

## GUIDELINES FOR DIRECT MICROSCOPIC EXAMINATION (DME) OF BULK, SWAB, AND TAPE SAMPLES

These guidelines contain opinions and interpretations and are not intended for determination of health significance nor are they necessarily representative of unacceptable indoor environments.

Molds require a food source, moisture, and spore production to proliferate, removing any one of these factors can control fungal growth. However, because of their ubiquitous nature, spores can never be completely eliminated from an area.

RELATIVE ABUNDANCE OF CONIDIA (SPORES) AND HYPHAL FRAGMENTS <sup>1</sup>		
RATING	Relative Amounts of Observed Fungal Structures per high power field (600X)	SIGNIFICANCE
Rare	0-1	Indicates a minimal amount of conidia (spores) and/or other fungal structures. Most normal indoor surfaces will show no to low fungal conidia/hyphal fragments. Generally, water indicator molds such as <i>Stachybotrys</i> or <i>Chaetomium</i> should be further investigated.
Few	2-5	Indicates low amounts of settled conidia (spores). Typically, this amount is not consistent with active fungal growth, however, it may suggest an active source nearby, or that a surface has not been cleaned appropriately. The presence of hyphal fragments or fruiting structures may indicate a nearby source of contamination. Generally, the presence of moisture indicator molds (e.g., <i>Stachybotrys</i> or <i>Chaetomium</i> ) may suggest a chronic or acute water condition from sources such as roofs, plumbing leaks, increased humidity, etc.
Moderate	6-10	Indicates a moderate to heavy amount of fungal contamination (conidia/spores). Generally, this category is indicative of a surface that is, or has been affected, by active fungal growth. The presence of fruiting structures or hyphal fragments may support the premise that fungal growth is on-going. However, the presence of moderate to numerous conidia/spores alone does not necessarily indicate the viability of the spores. Further investigation of the affected areas may be warranted.
Many	11-100	
Numerous	>100	Indicates that the sample area was highly contaminated with fungal conidia/spores and/or hyphal fragments. Samples in this category display an unusually high number of conidia/spores or other fungal structures in each microscopic field.

<sup>1</sup>This scale of relative abundance is affected by the size of the sampled area. If very large areas are sampled with a swab for example, this may cause the results to be skewed into a lower or higher category. These results correspond roughly to a sample area measuring one square inch.

SKIN CELL ANALYSIS	
SKIN CELL RATING	Relative Amounts of Observed Skin Cells per high power field (600 X)
0	No skin cells present
1	0-1
2	2 to 5
3	6 to 10
4	11 to 15
5	≥16

DEBRIS RATING for DME ANALYSIS (using 600X magnification)		
DEBRIS RATING	CONDITIONS FOR REPORTING DEBRIS RATING	SIGNIFICANCE
0	Debris is not present.	Sample may be a blank sample or from a very clean or remediated area.
1	Debris is present and <10% of the average viewing field is obscured.	Minimal amount of debris is observed.
2	Debris is present and 10% to <40% of the average viewing field is obscured.	Low amount of debris is observed, relative amounts of conidia/hyphal fragments may be affected.
3*	Debris is present and 40% to 75% of the average viewing field is obscured.	Moderate amount of debris is observed, relative amounts of conidia/hyphal fragments may be underestimated.
4*	Debris is present and >75% of the average viewing field is obscured.	High amount of debris is observed, relative amounts of conidia/hyphal fragments are estimated.
6	Slide completely obscured by excessive debris.	Unable to analyze. Recollect sample.

\* A debris rating of 3 or greater indicates that the accuracy of the analysis is likely affected.