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4495, boul. Wilfrid-Hamel, suite 150, **Québec** (Québec) G1P 2J7
2325, boul. Fernand-Lafontaine, **Longueuil** (Québec) J4N 1N7
3705, boul. Industriel, **Sherbrooke** (Québec) J1L 1X8
1390, rue Hocquart, **Saint-Bruno-de-Montarville** (Québec) J3V 6E1
T 1 877 977 1220 ET.eurofinsca.com

Sampling Method for Asbestos Analysis

Asbestos was mainly used from 1940 to 1980 but it was only banned in Canada in December 2018. The health hazard is present when the asbestos fibers are disturbed and are found in the air. Indeed, respiration of the fibers can cause asbestosis, mesothelioma and several types of cancers. Six minerals are classified as asbestos: chrysotile, amosite, crocidolite, anthophyllite, tremolite and actinolite. The last two are the main ones found in the vermiculite insulation.

To Protect Yourself

As long as the absence of asbestos has not been confirmed, it is imperative to protect yourself and your environment from the spread of asbestos fibers. To do this, use a **P100 class half-mask** and **disposable protective clothing** (or painter's suit, all available at most hardware stores) before entering the area. Air exchanges with the living area must be minimized.

Construction Material

The Sampling

- ☞ To minimize the release of fibers into the air, moisten/wet the surface with a spray bottle containing water and a little dish soap.
- ☞ Use proper tools to minimize equipment disturbance and therefore release of potentially hazardous fibers into the air. (Favor the utility knife to the hammer!) Take only the minimum sample required, while making sure that all the layers that make up the material have been taken.
- ☞ If taking more than one sample, thoroughly clean the tools between each sample and at the very end using wet wipes.
- ☞ Place each sample in a clean airtight individual bag ("Ziploc®" freezer type) and seal it well. Bags that do not have an integrated closure such as geotechnical bags are not suitable.
- ☞ Use tape, caulking or other effective means to seal the sampling spots (holes). Use damp wipes to gently wipe any residual dust.

Required Material Quantity for Analysis:

- For floor tiles, plaster/cement, roofing, insulating papers, etc., a piece of 2 x 2″ (5 x 5 cm) **of each layer of material** is sufficient.

- For suspended ceiling tiles, insulators for boilers or pipes, gypsum insulation, etc., a volume of about 1 cubic inch (1 x 1 x 1″) is adequate (2.5 x 2.5 x 2.5 cm).

- For paints, glue, mastic, sealants, plasters for joints, etc., a sample of 0.5 square inch (1.5 x 1.5 cm) is sufficient if the width is of at least 2 mm. A larger area is required if this width is not available. For this type of material, the weight of a 10-cent coin should be the minimum, under that threshold the analysis might not be possible.

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- For soil, stone or asphalt a volume of 1 cup (250 mL) is adequate. In the case of asphalts requiring prior calcination, each layer is treated as a single sample and must be separated and then roughly crushed. Fees may apply if a sample arrives at the laboratory in the form of a core or if it is of an oversized volume.

- For water the minimum volume is of 800 mL therefore, a 1L plastic bottle (without preservative) needs to be filled to the bottle's neck and kept cold until the deposit at the laboratory.

Vermiculite

The Sampling

☞ Vermiculite in the attic

For a surface of 1000 ft^2 or less, the sampling is done at 3 points. For a greater surface, the number of sampling points must be increased, for up to 9 samples for a surface of over 5000 ft^2. It is important to throroughly scrape the bottom, as asbestos tends to settle there. The ideal amount to collect is 2/3 cup per point, or about **2 cups (500 mL) in total**. The samples may be collected in the same bag if they come from the same place. Otherwise, they will be considered as separate samples.

☞ Vermiculite in a wall

The sampling is done at **3 different heights** (one near the floor, one in the middle and one near the ceiling). The number of required samples must be evaluated according to the surface as mentioned before. The samples can be inserted in the same bag as long as they are taken from the same spot.

Sampling Containers

To make your sample, you must have a hermetically sealed bag ("Ziploc®" type bag). Once the sampling is complete and before leaving the sampling area, empty the excess air in the bag, **double it and clean the outside** to remove any dust that may be stuck to the bag. If necessary, do not hesitate to reinforce the bag with duct tape or other. Identify your sample on the bag (your name and/or place of sampling).

Please do not put your request for analysis in the sampling bag.

Please complete the sampling certificate with all essential information as cited bellow :

- ☑ Date of sampling
- ☑ Sampling location
- ☑ Sampled by
- ☑ Contact information

Any questions ?

Contact the environmental customer service team at 1-877-977-1220 ext. 5400 or 6400