Surface Sampling for Mold

Surface Sampling (Tape, Swab, Bulk, or Wipe)

Objective

- To determine whether or not the visible stain, discoloration, etc. is indicative of mold growth at the sample location.
- To determine and identify molds actually growing on the surface sampled, as opposed to the mere presence of mold spores.
- To determine whether the spore population on the surface represents a normal population or a skewed population of spore type. and also to note “marker” spore types that may indicate indoor mold growth.

Note: A direct microscopic examination that directly identifies fungal growth (and doesn’t just count the number of spores) is usually the best method of analysis for surface samples. While culturing a surface sample may help resolve a specific identification problem, used alone such a culture may result in an inaccurate characterization of the surface sampled.

Advantages and Disadvantages

- **Advantages**
  - Surface sampling is inexpensive and (for a direct examination) may be analyzed immediately.
  - A direct microscopic examination of a surface shows exactly what is there.
  - Surface sampling may reveal indoor reservoirs of spores that have not yet become airborne.

- **Disadvantages**
  - The presence of biological materials on a particular surface is not a direct indication of what may be in the air.

Equipment

- Surface sampling for direct microscopic examinations usually requires no special equipment. Samples are typically tape lifts, swabs, or physical pieces of the suspect surfaces.

Sampling Protocols

- **Tape Sample**
  - Use a piece of absolutely clear (not frosted) tape that is one or two inches in length and 3/4 inch (2 cm) wide. Handle it by the ends only.
  - Position the adhesive side of the tape over the suspect area and press firmly.
  - Remove the tape from the surface and place it onto a clean microscope slide, then place the microscope slides into a slide box or other protective container. If microscope slides aren’t available, tape the tape sample directly onto the inside of a reclosable plastic bag adhesive side down, folding over one end for easy removal by the analyst.
  - Do not fold the tape onto itself.

- **Bulk Sample**

    - Remove a one or two square inch piece of the suspect material and place it inside a clean plastic reclosable bag.

- **Swab Sample**
    - Swabs are a last choice for when the sampling area is difficult to reach, a bulk sample is not practical, or the surface is very wet and a tape sample will not adhere to the area of concern.

- **Wipe Sample**
    - Wipes should only be used if sampling is not possible by any of the above methods mentioned. Wipes should not be the preferred method of sampling unless there is a proper justification to do so.

Shipping

- Tapes and dry bulk samples require placement into a reclosable plastic bag.
- Swabs and wet bulk samples should be sent via overnight courier with a cold pack to retard growth during shipping. Refrigeration of wipe samples using a cold pack during transportation is also recommended to minimize changes.