

# GENERAL GUIDANCE TO DETERMINE THE NEED FOR INDOOR AIR QUALITY (IAQ) TESTING

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## What is Indoor Air Quality Testing?

In reality, there is no one “indoor air quality test.” Testing the indoor environment can refer to a wide range of tests, different testing methods (air, bulk & surface samples,) and myriad contaminants or surrogates (indicators of contaminants) to test for. There is no *one* test that can be used to determine the safety or healthfulness of an indoor environment.

## Prior to Testing – the Comprehensive Building Walk-Through:

Prior to conducting any IAQ “test”, the Maine Indoor Air Quality Council recommends that a thorough inspection of the property be conducted. The intent of a preliminary building survey is to conduct a walk-through inspection of the facility to identify sources or potential contributors to the perceived concern. This may identify the need (or not) to proceed with testing for specific agents. This inspection, or “walk-through”, can often provide you with as much information about the healthfulness of the property as an indoor air quality test. For a better understanding of what to look for during a building walk-through, see [http://www.cmhc-schl.gc.ca/en/burema/gesein/abhose/abhose\\_ce32.cfm](http://www.cmhc-schl.gc.ca/en/burema/gesein/abhose/abhose_ce32.cfm).

## Testing Criteria

Testing should be part of a comprehensive, step-by-step approach, that includes:

- Defining the IAQ Problem or Concern
- Gathering Information About the Building
- Gathering information about the health and comfort of the building occupants
- Developing a Plan for Obtaining Additional Information if Needed
- Developing and Implementing a Remedy to the Identified Problem

The Maine Indoor Air Quality Council recommends that indoor environment/indoor contaminant testing be limited to very specific instances.

Prior to conducting any IAQ testing, building occupants and managers should ask:

- 1) **Have you conducted a thorough walk-through inspection of the property?**  
The property inspection can help identify structural, mechanical, environmental or occupant behavior issues that can lead to poor indoor air quality. It can provide a comprehensive understanding of how the various systems within the structure interact, and can assist to identify specific areas that may need further investigation.
- 2) **Do you have a clearly defined reason for considering conducting an IAQ test? What question(s) are you really trying to answer?**

A clear goal for the test results should exist. Doing a test for the sake of testing is costly and a waste of effort. A test to “check the quality of the air” or “to see if there’s mold” is too vague to provide a useful answer. An example of a clearly defined goal: *“During a property inspection, I discovered some flaking paint in a renovated section of my home and I don’t know how old it is. I want to find out if it is lead paint.”*

- 3) **Do you know what will be done as a result of the testing?**

You need a clear understanding of the potential actions to be taken based on the results of the test. It is a waste of effort and resources to test for a contaminant if you plan to do nothing, or will let the results ‘sit on

a shelf.’ You should know in advance the ramifications of the various test results, and the general steps that might be needed to solve a specific problem. Example of a clear plan for action: *I will contact a radon mitigation contractor to reduce the radon concentrations in my home if the test results come back at or above the action level.*

**4) Are there standard and/or approved methods for conducting the test?**

There are different ways to conduct tests for myriad contaminants. For some, such as mold, there is not one standard method, there are many methods that each have inherent pros and cons.

**5) When the results are received, are there standards or developed criteria (criteria developed as part of the testing plan) to compare them to?**

What is the point of conducting a test if no one can really tell you what the results mean?

**If the answer to any of the above questions is “No”, you should not proceed with an IAQ test..**

All of the above criteria should be met prior to considering an indoor environment/indoor air quality test. Of the tests people regularly request, only a few meet these criteria. These are: asbestos, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)-used as a surrogate for ventilation, lead dust/lead based paint, radon, relative humidity, and temperature. On a case-by-case basis, a volatile organic compound test (VOC) might also be considered.

**What should you do if your proposed test does not meet the above criteria?**

Chances are good, if you have completed a thorough property inspection, you already have sufficient information to remedy your specific indoor air quality problem or concern. If however, the property inspection reveals little information relative to your concerns, further investigation may be necessary. Consult with your physician about causes of a specific health complaint, or contact the Maine Indoor Air Quality Council to obtain additional information regarding ways to achieve and maintain a safe and healthy indoor environment.

**About Mold Testing**

Property owners often ask whether they should test for mold in their building. If your building walk-through confirms you have mold (you can see it, smell it, or have experienced moisture leaks), the next logical step is to fix the cause of the moisture leak and remove the wetted/moldy materials. See [http://www.buildingscience.com/resources/mold/mold\\_remediation.pdf](http://www.buildingscience.com/resources/mold/mold_remediation.pdf) \*or <http://www.ci.nyc.ny.us/html/doh/html/epi/moldrpt1.html> \* for some remediation guidelines.

Because of its variable nature and the lack of “standards” to compare test results to, testing for mold may only meet the above testing criteria in certain, limited circumstances, such as: if you need to confirm that black or dark patches are mold and not soot from candles or faulty combustion appliances; if you need to determine specific mold strains so that your physician can help diagnose or treat an allergy or other health symptoms; or if you suspect mold contamination in the building and are unable to locate it in your walk-through inspection, some testing may be necessary. This will likely require assistance from a home inspector, construction/building engineer, industrial hygienist or indoor air quality consultant.

For further information on mold and mold testing, see: <http://www.epa.gov/iaq/pubs/moldresources.html> \* or <http://www.buildingscience.com/resources/resources.htm#Mold>. \*

\*The Maine Indoor Air Quality Council (MLAQC) provides access to websites, and to the information therein contained, as an educational service to the public. While MLAQC seeks to provide accurate and timely educational materials via websites to the public, MLAQC cannot and does not guarantee or warrant the accuracy, completeness, reliability, security or utility of the information presented or its links to other websites. In addition, MLAQC does not recommend or endorse the materials, products, services or data made available at or through these other websites.