate water intrusion issues.

So as generalists every home inspector should be aware of the basics of mold and always, “identify, describe, disclaim, and defer,” suspect areas of staining and water intrusion and treat mold just like any other condition that requires further evaluation by an appropriate specialist. And remember, whether you like it or not, every home inspection is a preliminary home inspection.