



## Spore Trap Analysis

EMSL Analytical, Inc. analyzes 100% of the trace. We have been and will continue to provide this high level of service to our clients. We want to ensure our current and potential clients understand the analytical process which allows them to make informed decisions in light of our competitor's claims. EMSL has proven quality, operating since 1981, and is the exclusive laboratory in the nation to currently operate 28 AIHA EMLAP Accredited laboratories.

We in fact have always analyzed 100% at 600X for Micro5 cassettes. These cassettes have a smaller trace and a 100% analysis is feasible. For Air-O-Cell cassettes and other linear impact spore traps, we analyze 30% at 600X and enumerate all the spores we find. We then follow this with an analysis of 100% of the trace at 300X. The 300X analysis has a different analytical sensitivity than the 600X analysis.

Another benefit of using EMSL is that we provide more precise identifications and never use extremely broad groupings like "Amerospores" (See more info on Amerospores below). We also have an individual spore type-stopping rule of 100 counts while other microbiology laboratories have 100 total spores as their stopping rule. The truth is that all laboratories must extrapolate their data. It is not possible for an analyst to count each spore on a slide populated with 100,000+ spores. Even with a population of spores in the range of 1000's, it is unlikely a laboratory is counting this high.

As an example, at a client's requests, we have reviewed other microbiology laboratory reports and have observed results of 89,000 spores/m<sup>3</sup> for an individual spore trap sample. This being a 150 L sample with a detection limit reported as 7 and assuming the analyst spent 1 second per spore (this is a big assumption), this calculates to over 3.5 hours of analytical time for one sample! Please be wary of raw counts reported above 500, more than likely an extrapolation is taking place but not being reported to you.

We believe our stopping rule provides an accurate result that is also truthfully achievable. We analyze the entire trace area (100%) at 300X which is sufficient to detect rare or clumped spores that were not encountered during the 30% read. If there is a mold problem with spores disseminating in the air, the 30% read will not fail to miss these high counts. We ensure that we don't fail to detect *Stachybotrys* and other spores that may be found in lower concentrations by doing the 100% read at 300X.