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## How Many Asbestos Samples Should Be Taken?

A sample should be taken of any material that might reasonable contain asbestos. The provincial regulations state than any material used prior to 1990 may reasonable contain asbestos. Thus, newer renovations need not be sampled.

### **Sometimes there is a Lot of Pipes. Do I have to sample them all?**

Mechanical rooms with boilers can have what can seem like a hundred different pipes going in all directions. The pipes turn so that there are elbows and straights everywhere. It is not normally necessary to sample every pipe / every elbow.

In most cases, the insulation was all put in at the same time by the same contractor using the same materials. So three samples taken from straight pipes and three samples taken from elbows should tell you if there is asbestos present. If there are distinctly different types of insulation (e.g., hot water pipe insulation and boiler chimney insulation), each of these areas would be considered a new or “different” location. If some sections look older/newer, or different or you know that they were done at a different time, they may well have a different composition so these areas should also be tested.

### **Asbestos may be Hidden in an older building**



Asbestos containing materials may be obvious. Older walls or floor may have been covered with newer materials. An asbestos audit should consider that some building materials may be hidden under carpeting or behind newer panelling.

### **Image of Floor Tiles Found under Carpeting**

### **Do I Need to Take More than One Sample of Some Things?**

Yes, Materials such as plaster, stucco, and ceiling stipple need multiple samples. These materials were likely prepared or mixed by hand on site and their composition can vary. Experience has shown that taking a single sample of these types of materials does not reliable identify or rule out the presence of asbestos.

The province of Manitoba provides a guideline on managing asbestos in a building. This document includes information on preparing an asbestos inventory. As part of this information, it references an ASTM guideline on how many samples it would be reasonable to collect for different types of potential asbestos-containing material. The table from the provincial guideline is provided below.

As outlined by ASTM, a practical number of samples are to be obtained for each kind of material or area of the building. A sample collection practice is presented below:

Item	Type of material	Size of area of homogeneous material	Minimum number of bulk material samples to be collected
1	Surfacing material, including without limitation to material that is applied to surfaces by spraying, by troweling or otherwise, such as acoustical plaster on ceilings and fireproofing materials on structural members	Less than 90 square metres	3
		90 or more square metres, but less than 450 square metres	5
		450 or more square metres	7
2	Thermal insulation, except as described in item 3	Any size	3
3	Thermal insulation patch	Less than 2 linear metres or 0.5 square metres	1
4	Less than 2 linear metres or 0.5 square metres	Any size	3

In accordance with recognized hygiene practice:

- Manufactured products that are homogeneous (such as floor tiles, linoleum, identical ceiling tiles, cement board) may only require one sample to show that a specific material is asbestos free (example of "specific" – a green patterned tile will be considered different from a yellow patterned tile).
- Batch-mixed materials (such as drywall joint compound, stucco, textured coating), may not have been uniformly mixed when they were applied and sections may vary in concentrations (i.e. they may not be homogeneous).
- A single positive finding confirms the presence of asbestos. Further sampling cannot deny its presence at the location of the positive finding.
- Best practice is to sample, at a minimum, in accordance with the table above.

For manufactured items (i.e., made in a factory), products should have the same composition throughout (although they may have different layers of different materials). This can include flooring, floor tiles, etc. Manitoba suggests that these types of materials "may only require one sample to show that a specific material is free of asbestos".