

Black Mold: Not toxic to humans?

As real estate agents and home inspectors, we have been taught to run away screaming at the sight of black mold. Caoimhin (pronounced Qwee-Ving) Connell, Industrial Hygienist, says that there has not been a single, peer reviewed, scientific study done that shows *Stachybotrys* (one of many thousands of varieties of black mold) is toxic to human beings at concentrations seen in homes. There is, of course, the potential for allergic reaction.

Mr. Connell says that a report from the Centers for Disease Control that relied on unscientific and flawed study methods started the entire hysteria over black mold. There have been high profile stories about people getting sick from toxic mold, but Caoimhin says that in most cases, health problems attributed to mold are caused allergic reaction to other airborne agents common in most homes.

Mr. Connell calls testing methods used by home inspectors, “junk-science”. The normal testing done by home inspectors proves nothing except that mold is present. Mold is present everywhere. The normally used technique of comparing indoor and outdoor samples is so flawed that it proves nothing and is a waste of money, according to Caoimhin.

The normal reasons for mold testing usually don't make a lot of sense. Mold is everywhere. If it has a source of moisture and food (mold eats cellulose and complex sugars), it will grow and prosper until the moisture dries up. Then it goes into dormancy and can wait centuries to revive when the moisture is great enough for it to grow again. It takes around 19% water content in a food source and forty-eight hours for most molds to begin to grow. If moisture is controlled mold can't grow.

Testing is sometimes ordered when people in a house are having unexplained health problems. If mold is found, may be assumed to be the cause. The real cause is probably something else, especially in a climate as dry as Colorado.

Some people request a mold test to know what kind of mold is present in their homes with the thought that if *Stachybotrys* is present, something must be done. Normal testing procedures will find *Stachybotrys* present along with all other mold species that occur naturally in the environment. The concentrations, inside and out, will be higher or lower during different times of the year and periods of weather

An industrial hygienist approach would include working with the medical team to determine relevant testing. First a thorough visual inspection is done. He/she will be looking for a source of the allergen that has hopefully been identified by medical testing. Sampling for toxins (mycotoxins) is almost never performed since the testing is extremely expensive and there is no scientific evidence to suggest that such toxins are responsible for symptoms.

If a source is found, such as mold growth in walls, or off gassing of building materials, or pet danders or other allergen/toxin found in the environment, the next step is to identify a migratory pathway. This is a way that the offending source enters the person's immediate environment. If mold in the wall is contained in the wall and has no way to escape into the building, it is not a danger to the occupants.

If the offending agent has been found to have a way to enter a person's immediate environment, the person must be already susceptible to have a health effect. Only after all these aspects have been discovered will an industrial hygienist do lab testing, if necessary. Meaningful lab testing that will stand up in court is expensive. If the source, migration pathway and susceptibility pathways have been discovered, the problem can be corrected and lab testing may not be needed.

We welcome Caoimhin Connell and Christine McCarthy of Forensic Applications Consulting Technologies, Inc. to the Inspection Perfection Team.



Caoimhin and Christine will bring hard science to our environmental testing in order to provide our clients with the best possible information. They will provide commercial and residential environmental services to our clients.

In addition to mold testing, they provide meth lab testing (Caoimhin is the state trainer for testing), indoor environmental testing, complete commercial project testing, consulting and expert witness services. Check our site for a complete list of services provided by Caoimhin and Christine: <http://inspection-perfection.com/main/pages/Caoimhin.htm>

Mr. Connell has been a practicing industrial hygienist in Colorado for 17 years, and has an additional ten years experience as an analytical chemist working in both US EPA contract labs, and research labs in the US and abroad. In Colorado, an industrial hygienist must now have a minimum of a baccalaureate degree in one of the sciences. Check our website for Mr. Connell's extremely impressive resume: Further Information: <http://inspection-perfection.com/main/pages/Caoimhin.htm>