



## M2 MULTI-MOLD FIELD AND LABORATORY EVALUATION

The M2 Multi-Mold was used along side a major Competitor's Cassette (CC) during December, 2004, through April, 2005, in southern California. During this time, the region experienced the second highest rainfall on record. Field and laboratory personnel were asked to routinely perform their tasks, and overall performance of the M2 was evaluated.

A total of 208 sample collections (104 for both the M2 and CC) were obtained per the manufacturers' instructions; field personnel sampled both outdoors and indoors. The M2 and CC collection samples were obtained in the same general area and taken at the same time – with the understanding that the same air could not be sampled for each cassette. One independent laboratory (AIHA EMLAP accredited) processed the cassettes per manufacturers' instructions and the trace area was evaluated by counting along cross sections per standard operating procedure. All slides were read one time, and approximately 17% trace area was evaluated on each slide.

Field personnel reported ease of use for the M2 and noted the tamper proof tape seals were helpful. The laboratory analysts reported excellent clarity for the M2. They used cover slips for slide preparation since they routinely use cover slips with the CC (they prefer that only the cover slip be positioned between the trace area and microscope objective).

The M2 and the CC collected the same types of particles. Twenty two (22) different types of particles were identified with both cassettes which included Ascospores, Basidiospores, Hyphae-like Fragments, Mildew, Mitosporic Fungi, Myxomycetes/*Periconia*/Smuts, Pollen, Rusts, *Acremonium/Verticillium sp.*, *Alternaria sp.*, *Aspergillus/Penicillium sp.*, *Botrytis sp.*, *Chaetomium sp.*, *Cladosporium sp.*, *Curvularia sp.*, *Drechslera/Bipolaris sp.*, *Epicoccum sp.*, *Ganoderma sp.*, *Pithomyces sp.*, *Stachybotrys sp.*, *Stemphylium/Ulocladium sp.*, and *Torula sp.* In addition, *Paecilomyces sp.*, *Pithomyces sp.* and *Exserohilum sp.* were identified with the M2 (rare findings) but not identified with the CC; *Endophragmia sp.* (rare finding) was identified with the CC but not the M2. In general, particles ranged in size from approximately 2 to 75 microns.

The most common overall findings were *Aspergillus/Penicillium sp.*, *Cladosporium sp.*, Basidiospores, and Ascospores, and a similar distribution between M2 and CC was noted. Also, there was no significant difference between the M2 raw count and CC raw count.

All other findings were incidental and rare. The other 6% findings for the M2 included the remaining 21 different types of particles; the other 7% for CC included 19 different types.

In summary, the M2 was routinely used and provided acceptable overall performance in the field and laboratory.

|                                    | DISTRIBUTION % FOR M2 | DISTRIBUTION % FOR CC | T-TEST*       |
|------------------------------------|-----------------------|-----------------------|---------------|
| <i>Aspergillus/Penicillium sp.</i> | 53%                   | 48%                   | no difference |
| <i>Cladosporium sp.</i>            | 19%                   | 20%                   | no difference |
| Basidiospores                      | 13%                   | 13%                   | no difference |
| Ascospores                         | 9%                    | 12%                   | no difference |
| <b>Total</b>                       | <b>94%</b>            | <b>93%</b>            |               |

\*t-test, Difference between Independent Means (17% trace area), significance level alpha = 0.05

Data on file at Innovative Sampling Solutions, Inc.