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EMSL Order: **371203456**
 CustomerID: **MEA34**
 Customer PO:
 ProjectID:

Attn: **John Doe**
Mold Expert ERMi Assessment, Inc.
200 Rt 130 N
Cinnaminson
NJ 08077
 Project: NJ Residential Home-2100

Phone: 1-800-220-3675
 Fax:
 Collected:
 Received: 2/6/2012
 Analysis date: 2/7/2012

Analytical Results

EMSL - Results **ERMi Analysis** EMSL Test Code: **M180**

Based on USA EPA SOP MERB-020, Revision No. 3, 7/11/02

Lab Sample Number	Client Sample ID	Sample Location	Sample Size	EMSL Order#
371203456-1	04578	FamilyRm/MBedRm	5 mg	371203456

ERMi Value:	15
ERMi Interpretation*	Level 4

Your Result Indicator



ERMi Value >5 High Relative Moldiness.
 Further investigation needed to determine the sources of this mold.



ERMi Value is > -4 and ≤ 5 Moderate Relative Moldiness. Further investigation needed to determine if sources of mold exist.



ERMi value ≤ -4 Low Relative Moldiness. It is unlikely you have a mold problem.

* Developed by EPA researchers, the ERMi is an acronym for Environmental Relative Moldiness Index. The mold burden of a home can be defined by two factors; the quantity of each mold species and the diversity of species present. The ERMi takes into account both of these factors and measures the long term mold burden. A relatively new water damage event with ensuing mold growth may not be detected by the ERMi as the spores must undergo an equilibration period and collect in household dust. Other changes in the home, such as new carpets, must be interpreted in conjunction with the ERMi result.

Fungal spores are found everywhere. Whether or not symptoms develop in people exposed to fungi depends on the nature of the fungal material (e.g., allergenic, toxic, or infectious), the exposure level, and the susceptibility of exposed persons. Susceptibility varies with the genetic predisposition (e.g., allergic reactions do not always occur in all individuals), age, pre-existing medical conditions (e.g., diabetes, cancer, or chronic lung conditions), use of immunosuppressive drugs, and concurrent exposures. These reasons make it difficult to identify dose/response relationships that are required to establish "safe" or "unsafe" levels (i.e., permissible exposure limits).

It is generally accepted in the industry that indoor fungal growth is undesirable and inappropriate, necessitating removal or other appropriate remedial actions. Always remember that water is the key. Preventing water damage or water condensation will prevent mold growth. This report is not intended to provide medical advice or advice concerning the relative safety of an occupied space. Always consult an occupational or environmental health physician who has experience addressing indoor air contaminants if you have any questions.



USEPA License No: 0240-02

Initial Report From: 2/10/2012
 Amended Report From: Initial Report

Quanyi Li

Approved EMSL Signatory
 Quanyi"Charlie", Li, Ph.D.

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Analytical Results - (Detail)



Lab Sample Number	Client Sample ID	Sample Location	Sample Size	EMSL Order#
371203456-1	04578	FamilyRm/MBedRm	5 mg	371203456

Environmental Relative Moldiness Index (ERMI) by Mold Specific Quantitative Polymerase Chain Reaction (MSQPCR)

Lab Sample Number	371203456-1
Client Sample ID	04578
Sample Location	FamilyRm/MBedRm
Sample size	5mg Dust
EPA 36 Species Identification	Spores E./ mg dust
Group 1	
<i>Aspergillus flavus</i>	ND
<i>Aspergillus fumigatus</i>	49
<i>Aspergillus niger</i>	329
<i>Aspergillus ochraceus</i>	ND
<i>Aspergillus penicillioides</i>	ND
<i>Aspergillus restrictus</i>	ND
<i>Aspergillus sclerotiorum</i>	ND
<i>Aspergillus sydowii</i>	305
<i>Aspergillus unguis</i>	ND
<i>Aspergillus versicolor</i>	6,327
<i>Eurotium (A.) amstelodami</i>	ND
<i>Aureobasidium pullulans</i>	292
<i>Chaetomium globosum</i>	ND
<i>Cladosporium sphaerospermum</i>	ND
<i>Paecilomyces variotii</i>	4,481
<i>Penicillium brevicompactum</i>	ND
<i>Penicillium corylophilum</i>	ND
<i>Penicillium crustosum (group2)</i>	ND
<i>Penicillium purpurogenum</i>	ND
<i>Penicillium spinulosum</i>	ND
<i>Penicillium variable</i>	ND
<i>Scopulariopsis brevicaulis</i>	ND
<i>Scopulariopsis chartarum</i>	ND
<i>Stachybotrys chartarum</i>	ND
<i>Trichoderma viride</i>	ND
<i>Wallemia sebi</i>	10
Group 1 Sum of the Logs	17.6




Lab Sample Number	371203456-1
Client Sample ID	04578
Sample Location	FamilyRm/MBedRm
Sample size	5mg Dust
EPA 36 Species Identification	Spores E./ mg dust
Group 2	
<i>Acremonium strictum</i>	ND
<i>Alternaria alternata</i>	ND
<i>Aspergillus ustus</i>	ND
<i>Cladosporium cladosporioides I</i>	46
<i>Cladosporium cladosporioides II</i>	ND
<i>Cladosporium herbarum</i>	14
<i>Epicoccum nigrum</i>	ND
<i>Mucor and Rhizopus group</i>	ND
<i>Penicillium chrysogenum</i>	ND
<i>Rhizopus stolonifer</i>	ND
Group 2 Sum of the Logs	2.8

Interpretation Key Group 2 Sum of the Logs

	≤ 2 or ≥ 20 -- Less than or equal to 2 or Greater than or equal to 20
	> 2 and < 20 -- Greater than 2 or Less than 20

ERMI Value:	15	
ERMI Interpretation*	Level 4	

Interpretation Key ERMI Value

	ERMI Value > 5 -- High Relative Moldiness. Further Investigation needed to determine the sources of this mold.
	ERMI Value > -4 and ≤ 5 -- Moderate Relative Moldiness; Further investigation needed to determine if sources of mold exists.
	ERMI Value ≤ -4 -- Low Relative Moldiness. It is unlikely you have a mold problem.

Initial Report From: 2/10/2012
Amended Report From: Initial Report

Quanyi L:
Approved EMSL Signatory
Quanyi'Charlie", Li, Ph.D.

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Lab Sample Number	Client Sample ID	Location	Sample Size	EMSL Order#
371203456-1	04578	FamilyRm/MBedRm	5 mg	371203456

The US Department of Housing and Urban Development conducted the American Health Homes Survey in 2006. As part of this study, dust samples were collected from the bedroom and living room of 1096 homes across the US. Each composite sample was tested by MSQPCR for the ERMI. From this study, researchers were able to develop the following ERMI scale:

2. Understanding the Results

EMSL Analytical, Inc. is an independent laboratory, providing unbiased and scientifically valid results. These data represent only a portion of an overall IAQ investigation. Visual information and environmental conditions measured during the site assessment (humidity, moisture readings, etc.) are crucial to any final interpretation of the results. Many factors impact the final results; therefore, result interpretation should be conducted with caution.

ERMI Interpretation:

The mold burden of a home can be defined by two factors; the quantity of each mold species and the diversity of species present. The ERMI takes into account both of these factors and measures the long term mold burden. A relatively new water damage event with ensuing mold growth may not be detected by the ERMI as the spores must undergo an equilibration period. Other changes in the home, such as new carpets, must be interpreted in conjunction with the ERMI result.

The ERMI consists of the Group 1 water damage indicator species and the Group 2 commonly occurring species. There are cases whereby species found in one group could easily be categorized in the other group but in general the grouping holds true. Also the ERMI uses a combination of 36 molds to determine the mold burden in a home and does not rely on one or two species. Homes with an ERMI value above 0 are more likely to have a mold problem. Homes with an ERMI value above 5 have the greatest likelihood of having a mold problem. Homes with an ERMI value below 0 are less likely of having a mold problem and homes with an ERMI below -4 are the least likely of having a mold problem.

Figure 1 shows the distribution of the sum of the logs of the Group 2 species from the American Health Homes Survey conducted by HUD. If the reported Group 2 value falls towards the outside of either end of this scale then a reason must be sought. For example, if your Group 2 value is 1 meaning there are fewer common molds than we would have expected in a normal home. Perhaps it is a new construction or recently remediated environment. If you have a very high group two value (>20), it may be possible that the home is contaminated with species found in Group 2 and is not representative of normal background levels.

Fungal spores are found everywhere. Whether or not symptoms develop in people exposed to fungi depends on the nature of the fungal material (e.g., allergenic, toxic, or infectious), the exposure level, and the susceptibility of exposed persons. Susceptibility varies with the genetic predisposition (e.g., allergic reactions do not always occur in all individuals), age, pre-existing medical conditions (e.g., diabetes, cancer, or chronic lung conditions), use of immunosuppressive drugs, and concurrent exposures. These reasons make it difficult to identify dose/response relationships that are required to establish "safe" or "unsafe" levels (i.e., permissible exposure limits).

The results herein do not denote or represent a medical or clinical diagnosis or conclusion. Interpretation of the data is the responsibility of the client.

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Quanyi

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The ERMI Interpretation graph below is based on your results.

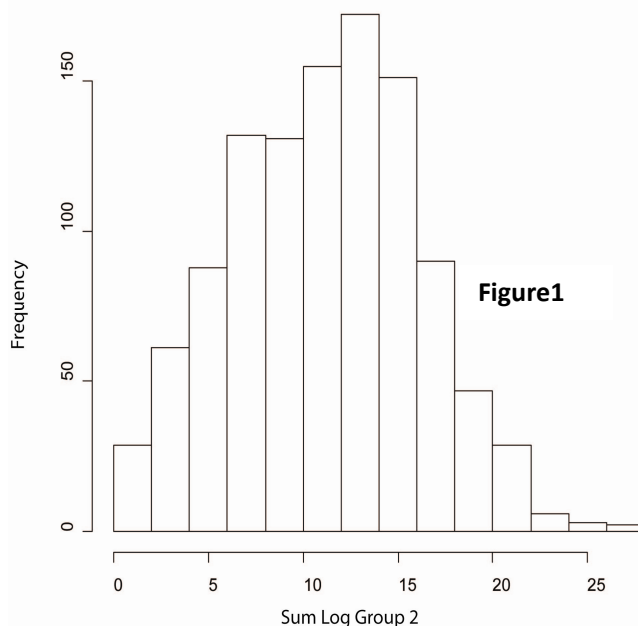
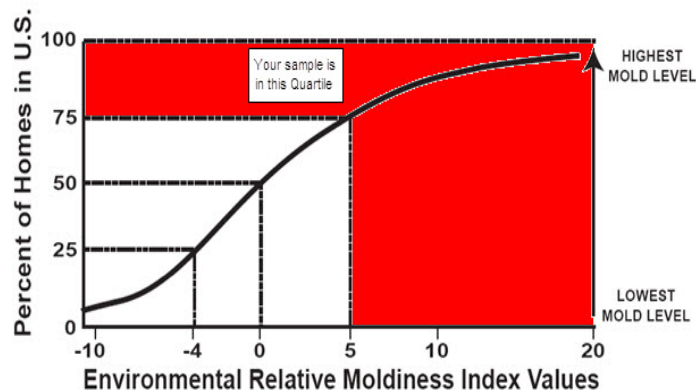


Figure1