

WIPE/TAPE, Test Code 1051-Direct Microscopic Exam

Direct microscopic examination of surface sample can provide helpful information in an IAQ investigation as to whether building material (wallboard, ceiling tiles, etc.) are contaminated with fungal spores and fragments. Tape/lift samples from an environmental surface are a less destructive sample than bulks, and can be used as an adjunct to air sampling to determine the source of contamination (reservoir) and the identity of the fungi. Identifications of the fungi are not dependent on its viability. Fungal spores remain allergenic and can produce mycotoxins if they are viable or not. Fabric and carpet (i.e. porous) are not suitable surfaces for tape sampling. These are better served by bulk or vacuum samples.

The direct exam can be performed on either a sterile swab or EMS Mold Tape Slide™. If either is not available single sided clear tape can be used not frosted tape.

Tape:

1. Record the sample location on the slide label and complete the Chain of Custody for the laboratory.
2. Peel off quality seal from slide to expose adhesive.
3. Place sticky side of the slide against the mold and press gently.
4. Place slide back in case.
5. If you using tape, place the clear tape on a clear microscope slide.

Swab:

1. If using a swab, rub the moisten swab across the surface vigorously.
2. Place swab back into swab holder and label sample.
3. Ship swab to lab within 24 hours to ensure accurate results. Bacteria in a swab sample tend to eat fungal spores so swabs should be kept cool in transportation.

References:

Dillon, H. Kenneth, L. Hung, J. Miller, Field Guide for the Determination of Biological Contaminants in Environmental Samples., 5.2.6.6:61, 7.1: 141-143 (2005).

Macher, Janet, Sc.D., M.P.H., Bioaerosols , 7.4.1.2, 18.1.4.2 (1999).