MYCOMETER®-AIR

BACTIQUANT®-WATER

BACTIQUANT®-SURFACE

MYCOMETER®-SURFACE

DEVELOPING RAPID MICROBIOLOGICAL TESTS FOR CONSULTANTS AND THE INDUSTRY.

ONE INSTRUMENT – MULTI PURPOSE

No other test equipment on the market today allows you to detect and analyze air, bulk and surface samples for fungal and bacterial contamination on-site in less than an hour.

MYCOMETER® AIR

REPRODUCIBLE AND VERIFIED BIOAEROSOL TECHNOLOGY

WHAT IS MYCOMETER®-AIR?

Mycometer®-air is the only USEPA verified rapid method for quantifying airborne fungal biomass. With a sampling time of 15 minutes and a reaction time of 30 minutes, Mycometer®-air makes it possible to obtain rapid onsite results.

Reproducibility has been the key for the development of this method. Protocols for sampling and for analysis are standardized to ensure that Mycometer data generated from project to project is the same for every person running a Mycometer®-air test all over the world. Two conditions contribute to the often substantial variability in traditionally collected air data for fungal propagules: the microscopic analysis and in-homogeneous environments. Whether identifying fungal species from cultivations or counting of fungal spores and hyphal fragments from spore traps the microscopy has an element of subjective interpretation that is eliminated by using the Mycometer®-air technology. When the USEPA tested Mycometer®-air, the reproducibility and repeat-ability was found to be very high.[1] Even more important, though, is the variation in the level of airborne mould propagules that will give high variability independent of the methods used. The main cause of this variability is differences in the activity levels (human or other activity) where settled fungal propagules are re-aerosolized. With the Mycometer aggressive sampling protocol the variability in the activity has been elimi-nated by simulating a high level of activity producing data independent of activity level prior to or during sampling. Call us to learn more or discuss this approach.

MYCOMETER®-AIR ADVANTAGE

- High reproducibility (<10% RSD) in the methodology
- The Mycometer®-air test is verified by USEPA
- Objective analysis free from subjective evaluation
- Elimination of high short term variability with a standardized aggressive sampling protocol
- Aggressive Post Remediation sampling (similar to that used for asbestos) gives the best possible results for confident project completion
- Low chance of false negatives when using the aggressive sampling protocol
- Rapid results onsite
- No overloading
- Interpretive criteria for many applications

APPLICATIONS

Initial diagnostic assessment

Rapid remediation clearance testing

Pre/Post HVAC cleaning documentation

Healthy Building Assessments

Expedite disaster response damage assessment

Healthcare ICRA documentation

Routine maintenance cleaning confirmation

mycometer

rapid microbiology – on-site technology

MYCOMETER is the leading developer of user friendly, robust and rapid, on-site microbiology methods for the IAQ Industry over the last 14 years.

[1] *In the EPA Verification Program (ETV) the reproducibility was tested by having two individuals testing samples using two different equipments. The relative standard deviation (RSD) on the measurements were found to be around 5-9%, which is a very high reproducibility compared to other methods available for measuring fungal propagules in air samples. Also see http://www.epa.gov/etv/pubs/600r12002/600r12002vs_my.pdf*

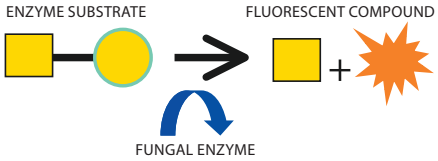
[2] *Field guide for the Determination of Biological Contaminants in Environmental Samples 2. Edition, American Industrial Hygiene Association*

"Mycometer's sensitivity, accurateness, high negative predictive and positive predictive values enable ESI to base our opinions upon a high degree of scientific certainty. Mycometer is a proven method for saving time and money."

ENGINEERING SYSTEMS INC.

TECHNOLOGY

Fluorometric Detection of Fungal Enzyme Activity



Sampling typically involves collecting 300- to 600 L of air on a filter. The three step analysis is then performed directly on the filter making handling of samples easy and robust. The reaction time is typically 30 min. Method corrects for ambient temperature effects on chemistry.

INTERPRETATIVE CRITERIA

Field Data have been collected in many buildings of different types in different regions but mainly buildings with no mechanical ventilation. Interpretation criteria was developed from these data to assist in a building evaluation. In general, mechanically ventilated buildings are believed to have a lower level of air borne mould particles. Therefore, the level in mechanically ventilated buildings should be lower than the criteria given for non-mechanically ventilated buildings.

The level of mold is not above normal background level.

The level of mould is above normal background level. This is typically due to high concentrations of spores , hyphal fragments in dust deposits but may in some cases indicate the presence of old mould damage (mould growth).

The level of mold is high above normal background levels due to mould growth.

Did you know that cultivation methods typically measure only around 1%[2] of the concentration compared to when determined by direct methods (microscopy). The Mycometer®-air test measures both spores, hyphae, hyphal fragments and even microparticles (<1µm) contains the enzyme activity. The method measures viable as well as most non-viable fungal particles.

[2] *Field Guide for the Determination of Biological Contaminants in Environmental Samples 2. Edition, American Industrial Hygiene Association*

SPECIFICITY

Mycometer-air provides unprecedented reliability over currents methods. Whereas, spore traps and culture plates data sets may have standard deviations of more than 50%, Mycometer-air is consistently less than 10%. Improving data reliablility, means the data collected is more meaningful. The ability to collect robust data onsite means the professional can make the best decision possible in the least amount of time.

The table shows the results of three experiments where four simultaneous samplings have been taken on two different locations. In one location both non-aggressive and aggressive sampling were performed. Very low relative standard deviations of 7.0%, 2.9% and 5.7% respectively demonstrate the robustness and repeatability of the method. In both experiments four pumps were used each with one filter.

Sample #	Bedroom: non-aggressive sampling	Bedroom: aggressive sampling	MM meeting room
1	493	2793	400
2	513	2800	410
3	540	2629	373
4	457	2758	363
Mean	501	2745	387
Standard deviation	35	80	22
Relative standard deviation	7.0%	2.9%	5.7%

ASHRAE Innovation Award Recipient

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