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Reference Sources

Health Canada

March 2004
Attic Insulation
ISBN # H50-3/150-2004E-HTML

April 2004
Asbestos
ISBN # H50-3/83-2004E-PDF

EPA

Asbestos Contamination
March 2004
910-R-04-004

Attic Insulation
January 2004
600/R-04/004

Sampling for Asbestos in Vermiculite Attic Insulation

A trained experienced person familiar with all aspects of the procedure should perform sample collection. If you decide to collect the sample yourself Health Canada and the US EPA advises using a respirator effective against asbestos during sample collection. You can purchase a NIOSH approved P100 respirator from most hardware stores or safety houses.

!!! CAUTION !!!

Avoid creating and breathing any more dust than necessary during this collection and do not remain in the area longer than necessary. Follow the instructions with the respirator regarding fitting and maintenance. This respirator should not be used for major disturbance of vermiculite that would be encountered during renovations in the attic or for removal of the material. Try to avoid tracking the insulation or dust into the living space of the house. Do not dry sweep or use a domestic vacuum cleaner to clean up debris until it is confirmed that the material does not contain any hazardous substances

!!! CAUTION !!!

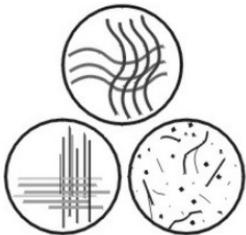
Collect several cups (8 oz/ 250 ml) full of product taken from the bottom half of the insulation in the attic or from towards the bottom of the wall cavity (the asbestos tends to settle to the bottom). Sampling only the top of the insulation may provide a false negative analysis for asbestos

Place the sample in a heavy-duty zip lock freezer bag, squeezing out the air before sealing. Obtain a Chain of Custody sheet from www.weshar.com or write the following information on the bag or fasten a label to the bag

- Location [attic, wall cavity]**
- Name, address, phone number**
- fax or email address if you wish to receive the result this way**

The visual identification can be confirmed by laboratory testing, although caution in selecting the laboratory is advised. The laboratory should be deemed proficient by one of the two US agencies that qualify laboratories for the analysis of asbestos in bulk samples, (**NIST NVLAP or AIHA BAPAT**) obtain and confirm Lab Identification and current proficiency status. Laboratories that do not specialize in asbestos analysis should never be relied on for asbestos analysis

It is extremely important to note that the overall percentages of asbestos in the bulk vermiculite are very low, possibly below existing legal limits for asbestos. None-the-less, the airborne concentrations can be very high when the material is disturbed, due to the very fine and loose nature of the asbestos. A recent US EPA study of six homes in Vermont (reference <http://www.epa.gov/asbestos/vaipilotstudy.pdf>) showed elevated airborne asbestos concentrations even in cases where the laboratory could not detect asbestos in the bulk material. Therefore EPA recommends that all loose-fill insulation visually identified as vermiculite, and installed prior to 1990, be treated with asbestos precautions



attic vermiculite

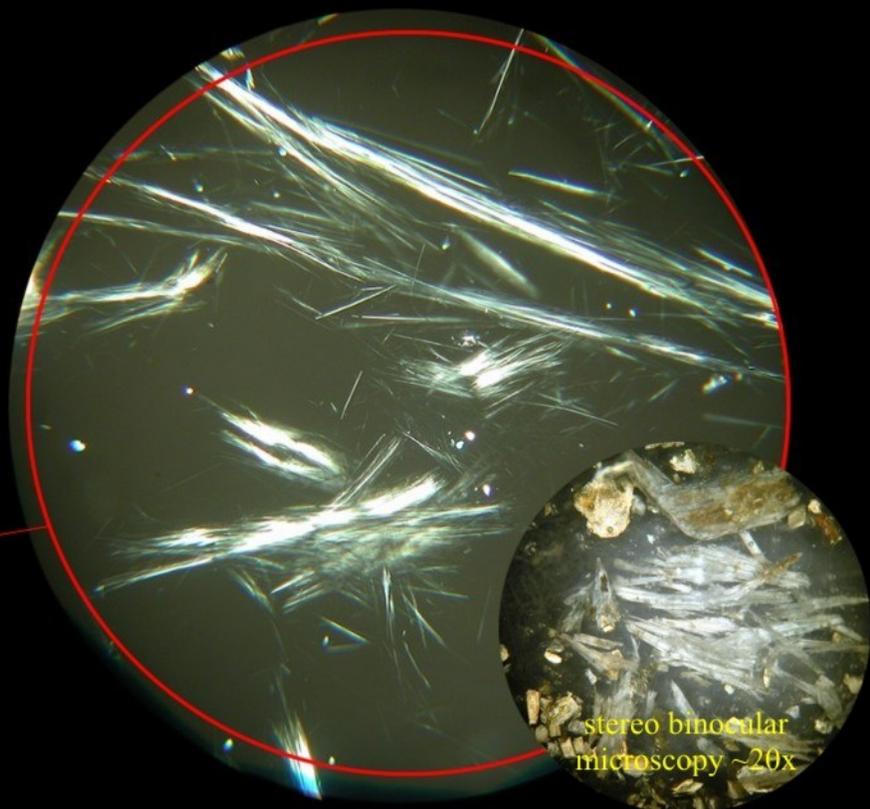


submitted sample

washed & sieved

polarized light microscopy
slightly uncrossed polars ~ 160x

asbestos fibres
[asbestiform amphiboles]



stereo binocular
microscopy ~20x