



# HYGIENETECH

Hygiene Technologies International, Inc.

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Torrance, California 90503-1643  
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December 7, 2011

California State Board of Equalization  
450 N Street  
Sacramento, California 94279

Document No. 21109001.2

Attention: David Gau

Regarding: Limited Fungal Growth Exposure Assessment Surveys  
Day Care - Cove Base Investigation

Dear Mr. Gau:

On September 18 and 25, 2011, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) conducted limited fungal growth exposure assessment surveys involving the Day Care facility located within the California State Board of Equalization (BOE) building. At the time of the surveys, LaCroix Davis, LLC (LCD), the industrial hygiene consultant contracted with the California Department of General Services (DGS), were conducting fungal growth investigation and surface sampling beneath the cove base in several Day Care areas. During the investigation, JLS Environmental Service Inc. (JLS) personnel provided the necessary control measures and upon completion of investigation activities, all of the inspected cove base areas were sealed and isolated. The findings of the surveys, along with the analytical data, conclusions, and recommendations appear below.

On the survey dates, air samples were collected for total (viable and nonviable) fungi analyses using a Zefon brand Bio-Pump™ equipped with Air-O-Cell™ cassettes. All such samples were subsequently analyzed for fungi (including yeasts, molds, rusts, smuts, and mushrooms) by trained and experienced microbiologists at a laboratory accredited by the American Industrial Hygiene Association (AIHA) and that successfully participates in the AIHA Environmental Microbiology Proficiency Analytical Testing (EMPAT) Program.

As presented in Table 21109001-5, the airborne spore count data recorded on the survey dates showed mostly common fungal spore types outdoors, such as *Alternaria*, *Arthrinium*, ascospores, basidiospores, *Bipolaris/Drechslera* group, *Chaetomium*, *Cladosporium*, *Epicoccum*, *Nigrospora*, *Oidium*, rusts, and/or smuts. In the Day Care areas tested, the data showed that airborne fungal spores were either not detected at or above the laboratory analytical detection limit indicated or were detected at low airborne concentrations. The common fungal spore types found indoors included *Alternaria*, *Cladosporium*, *Nigrospora*, other brown, and/or smuts. The distribution of fungal spore types detected in the surveyed areas was consistent with those found outdoors, and the overall data within the tested areas were well below the overall data recorded outdoors. These data are considered unremarkable and are not believed to pose a health risk beyond that posed by the outdoor environment where exposures to airborne fungi are expected.



Be advised that the data provided in this report only represent limited fungal growth exposure potentials that existed at the time these surveys were performed and at the precise sample locations indicated, the latter of which were selected based on the available background information provided. Note that fungal growth and exposure potentials may change due to changes in environmental conditions (such as those caused by water intrusion), use of mechanical systems, or other factors. Also be advised that additional fungal growth may exist at one or more locations in the structure that were not specifically assessed during the survey.

If you have any comments or questions regarding the information contained in this correspondence, please feel free to contact our offices directly at (310) 370-8370.

Sincerely,

**HYGIENE TECHNOLOGIES INTERNATIONAL, INC.**

A handwritten signature in black ink, appearing to read 'Kenny Hsi', is written over a horizontal line.

Kenny K. Hsi, CIH  
Technical Director

# HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

# APPENDIX A



CLIENT: California State Board of Equalization  
450 N Street  
Sacramento, California 94279

**TABLE 21109001- 5**  
**AIRBORNE TOTAL FUNGI RESULTS**  
**1<sup>ST</sup> FLOOR DAY CARE**  
**450 N STREET**  
**SACRAMENTO, CALIFORNIA**  
**SEPTEMBER 18 AND 25, 2011**

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**Results reported in spores per cubic meter of air (spores/M<sup>3</sup>)**

SAMPLE NUMBER	21109001-5 TM01OUT	21109001-5 TM02	21109001-5 TM03	21109001-5 TM04
<b>SAMPLING LOCATION/ACTIVITIES</b>	Outdoors; about 15 feet north of building; approximately five feet above ground/Normal outdoor activities	Day Care; Toddler area; about center; approximately five feet above floor/Sampling activities only	Day Care; western hallway adjacent to restroom entrance; about center; approximately five feet above floor/Inspection activities in progress	Day Care; reception area; about center; approximately five feet above floor/Sampling activities only
<b>DATE</b>	09/18/11	09/18/11	09/18/11	09/18/11
<b>START/STOP</b>	09:35:00/09:40:00	09:52:00/09:57:00	09:58:00/10:03:00	10:07:00/10:12:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria			13	
Arthrinium				
Ascospores	210			
Aureobasidium				
Basidiospores	480			
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	640			
Curvularia				
Epicoccum	13			
Myrothecium				
Nigrospora	27			13
Oidium				
Other brown			13	
Penicillium/Aspergillus types				
Rusts	13			
Smuts, Periconia, Myxomycetes	150	13	53	
Stachybotrys				
Stemphylium				
Torula				
Zygomycetes				
Hyphal fragments	13	13	<13	13
Background debris*	3+	2+	3+	2+
<b>TOTAL**</b>	1,500	13	80	13

\*Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

\*\*Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.

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AIRBORNE TOTAL FUNGI RESULTS  
1<sup>ST</sup> FLOOR DAY CARE  
450 N STREET  
SACRAMENTO, CALIFORNIA  
SEPTEMBER 18 AND 25, 2011**

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**Results reported in spores per cubic meter of air (spores/M<sup>3</sup>)**

SAMPLE NUMBER	21109001-5 TM05	21109001-5 TM06OUT	21109001-5 TM11OUT	21109001-5 TM16
<b>SAMPLING LOCATION/ACTIVITIES</b>	Day Care; Pre-school area; about center; approximately five feet above floor/Post inspection sampling activities only	Outdoors; about 15 feet west of building; approximately five feet above ground/Normal outdoor activities	Outdoors; about 15 feet west of building; approximately five feet above ground/Normal outdoor activities	Day Care; hallway at kitchen entrance; about center; approximately five feet above floor/ Inspection activities in progress
<b>DATE</b>	09/18/11	09/18/11	09/25/11	09/25/11
<b>START/STOP</b>	12:26:00/12:31:00	12:47:00/12:52:00	09:19:00/09:24:00	12:09:00/12:14:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Arthrinium		13		
Ascospores		270		
Aureobasidium				
Basidiospores		480	53	
Bipolaris/Drechslera group		13		
Botrytis				
Chaetomium		40		
Cladosporium		2,600	530	
Curvularia				
Epicoccum				
Myrothecium				
Nigrospora		190	13	
Oidium				
Other brown				
Penicillium/Aspergillus types				
Rusts		67		
Smuts, Periconia, Myxomycetes		400	200	13
Stachybotrys				
Stemphylium				
Torula				
Zygomycetes				
Hyphal fragments	<13	80	40	<13
Background debris*	2+	3+	1+	1+
<b>TOTAL**</b>	13	4,000	800	13

\*Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

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1<sup>ST</sup> FLOOR DAY CARE  
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SEPTEMBER 18 AND 25, 2011

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## Results reported in spores per cubic meter of air (spores/M<sup>3</sup>)

SAMPLE NUMBER	21109001-5 TM21	21109001-5 TM22OUT		
SAMPLING LOCATION/ACTIVITIES	Day Care; hallway at kitchen entrance; about center; approximately five foot above floor/Post inspection sampling activities only	Outdoors; about 15 feet north of building; approximately five feet above ground/Normal outdoor activities	This column intentionally left blank	This column intentionally left blank
DATE	09/25/11	09/25/11		
START/STOP	16:59:00/17:04:00	17:09:00/17:14:00		
SAMPLE TIME	5 minutes	5 minutes		
Alternaria		13		
Arthrinium				
Ascospores		480		
Aureobasidium				
Basidiospores		53		
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	53	160		
Curvularia				
Epicoccum				
Myrothecium				
Nigrospora				
Oidium		13		
Other brown				
Penicillium/Aspergillus types				
Rusts				
Smuts, Periconia, Myxomycetes	27	53		
Stachybotrys				
Stemphylium				
Torula				
Zygomycetes				
Hyphal fragments	<13	27		
Background debris*	3+	2+		
<b>TOTAL**</b>	<b>80</b>	<b>770</b>		

\*Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

\*\*Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.



Report for:

**Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu**  
**Hygiene Technologies International, Inc.: Northern California**  
3625 Del Amo Boulevard, Suite 180  
Torrance, CA 90503-8370

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Regarding: Project: 21109001-5; 1st Floor Day Care Exposure Assessment  
EML ID: 831935

Approved by:

Lab Manager  
Malcolm Moody

Dates of Analysis:

Spore trap analysis: 09-19-2011

Service SOPs: Spore trap analysis (1038)

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For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

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Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
 Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
 Date of Receipt: 09-19-2011  
 Date of Report: 09-19-2011

**SPORE TRAP REPORT: NON-VIABLE METHODOLOGY**

Location:	21109001-5 TM01out		21109001-5 TM02		21109001-5 TM03	
Comments (see below)	None		None		None	
Lab ID-Version‡:	3692261-1		3692262-1		3692263-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria					1	13
Arthrinium						
Ascospores*	4	210				
Aureobasidium						
Basidiospores*	9	480				
Bipolaris/Drechslera group						
Botrytis						
Chaetomium						
Cladosporium	12	640				
Curvularia						
Epicoccum	1	13				
Myrothecium						
Nigrospora	2	27				
Other brown					1	13
Other colorless						
Penicillium/Aspergillus types†						
Rusts*	1	13				
Smuts*, Periconia, Myxomycetes*	11	150	1	13	4	53
Stachybotrys						
Torula						
Zygomycetes						
Background debris (1-4+)††	3+		2+		3+	
Hyphal fragments/m3	13		13		< 13	
Pollen/m3	40		13		13	
Skin cells (1-4+)	< 1+		1+		1+	
Sample volume (liters)	75		75		75	
<b>§ TOTAL SPORES/m3</b>		<b>1,500</b>		<b>13</b>		<b>80</b>

**Comments:**

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.  
 \* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.  
 † The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.  
 †† Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.  
 The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.  
 For more information regarding analytical sensitivity, please contact QA by calling the laboratory.  
 ‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".  
 § Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
Date of Receipt: 09-19-2011  
Date of Report: 09-19-2011

**SPORE TRAP REPORT: NON-VIABLE METHODOLOGY**

Location:	21109001-5 TM04		21109001-5 TM05		21109001-5 TM06out	
Comments (see below)	None		None		None	
Lab ID-Version‡:	3692264-1		3692265-1		3692266-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria						
Arthrinium					1	13
Ascospores*					5	270
Aureobasidium						
Basidiospores*					9	480
Bipolaris/Drechslera group					1	13
Botrytis						
Chaetomium					3	40
Cladosporium					48	2,600
Curvularia						
Epicoccum						
Myrothecium						
Nigrospora	1	13			14	190
Other brown						
Other colorless						
Penicillium/Aspergillus types†						
Rusts*					5	67
Smuts*, Periconia, Myxomycetes*					30	400
Stachybotrys						
Torula						
Zygomycetes						
Background debris (1-4+)††	2+		2+		3+	
Hyphal fragments/m3	13		< 13		80	
Pollen/m3	< 13		13		80	
Skin cells (1-4+)	1+		2+		< 1+	
Sample volume (liters)	75		75		75	
<b>§ TOTAL SPORES/m3</b>		<b>13</b>		<b>&lt; 13</b>		<b>4.000</b>

**Comments:**

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.  
 \* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.  
 † The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.  
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Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
Date of Receipt: 09-19-2011  
Date of Report: 09-19-2011

**MoldRANGE™: Extended Outdoor Comparison**  
**Outdoor Location: 21109001-5 TM01out**

Fungi Identified	Outdoor data	Typical Outdoor Data for †						Typical Outdoor Data for †					
		September in California (n‡=12849)						The entire year in California (n‡=158505)					
	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
<b>Generally able to grow indoors*</b>													
Alternaria	-	13	13	27	53	93	61	13	13	27	67	100	56
Arthrinium	-	-	-	-	-	-	< 1	7	13	13	39	53	< 1
Bipolaris/Drechslera group	-	7	13	13	27	53	20	7	13	13	27	40	13
Chaetomium	-	8	13	13	27	53	27	8	13	13	27	44	19
Cladosporium	640	200	320	850	2,200	3,600	99	110	210	640	1,700	2,800	97
Curvularia	-	7	13	13	40	53	16	7	13	13	27	53	6
Epicoccum	13	7	13	13	27	53	21	8	13	13	27	53	19
Nigrospora	27	10	13	13	40	93	18	7	13	13	27	53	8
Penicillium/Aspergillus types	-	53	110	280	750	1,200	91	53	110	210	600	1,000	86
Stachybotrys	-	7	13	13	27	53	5	7	13	13	33	67	5
Torula	-	8	13	13	40	60	14	8	13	13	40	67	12
<b>Seldom found growing indoors**</b>													
Ascospores	210	13	33	80	210	330	68	22	53	110	330	670	72
Basidiospores	480	40	67	190	480	830	94	53	80	270	1,000	2,400	94
Rusts	13	8	13	13	40	67	26	13	13	13	50	80	27
Smuts, Periconia, Myxomycetes	150	13	13	40	110	190	75	13	13	40	110	190	69
<b>§ TOTAL SPORES/m3</b>	<b>1,500</b>												

†The 'Typical Outdoor Data' represents the typical outdoor spore levels for the location and time frame indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

\*The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

\*\*These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

‡n = number of samples used to calculate data.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, EMLab P&K may not have received and tested a representative number of samples for every region or time period. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
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Date of Sampling: 09-18-2011  
Date of Receipt: 09-19-2011  
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**MoldRANGE™: Extended Outdoor Comparison**  
**Outdoor Location: 21109001-5 TM06out**

Fungi Identified	Outdoor data	Typical Outdoor Data for †						Typical Outdoor Data for †					
		September in California (n‡=12849)						The entire year in California (n‡=158505)					
	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
<b>Generally able to grow indoors*</b>													
Alternaria	-	13	13	27	53	93	61	13	13	27	67	100	56
Arthrinium	13	-	-	-	-	-	< 1	7	13	13	39	53	< 1
Bipolaris/Drechslera group	13	7	13	13	27	53	20	7	13	13	27	40	13
Chaetomium	40	8	13	13	27	53	27	8	13	13	27	44	19
Cladosporium	2,600	200	320	850	2,200	3,600	99	110	210	640	1,700	2,800	97
Curvularia	-	7	13	13	40	53	16	7	13	13	27	53	6
Epicoccum	-	7	13	13	27	53	21	8	13	13	27	53	19
Nigrospora	190	10	13	13	40	93	18	7	13	13	27	53	8
Penicillium/Aspergillus types	-	53	110	280	750	1,200	91	53	110	210	600	1,000	86
Stachybotrys	-	7	13	13	27	53	5	7	13	13	33	67	5
Torula	-	8	13	13	40	60	14	8	13	13	40	67	12
<b>Seldom found growing indoors**</b>													
Ascospores	270	13	33	80	210	330	68	22	53	110	330	670	72
Basidiospores	480	40	67	190	480	830	94	53	80	270	1,000	2,400	94
Rusts	67	8	13	13	40	67	26	13	13	13	50	80	27
Smuts, Periconia, Myxomycetes	400	13	13	40	110	190	75	13	13	40	110	190	69
<b>§ TOTAL SPORES/m3</b>	<b>4,000</b>												

†The 'Typical Outdoor Data' represents the typical outdoor spore levels for the location and time frame indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
 Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
 Date of Receipt: 09-19-2011  
 Date of Report: 09-19-2011

**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Outdoor Summary:** 21109001-5 TM01out:

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Ascospores				210	13 - 170 - 5,200	77
Basidiospores				480	13 - 370 - 20,000	91
Cladosporium				640	27 - 480 - 9,800	91
Epicoccum				13	7 - 20 - 340	26
Nigrospora				27	7 - 13 - 230	17
Penicillium/Aspergillus types				ND	13 - 170 - 2,500	73
Rusts				13	7 - 20 - 330	20
Smuts, Periconia, Myxomycetes				150	7 - 40 - 910	66
<b>Total</b>				1,533		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

**Indoor Samples**

**Location:** 21109001-5 TM02

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: < 1%	dF: 3 Result: 3.5250 Critical value: 7.8147 Inside Similar: Yes	Result: 0.2500	dF: 7 Result: 0.3214 Critical value: 0.6786 Outside Similar: No	Score: 102 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Smuts, Periconia, Myxomycetes					13
<b>Total</b>					13

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
 Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
 Date of Receipt: 09-19-2011  
 Date of Report: 09-19-2011

**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Location:** 21109001-5 TM03

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 5%	dF: 3 Result: 3.5250 Critical value: 7.8147 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: -0.2167 Critical value: 0.5833 Outside Similar: No	Score: 119 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Alternaria					13
Other brown					13
Smuts, Periconia, Myxomycetes					53
<b>Total</b>					80

**Location:** 21109001-5 TM04

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: < 1%	dF: 3 Result: 3.5250 Critical value: 7.8147 Inside Similar: Yes	Result: 0.2500	dF: 7 Result: 0.1964 Critical value: 0.6786 Outside Similar: No	Score: 105 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Nigrospora					13
<b>Total</b>					13

**Location:** 21109001-5 TM05

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: < 1%	dF: 3 Result: 3.5250 Critical value: 7.8147 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
<b>None Detected</b>					N/A

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry  
Sandhu  
Re: 21109001-5; 1st Floor Day Care Exposure  
Assessment

Date of Sampling: 09-18-2011  
Date of Receipt: 09-19-2011  
Date of Report: 09-19-2011

**MoldSTAT™: Supplementary Statistical Spore Trap Report**

\* The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

\*\* An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

\*\*\* The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

\*\*\*\* MoldSCORE™ is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&K reserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
 Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
 Date of Receipt: 09-19-2011  
 Date of Report: 09-19-2011

**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Outdoor Summary:** 21109001-5 TM06out:

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Arthrinium				13	7 - 20 - 350	< 1
Ascospores				270	13 - 170 - 5,200	77
Basidiospores				480	13 - 370 - 20,000	91
Bipolaris/Drechslera group				13	7 - 13 - 230	17
Chaetomium				40	7 - 13 - 150	10
Cladosporium				2,600	27 - 480 - 9,800	91
Nigrospora				190	7 - 13 - 230	17
Penicillium/Aspergillus types				ND	13 - 170 - 2,500	73
Rusts				67	7 - 20 - 330	20
Smuts, Periconia, Myxomycetes				400	7 - 40 - 910	66
<b>Total</b>				4,027		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

**Indoor Samples**

**Location:** 21109001-5 TM02

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: < 1%	dF: 3 Result: 3.5250 Critical value: 7.8147 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.5042 Critical value: 0.5833 Outside Similar: No	Score: 102 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Smuts, Periconia, Myxomycetes					13
<b>Total</b>					13

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
 Re: 21109001-5; 1st Floor Day Care Exposure Assessment

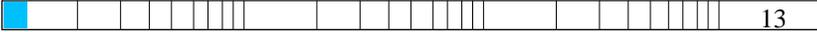
Date of Sampling: 09-18-2011  
 Date of Receipt: 09-19-2011  
 Date of Report: 09-19-2011

**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Location:** 21109001-5 TM03

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 1%	dF: 3 Result: 3.5250 Critical value: 7.8147 Inside Similar: Yes	Result: 0.1667	dF: 11 Result: -0.0341 Critical value: 0.5273 Outside Similar: No	Score: 119 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Alternaria					13
Other brown Smuts, Periconia, Myxomycetes					53
<b>Total</b>					80

**Location:** 21109001-5 TM04

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: < 1%	dF: 3 Result: 3.5250 Critical value: 7.8147 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.3542 Critical value: 0.5833 Outside Similar: No	Score: 105 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Nigrospora					13
<b>Total</b>					13

**Location:** 21109001-5 TM05

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: < 1%	dF: 3 Result: 3.5250 Critical value: 7.8147 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
<b>None Detected</b>					N/A

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry  
Sandhu  
Re: 21109001-5; 1st Floor Day Care Exposure  
Assessment

Date of Sampling: 09-18-2011  
Date of Receipt: 09-19-2011  
Date of Report: 09-19-2011

**MoldSTAT™: Supplementary Statistical Spore Trap Report**

\* The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

\*\* An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

\*\*\* The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

\*\*\*\* MoldSCORE™ is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&K reserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.



Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
 Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
 Date of Receipt: 09-19-2011  
 Date of Report: 09-19-2011

**MoldSCORE™: Spore Trap Report**

**Location:** 21109001-5 TM03

Fungi Identified	Indoor sample spores/m3				Raw count	Spores/m3	MoldSCORE‡			
	<100	1K	10K	>100K			100	200	300	Score
<b>Generally able to grow indoors*</b>										
Alternaria	█				1	13	█			105
Bipolaris/Drechslera group					ND	< 13	█			100
Chaetomium					ND	< 13	█			100
Cladosporium					ND	< 13	█			100
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Other brown	█				1	13	█			105
Penicillium/Aspergillus types†					ND	< 13	█			100
Stachybotrys					ND	< 13	█			100
Torula					ND	< 13	█			100
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13	█			100
Basidiospores††					ND	< 13	█			100
Rusts					ND	< 13	█			100
Smuts, Periconia, Myxomycetes††	█				4	53	█			109
<b>Total</b>						<b>80</b>				<b>Final MoldSCORE 119</b>

**Location:** 21109001-5 TM04

Fungi Identified	Indoor sample spores/m3				Raw count	Spores/m3	MoldSCORE‡			
	<100	1K	10K	>100K			100	200	300	Score
<b>Generally able to grow indoors*</b>										
Alternaria					ND	< 13	█			100
Bipolaris/Drechslera group					ND	< 13	█			100
Chaetomium					ND	< 13	█			100
Cladosporium					ND	< 13	█			100
Curvularia					ND	< 13	█			100
Nigrospora	█				1	13	█			105
Penicillium/Aspergillus types†					ND	< 13	█			100
Stachybotrys					ND	< 13	█			100
Torula					ND	< 13	█			100
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13	█			100
Basidiospores††					ND	< 13	█			100
Rusts					ND	< 13	█			100
Smuts, Periconia, Myxomycetes††					ND	< 13	█			100
<b>Total</b>						<b>13</b>				<b>Final MoldSCORE 105</b>

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
 Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
 Date of Receipt: 09-19-2011  
 Date of Report: 09-19-2011

**MoldSCORE™: Spore Trap Report**

**Location:** 21109001-5 TM05

Fungi Identified	Indoor sample spores/m3				Raw count	Spores/m3	MoldSCORE‡			
	<100	1K	10K	>100K			100	200	300	Score
<b>Generally able to grow indoors*</b>										
Alternaria					ND	< 13	█			100
Bipolaris/Drechslera group					ND	< 13	█			100
Chaetomium					ND	< 13	█			100
Cladosporium					ND	< 13	█			100
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Penicillium/Aspergillus types†					ND	< 13	█			100
Stachybotrys					ND	< 13	█			100
Torula					ND	< 13	█			100
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13	█			100
Basidiospores††					ND	< 13	█			100
Rusts					ND	< 13	█			100
Smuts, Periconia, Myxomycetes††					ND	< 13	█			100
<b>Total</b>						<b>N/A</b>				<b>Final MoldSCORE 100</b>

\*The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

\*\*These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

†The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

††Most of these spore types are not seen with culturable methods (Anderson sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores.

‡Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.



Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
 Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
 Date of Receipt: 09-19-2011  
 Date of Report: 09-19-2011

**MoldSCORE™: Spore Trap Report**

**Location:** 21109001-5 TM03

Fungi Identified	Indoor sample spores/m3				Raw count	Spores/m3	MoldSCORE‡			
	<100	1K	10K	>100K			100	200	300	Score
<b>Generally able to grow indoors*</b>										
Alternaria	█				1	13	█			105
Bipolaris/Drechslera group					ND	< 13	█			100
Chaetomium					ND	< 13	█			100
Cladosporium					ND	< 13	█			100
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Other brown	█				1	13	█			105
Penicillium/Aspergillus types†					ND	< 13	█			100
Stachybotrys					ND	< 13	█			100
Torula					ND	< 13	█			100
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13	█			100
Basidiospores††					ND	< 13	█			100
Rusts					ND	< 13	█			100
Smuts, Periconia, Myxomycetes††	█				4	53	█			109
<b>Total</b>						<b>80</b>				<b>Final MoldSCORE 119</b>

**Location:** 21109001-5 TM04

Fungi Identified	Indoor sample spores/m3				Raw count	Spores/m3	MoldSCORE‡			
	<100	1K	10K	>100K			100	200	300	Score
<b>Generally able to grow indoors*</b>										
Alternaria					ND	< 13	█			100
Bipolaris/Drechslera group					ND	< 13	█			100
Chaetomium					ND	< 13	█			100
Cladosporium					ND	< 13	█			100
Curvularia					ND	< 13	█			100
Nigrospora	█				1	13	█			105
Penicillium/Aspergillus types†					ND	< 13	█			100
Stachybotrys					ND	< 13	█			100
Torula					ND	< 13	█			100
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13	█			100
Basidiospores††					ND	< 13	█			100
Rusts					ND	< 13	█			100
Smuts, Periconia, Myxomycetes††					ND	< 13	█			100
<b>Total</b>						<b>13</b>				<b>Final MoldSCORE 105</b>

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wesley Frey, Mr. Kenny Hsi, Mr. Larry Sandhu  
 Re: 21109001-5; 1st Floor Day Care Exposure Assessment

Date of Sampling: 09-18-2011  
 Date of Receipt: 09-19-2011  
 Date of Report: 09-19-2011

**MoldSCORE™: Spore Trap Report**

**Location:** 21109001-5 TM05

Fungi Identified	Indoor sample spores/m3				Raw count	Spores/m3	MoldSCORE‡			
	<100	1K	10K	>100K			100	200	300	Score
<b>Generally able to grow indoors*</b>										
Alternaria					ND	< 13	█			100
Bipolaris/Drechslera group					ND	< 13	█			100
Chaetomium					ND	< 13	█			100
Cladosporium					ND	< 13	█			100
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Penicillium/Aspergillus types†					ND	< 13	█			100
Stachybotrys					ND	< 13	█			100
Torula					ND	< 13	█			100
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13	█			100
Basidiospores††					ND	< 13	█			100
Rusts					ND	< 13	█			100
Smuts, Periconia, Myxomycetes††					ND	< 13	█			100
<b>Total</b>						<b>N/A</b>				<b>Final MoldSCORE 100</b>

\*The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

\*\*These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

†The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

††Most of these spore types are not seen with culturable methods (Anderson sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores.

‡Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.





Report for:

**Mr. Wesley Frey, Mr. Larry Sandhu**  
**Hygiene Technologies International, Inc.: Northern California**  
3625 Del Amo Boulevard, Suite 180  
Torrance, CA 90503-8370

---

Regarding: Project: 21109001-5  
EML ID: 834793

Approved by:

Lab Manager  
Malcolm Moody

Dates of Analysis:

Spore trap analysis: 09-26-2011

Service SOPs: Spore trap analysis (1038)

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For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

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Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wesley Frey, Mr. Larry Sandhu  
Re: 21109001-5

Date of Submittal: 09-26-2011  
Date of Receipt: 09-26-2011  
Date of Report: 09-26-2011

**SPORE TRAP REPORT: NON-VIABLE METHODOLOGY**

Location:	21109001-5 TM11OUT		21109001-5 TM16		21109001-5 TM21		21109001-5 TM22OUT	
Comments (see below)	None		None		None		None	
Lab ID-Version‡:	3704923-1		3704924-1		3704925-1		3704926-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria							1	13
Arthrinium								
Ascospores*							9	480
Aureobasidium								
Basidiospores*	1	53					1	53
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	10	530			1	53	3	160
Curvularia								
Epicoccum								
Myrothecium								
Nigrospora	1	13						
Oidium							1	13
Other colorless								
Penicillium/Aspergillus types†								
Rusts*								
Smuts*, Periconia, Myxomycetes*	15	200	1	13	2	27	4	53
Stachybotrys								
Stemphylium								
Torula								
Zygomycetes								
Background debris (1-4+)††	1+		1+		3+		2+	
Hyphal fragments/m3	40		< 13		< 13		27	
Pollen/m3	110		< 13		27		290	
Skin cells (1-4+)	< 1+		< 1+		2+		< 1+	
Sample volume (liters)	75		75		75		75	
<b>§ TOTAL SPORES/m3</b>		<b>800</b>		<b>13</b>		<b>80</b>		<b>770</b>

**Comments:**

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.  
 \* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.  
 † The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.  
 †† Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.  
 The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.  
 For more information regarding analytical sensitivity, please contact QA by calling the laboratory.  
 ‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".  
 § Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

