

# SAMPLING – HOMEOWNER GUIDE

## ASBESTOS BULK

There is a significant amount of good information about asbestos in the home at <https://www.epa.gov/asbestos>. The below is informational only, and in no way supersedes the official EPA information.

If you are at all nervous about sampling, you can find certified professionals at <https://asbestosprogram.apps.lara.state.mi.us/Contractor/ContractorSearch>. This includes all certified remediators in the state of Michigan. Presumably a similar list is available for other states as well.

If you do want to proceed on your own, bulk material sampling can generally be performed quickly and easily. For all sampling of potential asbestos, it is recommended to wear disposable latex or nitrile gloves, a face mask that is P100 or better, and a Tyvek suit if you would like to be extra cautious. You should also have a HEPA vacuum nearby.

For any bulk material other than loose-fill vermiculite, we need minimally a postage-stamp (1 square inch) sized sample. Any samples larger than about 5"x5" cannot be safely handled in our facility and may be rejected. This includes intact floor tiles and ceiling tiles. If there are multiple materials present (joint compound on drywall, adhesive on floor tile, etc.) they can be sampled separately if needed or submitted together as a single piece.

For loose fill vermiculite, the EPA recommendation is that you take a one half cup sample from the top, middle, and bottom of the material as it lies and combine those into a single 1.5 cup sample. Any asbestos present settles out to the bottom over time, so this procedure is the best way to create a representative sample. It is more difficult to sample this material without significant disturbance, so please do consider using a professional.

For other material sampling, if there is an area that is cut/fractured already that meets the size requirements, that is great, use it. If you will have to fracture/scrape/cut a piece yourself, make sure you are using the safety equipment as outlined above. If possible (drop ceiling tile, loose floor tile, etc.) doing the fracturing outside is always the safest way. If it must be done indoors, **lightly** mist the area to be sampled with a spray bottle of water with a couple drops of dish soap

in it. The light mist prevents fiber release during sampling, and using light mist rather than spray prevents material spread in the runoff. Then go ahead and cut/fracture/scrape.

After this, make sure to carefully vacuum the area with a HEPA vacuum. HEPA removes all material 0.3 microns and larger at a 99.97% efficiency rate, which should capture any asbestos structures released. Always advisable to vacuum far longer than you think you need to just to be on the safe side.

The sample itself should then be placed in a Ziploc-style bag and sealed. That bag should then be placed in a second bag and sealed. Any samples thus double-bagged are perfectly acceptable to send via USPS, FedEx, USPS, or hand delivery.

The sample(s) will need to be accompanied by a COC (Chain Of Custody), which serves as the official contractual request for service. Directions for this paperwork are found separately. The COC **MUST NOT** ever contact the sample. It will be rejected in this instance. The COC can be submitted inside the outer bag but outside the sample bag(s), stapled to the outer bag above the zipper, paperclipped, binder clipped, or completely separate from the sample as long as there is an unquestionable label to match the sample to the COC.

## **MOLD Tape Lift / Swab**

The below sampling instructions are only intended for use on obvious discolorations to confirm as fungal and derive some information about the mold type, if any. They should not be used for ordinary settled dust or any other non-discolored surfaces. When this methodology is used on ordinary settled dust, it generally produces results that are impossible for even a professional to interpret in any useful fashion. Looking for a mold issue or just a general household survey requires air testing, which requires a specialized pump and media, and therefore is best left to a professional.

During sampling, it is advised to wear latex or nitrile gloves. An N100 or better mask is also advisable, but this sampling procedure does not generally result in any significant extra material becoming airborne, so the risk over the background risk of living with the (potential) mold is minimal.

For all discolorations, tape lifts are recommended over Q-tip type swabs. If you do happen to have a sterile transporter-type swab, those are fine also, but it's very unlikely you do. There are several issues with ordinary cotton swabs. First, in order to produce rapid results, our analysis is direct rather than culturing. That is, we are just directly mounting the tape on a microscope slide with a bio-stain and examining it on a microscope at 200X-400X, or using the swab to deposit material on a piece of tape and then proceeding the same way.

First issue, cotton swabs will leave a huge quantity of cotton fibers on the preparation that significantly obscure all other material present. Second issue, cotton swabs are designed to retain material, not release it. Therefore, any material picked up during sampling may remain embedded in the swab rather than making it to the final preparation. Third, material on the cotton swabs will desiccate very quickly and can degenerate to the point where we can no longer identify the material as spores. For these reasons, tape lifts should be the chosen sampling method pretty much every time.

Tape lifts are just what they sound like – just using a piece of adhesive tape to pick up material from the surface. For various optical reasons beyond the scope of this document, tape lifting should **ALWAYS** use clear, standard, Scotch desk tape (the red packaging). Frosted tape, packing tape, and any other brand of standard desk tape should not be used, however we can process those and give it our best effort. Be aware our identification ability will be compromised in this case and there is significant risk of false negative. Duct tape or any other opaque tape cannot be processed and will be rejected.

To sample with the clear Scotch tape, make sure to put on gloves prior to handling the tape in order to prevent fingerprint smudges on the tape. Pull off an inch or two of the tape, and adhere it lightly to the discoloration to be sampled. Use light pressure only, heavy pressure can smash the sampled material beyond recognition. If you can see some of the material adhering to the

tape, so can we. It does not need to be a thick coating. Some people find wrapping the tape around their finger sticky-side out to be easier, some prefer holding it between their thumbs and index fingers and pressing to the surface to be easier. Both are perfectly fine.

After the sample is taken, the piece of tape should be lightly adhered to a small piece of wax or parchment paper, which is then placed into a Ziploc-style resealable bag. This allows us to remove the tape and prepare the sample with minimal disturbance to the material sampled. If the tape is adhered to itself or the inside of the Ziploc, we can proceed but there will be an inevitable degradation of the sample that may cause false negatives. Samples adhered to standard paper or cardboard may pull up significant substrate when we remove them and may not be able to be analyzed if we cannot physically remove the paper without significant damage to the sample.

The sample bag(s) should then be placed in a second bag and sealed. Any samples thus double-bagged are perfectly acceptable to send via USPS, FedEx, USPS, or hand delivery.

The sample(s) will need to be accompanied by a COC (Chain Of Custody), which serves as the official contractual request for service. Directions for this paperwork are found separately. The COC **MUST NOT** ever contact the sample. It will be rejected in this instance. The COC can be submitted inside the outer bag but outside the sample bag(s), stapled to the outer bag above the zipper, paperclipped, binder clipped, or completely separate from the sample as long as there is an unquestionable label to match the sample to the COC.