HIC Home Inspection Carolina
info@hicarolina.com
Office – (704) 542-6575
Fax - (704) 215-4450
HomeInspectionCarolina.com

AIRBORNE AND SURFACE DUST ANALYSIS INTERPRETATION GUIDE

EAA - Environmental Analysis Associates 6/19

Overview on the interpretation of mold spore concentrations

A high variability in outdoor mold spore concentrations and distribution exists on a daily to hourly basis and is dependent on local vegetation and micro-climate, the time of year, local weather patterns, and diurnal variation. As a result, caution must be used when simultaneously comparing limited data sets of inside and outside concentrations or over generalizing any set of data. Tables given below can serve as a guide to evaluating the relative degree of indoor airborne mold spore amplification.

Common outdoor molds

Outdoor assemblages of mold spores are most commonly associated with the following genera (listed in approximate order of descending abundance):

- Mushroom-like fungi (Ascospores and Basidiospores)
- Cladosporium
- Alternaria
- Rusts and Smuts (colonizing primary flower and leaf parts)
- Aspergillus & Penicillium (soil and moist cellulosic surfaces).

All of the above mentioned mold genera colonize decaying vegetation and/or soil.

Common molds associated with indoor mold "growth"

The most common molds associated with indoor amplification (over 90% of the typical mold growth found inside buildings) given in approximate order of descending abundance are listed below:

- Penicillium
- Aspergillus (flavus, fumigatus, terrus, versicolor, niger)
- Cladosporium
- Chaetomium
- Stachybotrys
- Zygomycetes (Mucor & Rhizopus)
- Ulocladium
- Trichoderma

Typical Outdoor Mold Spore Concentration Ranges and Genera

			Mold Genera and Prevalence				
Description / Condition	**Spores (cts/m^3)**		**As/ba**	**Cla**	**Oth**	**As/Pe**	**W.I.**
Arid / desert regions	50 -	5,000	C	C	C	L	T
Urban & coastal strip	200 -	30,000	C	C	C	L	T
Inland valley / native vegetation	500 -	50,000	P	P	C	L	T
Farms & heavy forestation	5,000 -	100,000	P	P	C	L	L

Typical Indoor Mold Spore Concentration Ranges

"Clean" non-HVAC supplied air	ND -	1,600	C	C	C	L	T
"Clean" HVAC supplied air	ND -	500	L	L	L	L	T
Low - moderate, infiltration, pos. growth	600 -	13,000	L	C	L	C	L
Moderate – Growth likely	13,000 -	50,000	L	C	L	P	L
High - Growth	>50,000		C	C	L	P	C
Inadequate flood cleanup/demolition	>50,000		C	C	C	P	C

Genera present

As/Ba – Asco / basidiospores
Cla – Cladosporium
Oth – Other (Alternaria, Dreschlera, Rusts, Smuts, etc.)
As/Pe – Aspergillus and/or Penicillium species
W.I. – Water Indicating - including (Stachybotrys, Chaetomium, Ulocladium, Trichoderma)

Genera Distribution / Concentration

ND – Not detected
P - Predominant (can comprise ~80% of the spore distribution)
C – Commonly occurring (can comprise ~50% of the spore distribution)
L – Low (comprises <10% of the spore distribution)
T – Trace (comprises <5% of the spore distribution

http://eaabaxter.com/docs/air-o-cell-methodguide-atlas-2019-6.pdf
https://eaalab.com/