



# HYGIENETECH

Hygiene Technologies International, Inc.

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June 19, 2009

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

Document No. 20906001.5

Attention: David Gau

Regarding: Limited Fungal Growth Exposure Assessment Survey  
Elevator Lobby Areas

Dear Mr. Gau:

On June 12 through 14, 2009, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) monitored elevator shaft mold remediation work within the State of California Board of Equalization (BOE) building being performed by JLS Environmental Services, Inc. (JLS) in accordance with the protocols set forth in the document "Letter Summary Report – Elevator Shaft Mitigation Procedures", prepared by BioMax Environmental, LLC, dated March 19, 2009. During the monitored period, air samples for fungal spores were collected in random elevator lobby areas and within the elevator cars while the remediation was ongoing and at the conclusion of the cleaning. The survey findings, along with the analytical data, conclusions, and conclusions appear below.

On the survey date, air samples were collected for total (viable and nonviable) fungi analyses using a Zefon brand Bio-Pump™ equipped with Allergenco-D™ 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. The airborne fungi assessment analytical data with supporting and background information appear in the enclosed table.

As presented in Table 20906001-104, the airborne spore count data recorded showed mostly common fungal spore types outdoors, such as *Alternaria*, ascospores, basidiospores, *Bipolaris/Drechslera* group, *Botrytis*, *Chaetomium*, *Cladosporium*, colorless spores typical of *Penicillium* and *Aspergillus* species, *Oidium*, other brown, rusts, smuts, *Stemphylium*, *Torula*, and/or *Ulocladium*, with basidiospores or *Cladosporium* predominating. In the interior elevator lobby areas, the data showed low airborne concentrations of common fungal spore types that were consistent with those found outdoors, and the overall data within these areas were well below the overall data recorded outdoors. As indicated in the table, the air samples collected in the elevator cars, with one exception, also showed low airborne concentrations of common fungal spore types that were consistent with those found outdoors, along with overall data that were well below the overall data recorded outdoors. The only exception occurred within Elevator Car #3 while the elevator shaft cleaning was ongoing. That air sample indicated a somewhat higher than normal



level of *Cladosporium*, along with a low but detectable level of *Stachybotrys*. This slight increase in airborne fungal spore count was likely attributable to the opening and closing of the elevator car hatch to facilitate the exchange of tools and supplies to the JLS workers riding on top of the car. However, note that a subsequent air sample collected within Elevator Car #3 approximately two hours later at the conclusion of remediation work indicated only low levels of common fungal spore types. Please also note that once the elevator shaft cleaning was finished, the interior of the elevator cars were vacuumed with equipment having high efficiency particulate air (HEPA) filtration and then wet wiped by JLS personnel. Collectively, 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 the survey was 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", followed by a horizontal line.

Kenny K. Hsi, CIH  
Technical Director

# HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

# APPENDIX A



CLIENT: State of California  
Board of Equalization  
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**TABLE 20906001-104  
AIRBORNE TOTAL FUNGI RESULTS  
ELEVATOR SHAFT ABATEMENT  
SACRAMENTO, CALIFORNIA  
JUNE 12, 13, AND 14, 2009**

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

SAMPLE NUMBER	20906001-TM1001OUTLS	20906001-TM1002LS	20906001-TM1003LS	20906001-TM1004LS
<b>SAMPLING LOCATION/ACTIVITIES</b>	Outdoors about 15 feet north of building; approximately five feet above floor/Normal out door activities	1 <sup>st</sup> Floor; low rise elevator lobby; about center; approximately five feet above floor/Elevator shaft abatement in progress	2 <sup>nd</sup> Floor; elevator lobby; about center; approximately five feet above floor/Elevator shaft abatement in progress	21 <sup>st</sup> Floor; elevator lobby; about center; approximately five feet above floor/Sampling activities only
<b>DATE</b>	6-12-09	6-13-09	6-13-09	6-13-09
<b>START/STOP</b>	23:54:00/23:59:00	00:16:00/00:21:00	01:18:00/01:23:00	02:42:00/02:47:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				13
Ascospores				
Aureobasidium				
Basidiospores	160			
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	850	210	53	53
Epicoccum				
Fusarium				
Nigrospora				
Other brown				13
Penicillium/Aspergillus types	960		110	53
Pithomyces				
Rusts	13		13	
Scopulariopsis				
Smuts (Periconia, Myxomycetes)				
Stachybotrys				
Stemphylium				
Torula	13			
Ulocladium				
Hyphal fragments	<13	<13	<13	<13
Background debris*	2+	2+	2+	2+
<b>TOTAL**</b>	2,000	210	170	130

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

SAMPLE NUMBER	20906001-TM1005LS	20906001-TM1006LS	20906001-TM1007LS	20906001-TM1008LS
<b>SAMPLING LOCATION/ACTIVITIES</b>	Elevator Car #1; about center; approximately five feet above floor/Post abatement; sampling activities only	15 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/Sampling activities only	8 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/Sampling activities only	3 <sup>rd</sup> Floor; elevator lobby; about center; approximately five feet above floor/Sampling activities only
<b>DATE</b>	6-13-09	6-13-09	6-13-09	6-13-09
<b>START/STOP</b>	02:52:00/02:57:00	03:01:00/03:06:00	03:09:00/03:14:00	03:17:00/03:22:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Ascospores	53			
Aureobasidium				
Basidiospores	53			
Bipolaris/Drechslera group				
Botrytis				
Chaetomium		13		
Cladosporium	160			53
Epicoccum	13			
Nigrospora				
Other brown	27	27	13	
Penicillium/Aspergillus types	160		53	
Pithomyces				
Rusts	13			
Scopulariopsis				
Smuts (Periconia, Myxomycetes)	13		13	
Stachybotrys				
Stemphylium				
Torula				
Trichophyton				
Trichosporon				
Ulocladium				
Hyphal fragments	27	<13	13	<13
Background debris*	3+	2+	2+	2+
<b>TOTAL**</b>	490	40	80	53

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

SAMPLE NUMBER	20906001-TM1009OUTLS	20906001-TM01CL	20906001-TM02CL	20906001-TM03CL
<b>SAMPLING LOCATION/ACTIVITIES</b>	Outdoors about 15 feet north of building; approximately five feet above floor/Normal outdoor activities	3 <sup>rd</sup> Floor; elevator lobby; about center; approximately five feet above floor/Elevator shaft abatement in progress	4 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/Elevator shaft abatement in progress	5 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/Elevator shaft abatement in progress
<b>DATE</b>	6-13-09	6-13-09	6-13-09	6-13-09
<b>START/STOP</b>	03:25:00/03:30:00	11:35:00/11:40:00	13:37:00/13:42:00	14:40:00/14:45:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Ascospores	110			
Aureobasidium				
Basidiospores	210			
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	270			53
Epicoccum				
Nigrospora				
Penicillium/Aspergillus types	320	370	110	110
Pithomyces				
Rusts				
Scopulariopsis				
Smuts (Periconia, Myxomycetes)				
Stachybotrys				
Torula				
Trichoderma				
Trichophyton				
Trichosporon				
Ulocladium				
Hyphal fragments	13	13	13	<13
Background debris*	2+	2+	1+	1+
<b>TOTAL **</b>	910	370	110	160

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

SAMPLE NUMBER	20906001-TM04CL	20906001-TM05CL	20906001-TM06CL	20906001-TM07CL
<b>SAMPLING LOCATION/ACTIVITIES</b>	6 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/ Elevator shaft abatement in progress	7 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/ Elevator shaft abatement in progress	8 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/ Elevator shaft abatement in progress	23 <sup>rd</sup> Floor; southern hallway; about center; approximately five feet above floor/Post abatement; sampling activities only
<b>DATE</b>	6-13-09	6-13-09	6-13-09	6-13-09
<b>START/STOP</b>	16:35:00/16:40:00	17:15:00/17:20:00	17:50:00/17:55:00	18:40:00/18:45:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Ascospores				
Aureobasidium				
Basidiospores	53			
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium				
Epicoccum				
Nigrospora				
Penicillium/Aspergillus types	53	110	110	270
Pithomyces				
Rusts				
Scopulariopsis				
Smuts (Periconia, Myxomycetes)		13	13	
Stachybotrys				
Torula				
Trichoderma				
Trichophyton				
Ulocladium				
Hyphal fragments	<13	13	<13	<13
Background debris*	1+	2+	2+	1+
<b>TOTAL**</b>	110	120	120	270

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

SAMPLE NUMBER	20906001-TM08CL	20906001-TM09CL	20906001-TM10CL	20906001-TM11CL
<b>SAMPLING LOCATION/ACTIVITIES</b>	21 <sup>st</sup> Floor; elevator lobby; about center; approximately five feet above floor/Post abatement; sampling activities only	11 <sup>th</sup> Floor; southern hallway; about center; approximately five feet above floor/ Post abatement; sampling activities only	9 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/ Post abatement; sampling activities only	3 <sup>rd</sup> Floor; ; elevator lobby; about center; approximately five feet above floor/ Post abatement; sampling activities only
<b>DATE</b>	6-13-09	6-13-09	6-13-09	6-13-09
<b>START/STOP</b>	18:47:00/18:52:00	18:57:00/19:02:00	19:04:00/19:09:00	19:11:00/19:16:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Ascospores				
Aureobasidium				
Basidiospores	53	53		
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium		53	110	
Epicoccum				
Fusarium				
Nigrospora				
Penicillium/Aspergillus types	210	110		53
Pithomyces				
Rusts				13
Scopulariopsis				
Smuts (Periconia, Myxomycetes)		13		13
Stachybotrys				
Torula				
Trichoderma				
Trichophyton				
Trichosporon				
Ulocladium		13		
Hyphal fragments	<13	13	27	<13
Background debris*	1+	3+	2+	2+
<b>TOTAL**</b>	270	240	110	80

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

SAMPLE NUMBER	20906001- TM2001OUTLS	20906001- TM2002LS	20906001- TM2003LS	20906001- TM2004LS
<b>SAMPLING LOCATION/ACTIVITIES</b>	Outdoors; about 15 feet north of building; approximately five feet above ground/Normal outdoor activities	Elevator Car #2; between 2 <sup>nd</sup> and 3 <sup>rd</sup> Floors; about center; approximately five feet above floor/Elevator shaft abatement in progress	Elevator Car #2; at 2 <sup>nd</sup> Floor; about center; approximately five feet above floor/Elevator shaft abatement in progress	Elevator Car #2; at 11 <sup>th</sup> Floor; about center; approximately five feet above floor/Post abatement; sampling activities only
<b>DATE</b>	6-13-09	6-13-09	6-13-09	6-13-09
<b>START/STOP</b>	10:03:00/10:08:00	11:33:00/11:38:00	17:12:00/17:17:00	18:42:00/18:47:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Ascospores	320	53		
Aureobasidium				
Basidiospores	1,600	320		
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	910	270	270	
Epicoccum				
Nigrospora				
Penicillium/Aspergillus types	640	270	160	110
Pithomyces				
Rusts				
Scopulariopsis				
Smuts (Periconia, Myxomycetes)	450	67		
Stachybotrys				
Torula	40			
Trichoderma				
Trichophyton				
Trichosporon				
Ulocladium	27			
Hyphal fragments	160	27	<13	<13
Background debris*	2+	4+	2+	1+
<b>TOTAL**</b>	4,000	970	430	110

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

SAMPLE NUMBER	20906001- TM2005OUTLS	20906001- TM3001LS	20906001- TM3002LS	20906001- TM3003LS
<b>SAMPLING LOCATION/ACTIVITIES</b>	Outdoors; about 15 feet north of building; approximately five feet above ground/Normal outdoor activities	Elevator Car #1; at 10 <sup>th</sup> floor; about center; approximately five feet above floor/ Elevator shaft abatement in progress	Elevator Car #3; at 3 <sup>rd</sup> Floor; about center; approximately five feet above floor/ Elevator shaft abatement in progress	Elevator Car #3; at 11 <sup>th</sup> Floor; about center; approximately five feet above floor/Post abatement; sampling activities only
<b>DATE</b>	6-13-09	6-14-09	6-14-09	6-14-09
<b>START/STOP</b>	19:09:00/19:14:00	12:02:00/12:06:00	16:48:00/16:53:00	18:58:00/19:03:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria	27		27	
Ascospores	53		110	
Aureobasidium				
Basidiospores	270	110	750	
Bipolaris/Drechslera group				
Botrytis	13			
Chaetomium	13			
Cladosporium	850	160	1,400	53
Epicoccum			13	
Nigrospora				
Oidium	13			
Other Brown		13	13	
Penicillium/Aspergillus types	53	270	53	
Pithomyces				
Rusts	13			
Smuts (Periconia, Myxomycetes)	110	27	40	13
Stachybotrys			13	
Stemphylium			13	
Torula	13	13	40	
Trichoderma				
Ulocladium			13	
Hyphal fragments	160	13	13	<13
Background debris*	2+	4+	4+	2+
<b>TOTAL**</b>	1,400	590	2,500	67

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

SAMPLE NUMBER	209060001- TM3004LS	20906001- TM3005LS	20906001- TM3006LS	20906001- TM12OUTCL
<b>SAMPLING LOCATION/ACTIVITIES</b>	Elevator Car #4; at 11 <sup>th</sup> Floor; about center; approximately five feet above floor/Post abatement; sampling activities only	Elevator Car #2; at 11 <sup>th</sup> Floor; about center; approximately five feet above floor/Post abatement; sampling activities only	Elevator Car #1; at 11 <sup>th</sup> Floor; about center; approximately five feet above floor/Post abatement; sampling activities only	Outdoors; about 25 feet east of building; approximately five feet above ground/Normal outdoor activities
<b>DATE</b>	6-14-09	6-14-09	6-14-09	6-14-09
<b>START/STOP</b>	18:59:00/19:04:00	19:04:00/19:09:00	19:25:00/19:30:00	10:50:00/10:55:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria		13		13
Ascospores		53		110
Aureobasidium				
Basidiospores	110	110	110	1,500
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	160	270	370	1,500
Epicoccum				
Other Brown				13
Penicillium/Aspergillus types	53	67		210
Pithomyces				
Rusts			13	13
Scopulariopsis				
Smuts (Periconia, Myxomycetes)	27	67	67	110
Stachybotrys				
Stemphylium				13
Trichoderma				
Trichophyton				
Trichosporon				
Ulocladium				
Hyphal fragments	27	<13	<13	53
Background debris*	2+	2+	2+	2+
<b>TOTAL**</b>	350	570	560	3,500

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

SAMPLE NUMBER	20906001-TM13CL	20906001-TM14CL	20906001-TM15CL	20906001-TM16CL
<b>SAMPLING LOCATION/ACTIVITIES</b>	9 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/ Elevator shaft abatement in progress	10 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/ Elevator shaft abatement in progress	11 <sup>th</sup> Floor; within barrier; about center; approximately five feet above floor/Elevator shaft abatement in progress	11 <sup>th</sup> Floor; northern hallway; at critical barrier entrance; approximately five feet above floor/Elevator shaft abatement in progress
<b>DATE</b>	6-14-09	6-14-09	6-14-09	6-14-09
<b>START/STOP</b>	11:25:00/11:30:00	12:10:00/12:15:00	12:57:00/13:02:00	13:04:00/13:09:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Ascospores			53	
Aureobasidium				
Basidiospores		53	160	53
Bipolaris/Drechslera group				
Botrytis				13
Chaetomium				
Cladosporium		53	370	
Epicoccum				
Other brown				
Penicillium/Aspergillus types	40		270	
Pithomyces				
Rusts			13	
Scopulariopsis				
Smuts (Periconia, Myxomycetes)			450	
Stachybotrys				
Stemphylium				
Torula				
Ulocladium				
Unidentified mitosporic fungi				
Unidentified zygomycetes				
Hyphal fragments	13	<13	27	<13
Background debris*	1+	1+	3+	1+
<b>TOTAL **</b>	40	110	1,300	67

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

SAMPLE NUMBER	20906001-TM17CL	20906001-TM18CL	20906001-TM19CL	20906001-TM20CL
<b>SAMPLING LOCATION/ACTIVITIES</b>	1 <sup>st</sup> Floor; low rise elevator lobby; about center; approximately five feet above floor/sampling activities only	2 <sup>nd</sup> Floor; elevator lobby; about center; approximately five feet above floor/Elevator shaft abatement in progress	3 <sup>rd</sup> Floor; elevator lobby; about center; approximately five feet above floor/ Elevator shaft abatement in progress	4 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/ Elevator shaft abatement in progress
<b>DATE</b>	6-14-09	6-14-09	6-14-09	6-14-09
<b>START/STOP</b>	16:05:00/16:10:00	16:40:00/16:45:00	17:00/17:05:00	17:35:00/17:40:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria		13		
Ascospores				
Aureobasidium				
Basidiospores	53	110	53	
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium		110	53	53
Epicoccum				
Fusarium				
Nigrospora				
Penicillium/Aspergillus types				
Pithomyces				
Rusts				
Scopulariopsis				
Smuts (Periconia, Myxomycetes)		27		
Stachybotrys				
Stemphylium				
Torula				
Trichoderma				
Trichophyton				
Trichosporon				
Hyphal fragments	<13	13	<13	<13
Background debris*	1+	1+	1+	1+
<b>TOTAL**</b>	53	250	110	53

\*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.



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

**TABLE 20906001-104  
AIRBORNE TOTAL FUNGI RESULTS  
ELEVATOR SHAFT ABATEMENT  
SACRAMENTO, CALIFORNIA  
JUNE 12, 13, AND 14, 2009**

Page 11

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

SAMPLE NUMBER	20906001-TM21CL	20906001-TM22CL	20906001-TM23CL	20906001-TM24CL
<b>SAMPLING LOCATION/ACTIVITIES</b>	23 <sup>rd</sup> Floor; southern hallway; about enter; approximately five feet above floor/Post abatement; sampling activities only	15 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/Post abatement; sampling activities only	11 <sup>th</sup> Floor; northern hallway; about center; approximately five feet above floor/Post abatement; sampling activities only	8 <sup>th</sup> Floor; elevator lobby; about center; approximately five feet above floor/sampling activities only
<b>DATE</b>	6-14-09	6-14-09	6-14-09	6-14-09
<b>START/STOP</b>	17:45:00/17:50:00	17:55:00/18:00:00	18:03:00/18:08:00	18:12:00/18:17:00
<b>SAMPLE TIME</b>	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria			13	
Ascospores				
Aureobasidium				
Basidiospores				
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	53	110	510	53
Epicoccum				
Fusarium				
Microsporium				
Myrothecium				
Nigrospora				
Penicillium/Aspergillus types	53			53
Pithomyces				
Rusts				
Scopulariopsis				
Smuts (Periconia, Myxomycetes)				
Stachybotrys				
Stemphylium				
Torula	27			
Trichoderma				
Hyphal fragments	<13	<13	13	<13
Background debris*	1+	1+	2+	2+
<b>TOTAL**</b>	130	110	520	110

\*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.

# HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

# APPENDIX A



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

**TABLE 20906001-104  
AIRBORNE TOTAL FUNGI RESULTS  
ELEVATOR SHAFT ABATEMENT  
SACRAMENTO, CALIFORNIA  
JUNE 12, 13, AND 14, 2009**

Page 12

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

SAMPLE NUMBER	20906001-TM25CL	20906001-TM26OUTCL		
<b>SAMPLING LOCATION/ACTIVITIES</b>	3 <sup>rd</sup> Floor; elevator lobby; about center; approximately five feet above floor/Post abatement; sampling activities only	Outdoors; about 25 feet east of building; approximately five feet above ground/Normal outdoor activities	This column intentionally left blank	This column intentionally left blank
<b>DATE</b>	6-14-09	6-14-09		
<b>START/STOP</b>	18:20:00/18:25:00	18:28:00/18:33:00		
<b>SAMPLE TIME</b>	5 minutes	5 minutes		
Alternaria		67		
Ascospores		160		
Aureobasidium				
Basidiospores		2,000		
Bipolaris/Drechslera group		13		
Botrytis				
Chaetomium				
Cladosporium	110	3,100		
Epicoccum				
Microsporium				
Nigrospora				
Penicillium/Aspergillus types				
Rusts		40		
Scopulariopsis				
Smuts (Periconia, Myxomycetes)		160		
Stachybotrys				
Stemphylium				
Torula	27	13		
Trichoderma				
Trichophyton				
Trichosporon				
Ulocladium				
Hyphal fragments	27	40		
Background debris*	2+	2+		
<b>TOTAL**</b>	130	5,600		

\*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.



**EMLab P&K**

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Report for:

**Mr. Wes Frey**  
**Hygiene Technologies International, Inc.: Northern California**  
3127 Bowen Island Street  
West Sacramento, CA 95691

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Regarding:      Project: 20906001  
                         EML ID: 551262

Approved by:

Lab Manager  
Dr. Kamashwaran Ramanathan

Dates of Analysis:  
Spore trap analysis: 06-15-2009

Project SOPs: Spore trap analysis (I100000)

---

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

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 corrections of results is not a standard practice. 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.

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Document Number: 200091 - Revision Number: 5

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

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

Location:	20906001TM10	20906001TM10	20906001TM10	20906001TM10	20906001TM10
	0 1OUTLS	0 2LS	0 3LS	0 4LS	0 5LS
Comments (see below)	None	None	None	None	None
Lab ID-Version‡:	2446549-1	2446550-1	2446551-1	2446552-1	2446553-1
	raw ct. spores/m3				
Alternaria				1	13
Arthrinium					
Ascospores*					1 53
Aureobasidium					
Basidiospores*	3	160			1 53
Bipolaris/Drechslera group					
Botrytis					
Chaetomium					
Cladosporium	16	850	4	210	1 53
Curvularia					
Epicoccum					1 13
Fusarium					
Myrothecium					
Nigrospora					
Other brown				1	13
Penicillium/Aspergillus types†	18	960		2	110
Pithomyces					
Rusts*	1	13		1	13
Smuts*, Periconia, Myxomycetes*					1 13
Stachybotrys					
Stemphylium					
Torula	1	13			
Ulocladium					
Background debris (1-4+)††	2+	2+	2+	2+	3+
Hyphal fragments/m3	< 13	< 13	< 13	< 13	27
Pollen/m3	27	< 13	< 13	< 13	< 13
Skin cells (1-4+)	< 1+	1+	2+	2+	2+
Sample volume (liters)	75	75	75	75	75
<b>§ TOTAL SPORE/m3</b>		<b>2,000</b>	<b>210</b>	<b>170</b>	<b>130</b>
					<b>490</b>

**Comments:**

\* 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.  
 ‡ A "Version" greater than 1 indicates amended data.  
 § Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
 TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

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

Location:	20906001TM1006L		20906001TM1007L		20906001TM1008L		20906001TM1009C	
	S		S		S		U TLS	
Comments (see below)	None		None		None		None	
Lab ID-Version‡:	2446554-1		2446555-1		2446556-1		2446557-1	
	raw ct.	spores/m3						
Alternaria								
Arthrinium								
Ascospores*							2	110
Aureobasidium								
Basidiospores*							4	210
Bipolaris/Drechslera group								
Botrytis								
Chaetomium	1	13						
Cladosporium					1	53	5	270
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown	2	27	1	13				
Penicillium/Aspergillus types†			1	53			6	320
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*			1	13				
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Background debris (1-4+)††	2+		2+		2+		2+	
Hyphal fragments/m3	< 13		13		< 13		13	
Pollen/m3	< 13		< 13		< 13		13	
Skin cells (1-4+)	1+		1+		1+		< 1+	
Sample volume (liters)	75		75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>40</b>		<b>80</b>		<b>53</b>		<b>910</b>

**Comments:**

\* 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.

‡ A "Version" greater than 1 indicates amended data.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

**MoldRANGE™: Extended Outdoor Comparison****Outdoor Location: 20906001TM1001OUTLS**

Fungi Identified	Outdoor data	Typical Outdoor Data by Date†				Typical Outdoor Data by Location‡			
		Month: June				State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
<b>Generally able to grow indoors*</b>									
Alternaria	-	7	40	380	65	7	27	220	57
Bipolaris/Drechslera group	-	7	13	180	18	7	13	120	13
Chaetomium	-	7	13	120	15	7	13	120	19
Cladosporium	850	53	650	8,600	97	53	630	6,700	97
Curvularia	-	7	13	460	13	7	13	230	7
Nigrospora	-	7	13	160	10	7	13	170	8
Penicillium/Aspergillus types	960	27	190	2,100	79	33	210	2,500	86
Stachybotrys	-	7	13	350	3	7	13	290	5
Torula	13	7	13	160	16	7	13	150	12
<b>Seldom found growing indoors**</b>									
Ascospores	-	13	190	7,200	82	13	110	1,900	71
Basidiospores	160	13	270	15,000	93	13	210	7,000	93
Rusts	13	7	13	210	27	7	13	250	28
Smuts, Periconia, Myxomycetes	-	10	58	1,300	81	8	40	490	70
<b>TOTAL SPORES/M3</b>	1,996								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 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, 2.5% 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.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

\*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.

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. Wes Frey  
Re: 20906001

Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

**MoldRANGE™: Extended Outdoor Comparison****Outdoor Location: 20906001TM1009OUTLS**

Fungi Identified	Outdoor data	Typical Outdoor Data by Date†				Typical Outdoor Data by Location‡			
		Month: June				State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
<b>Generally able to grow indoors*</b>									
Alternaria	-	7	40	380	65	7	27	220	57
Bipolaris/Drechslera group	-	7	13	180	18	7	13	120	13
Chaetomium	-	7	13	120	15	7	13	120	19
Cladosporium	270	53	650	8,600	97	53	630	6,700	97
Curvularia	-	7	13	460	13	7	13	230	7
Nigrospora	-	7	13	160	10	7	13	170	8
Penicillium/Aspergillus types	320	27	190	2,100	79	33	210	2,500	86
Stachybotrys	-	7	13	350	3	7	13	290	5
Torula	-	7	13	160	16	7	13	150	12
<b>Seldom found growing indoors**</b>									
Ascospores	110	13	190	7,200	82	13	110	1,900	71
Basidiospores	210	13	270	15,000	93	13	210	7,000	93
Rusts	-	7	13	210	27	7	13	250	28
Smuts, Periconia, Myxomycetes	-	10	58	1,300	81	8	40	490	70
<b>TOTAL SPORES/M3</b>	910								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 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, 2.5% 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.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

\*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.

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. Wes Frey  
 Re: 20906001

Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

**Outdoor Summary: 20906001TM1001OUTLS:**

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Ascospores	ND				13 - 160 - 4,500	76
Basidiospores	160				13 - 310 - 15,000	91
Cladosporium	850				27 - 510 - 8,900	93
Penicillium/Aspergillus types	960				27 - 210 - 2,500	80
Rusts	13				7 - 15 - 310	22
Smuts, Periconia, Myxomycetes	ND				7 - 40 - 830	69
Torula	13				7 - 13 - 160	11
<b>Total</b>	1,996					

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: 20906001TM1002LS**

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 10%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.3333	dF: 5 Result: 0.5250 Critical value: 0.8000 Outside Similar: No	Score: 108 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
	Cladosporium	210			
	<b>Total</b>	210			

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

**Location:** 20906001TM1003LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 8%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.7500	dF: 5 Result: 0.7750 Critical value: 0.8000 Outside Similar: No	Score: 104 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					53
Penicillium/Aspergillus types					110
Rusts					13
<b>Total</b>					176

**Location:** 20906001TM1004LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 6%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.4444	dF: 7 Result: 0.4286 Critical value: 0.6786 Outside Similar: No	Score: 110 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Alternaria					13
Cladosporium					53
Other brown					13
Penicillium/Aspergillus types					53
<b>Total</b>					132

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

**Location:** 20906001TM1005LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 24%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.6154	dF: 9 Result: 0.5833 Critical value: 0.5833 Outside Similar: Yes	Score: 118 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Ascospores					53
Basidiospores					53
Cladosporium					160
Epicoccum					13
Other brown					27
Penicillium/Aspergillus types					160
Rusts					13
Smuts, Periconia, Myxomycetes					13
<b>Total</b>					492

**Location:** 20906001TM1006LS

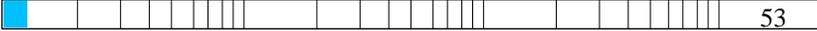
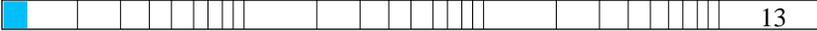
% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 2%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.0000	dF: 7 Result: -0.4286 Critical value: 0.6786 Outside Similar: No	Score: 121 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Chaetomium					13
Other brown					27
<b>Total</b>					40

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

**Location:** 20906001TM1007LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 3%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.2500	dF: 7 Result: 0.0625 Critical value: 0.6786 Outside Similar: No	Score: 108 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Other brown					
Penicillium/Aspergillus types					
Smuts, Periconia, Myxomycetes					
<b>Total</b>					

**Location:** 20906001TM1008LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 2%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.3333	dF: 5 Result: 0.5250 Critical value: 0.8000 Outside Similar: No	Score: 102 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					
<b>Total</b>					

\* 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.

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

\*\*\*\* 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.

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

**Outdoor Summary: 20906001TM1009OUTLS:**

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Ascospores					13 - 160 - 4,500	76
Basidiospores					13 - 310 - 15,000	91
Cladosporium					27 - 510 - 8,900	93
Penicillium/Aspergillus types					27 - 210 - 2,500	80
Smuts, Periconia, Myxomycetes					7 - 40 - 830	69
<b>Total</b>						

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: 20906001TM1002LS**

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 23%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.4000	dF: 4 Result: 0.4000 Critical value: N/A Outside Similar: N/A	Score: 112 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
	Cladosporium				
	<b>Total</b>				

**Location: 20906001TM1003LS**

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 19%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.5714	dF: 5 Result: 0.6750 Critical value: 0.8000 Outside Similar: No	Score: 113 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
	Cladosporium				
	Penicillium/Aspergillus types				
	Rusts				
	<b>Total</b>				

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

**Location:** 20906001TM1004LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 14%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.5000	dF: 6 Result: 0.5143 Critical value: 0.7714 Outside Similar: No	Score: 110 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Alternaria					13
Cladosporium					53
Other brown					13
Penicillium/Aspergillus types					53
<b>Total</b>					132

**Location:** 20906001TM1005LS

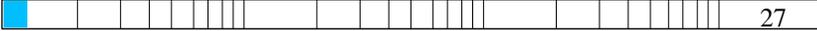
% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 54%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.6667	dF: 8 Result: 0.9524 Critical value: 0.6190 Outside Similar: Yes	Score: 118 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Ascospores					53
Basidiospores					53
Cladosporium					160
Epicoccum					13
Other brown					27
Penicillium/Aspergillus types					160
Rusts					13
Smuts, Periconia, Myxomycetes					13
<b>Total</b>					492

Client: Hygiene Technologies International, Inc.:  
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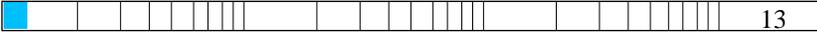
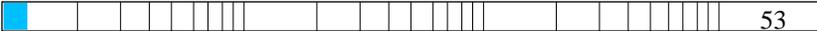
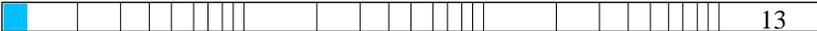
Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

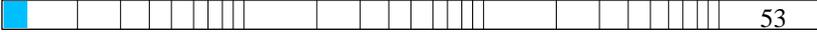
**Location:** 20906001TM1006LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 4%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.0000	dF: 6 Result: -0.5286 Critical value: 0.7714 Outside Similar: No	Score: 121 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Chaetomium					13
Other brown					27
<b>Total</b>					40

**Location:** 20906001TM1007LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 8%	dF: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.2857	dF: 6 Result: 0.0857 Critical value: 0.7714 Outside Similar: No	Score: 108 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Other brown					13
Penicillium/Aspergillus types					53
Smuts, Periconia, Myxomycetes					13
<b>Total</b>					79

**Location:** 20906001TM1008LS

% 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: 6 Result: 11.5500 Critical value: 12.5916 Inside Similar: Yes	Result: 0.4000	dF: 4 Result: 0.4000 Critical value: N/A Outside Similar: N/A	Score: 103 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					53
<b>Total</b>					53

Client: Hygiene Technologies International, Inc.:  
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Date of Receipt: 06-15-2009  
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### **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.

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Date of Receipt: 06-15-2009  
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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001TM1003LS

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	█				1	53	100			
Curvularia					ND	< 13	100			
Nigrospora					ND	< 13	100			
Penicillium/Aspergillus types†	█				2	110	104			
Stachybotrys					ND	< 13	100			
Torula					ND	< 13	100			
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13	100			
Basidiospores††					ND	< 13	100			
Rusts	█				1	13	105			
Smuts, Periconia, Myxomycetes††					ND	< 13	100			
<b>Total</b>						<b>176</b>	<b>Final MoldSCORE 104</b>			

**Location:** 20906001TM1004LS

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	█				1	53	100			
Curvularia					ND	< 13	100			
Nigrospora					ND	< 13	100			
Other brown	█				1	13	105			
Penicillium/Aspergillus types†	█				1	53	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>132</b>	<b>Final MoldSCORE 110</b>			

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001TM1005LS

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	█				3	160				100
Curvularia					ND	< 13				100
Epicoccum	█				1	13				105
Nigrospora					ND	< 13				100
Other brown	█				2	27				111
Penicillium/Aspergillus types†	█				3	160				100
Stachybotrys					ND	< 13				100
Torula					ND	< 13				100
<b>Seldom found growing indoors**</b>										
Ascospores‡‡	█				1	53				121
Basidiospores‡‡	█				1	53				101
Rusts					1	13				104
Smuts, Periconia, Myxomycetes‡‡	█				1	13				103
<b>Total</b>						<b>492</b>				<b>Final MoldSCORE 118</b>

**Location:** 20906001TM1006LS

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	█				1	13				121
Cladosporium					ND	< 13				100
Curvularia					ND	< 13				100
Nigrospora					ND	< 13				100
Other brown	█				2	27				111
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>40</b>				<b>Final MoldSCORE 121</b>

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001TM1007LS

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
Other brown	█				1	13				105
Penicillium/Aspergillus types†	█				1	53				102
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‡‡	█				1	13				103
<b>Total</b>						<b>79</b>				<b>Final MoldSCORE 108</b>

**Location:** 20906001TM1008LS

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	█				1	53				102
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>53</b>				<b>Final MoldSCORE 102</b>

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### **MoldSCORE™: Spore Trap Report**

\*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.



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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001TM1003LS

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	█				1	53	█			102
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Penicillium/Aspergillus types†	█				2	110	█			113
Stachybotrys					ND	< 13	█			100
Torula					ND	< 13	█			100
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13	█			100
Basidiospores††					ND	< 13	█			100
Rusts	█				1	13	█			105
Smuts, Periconia, Myxomycetes††					ND	< 13	█			100
<b>Total</b>						<b>176</b>				<b>Final MoldSCORE 113</b>

**Location:** 20906001TM1004LS

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	█				1	53	█			102
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Other brown	█				1	13	█			105
Penicillium/Aspergillus types†	█				1	53	█			105
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>132</b>				<b>Final MoldSCORE 110</b>

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

**MoldSCORE™: Spore Trap Report**

**Location:** 20906001TM1005LS

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	█				3	160				106
Curvularia					ND	< 13				100
Epicoccum	█				1	13				105
Nigrospora					ND	< 13				100
Other brown	█				2	27				111
Penicillium/Aspergillus types†	█				3	160				113
Stachybotrys					ND	< 13				100
Torula					ND	< 13				100
<b>Seldom found growing indoors**</b>										
Ascospores††	█				1	53				110
Basidiospores††	█				1	53				100
Rusts					1	13				105
Smuts, Periconia, Myxomycetes††	█				1	13				103
<b>Total</b>						<b>492</b>				<b>Final MoldSCORE 118</b>

**Location:** 20906001TM1006LS

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	█				1	13				121
Cladosporium					ND	< 13				100
Curvularia					ND	< 13				100
Nigrospora					ND	< 13				100
Other brown	█				2	27				111
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>40</b>				<b>Final MoldSCORE 121</b>

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

**MoldSCORE™: Spore Trap Report**

**Location:** 20906001TM1007LS

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
Other brown	█				1	13	█			105
Penicillium/Aspergillus types†	█				1	53	█			106
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††	█				1	13	█			103
<b>Total</b>						<b>79</b>				<b>Final MoldSCORE 108</b>

**Location:** 20906001TM1008LS

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	█				1	53	█			103
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>53</b>				<b>Final MoldSCORE 103</b>

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

### **MoldSCORE™: Spore Trap Report**

\*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.



# HYGIENE TECH

Hygiene Technologies International, Inc.

3625 Del Amo Boulevard, Suite 180  
Torrance, California 90503-1643  
(310) 370-8370  
(310) 370-2474 FAX  
www.hygienetech.com

## Request For Analysis

Project Number/Purchase Order: 20906001 Date Submitted: 6/15/09  
 Project Contact: W. Fry Turnaround Required: Rush (Monday)  
 Lab Destination: EMLAB P&K Lab Contact: \_\_\_\_\_

SAMPLE ID	VOLUME	MEDIA	ANALYSIS REQUESTED
20906001 TM1000LS	75L	75L	M100
TM1002LS			
TM1003LS			
TM1004LS			
TM1005LS			
TM1006LS			
TM1007LS			
TM1008LS			
TM100900LS			



Special Instructions: \_\_\_\_\_

1. Sampled by: [Signature] on 6/15/09 Received by: Ann Morrissey 6-15-09 9:20  
 2. Relinquished by: [Signature] on 6/15/09 2:50 Received by: [Signature] 6/15/09 9:50  
 3. Relinquished by: [Signature] 6-15-09 10:30 Received by: \_\_\_\_\_  
Please include signature, date, and time

Lab Use Only: \_\_\_\_\_



**EMLab P&K**

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Report for:

**Mr. Wes Frey**  
**Hygiene Technologies International, Inc.: Northern California**  
3127 Bowen Island Street  
West Sacramento, CA 95691

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Regarding:      Project: 20906001  
                         EML ID: 551313

Approved by:

Lab Manager  
Malcolm Moody

Dates of Analysis:  
Spore trap analysis: 06-15-2009

Project SOPs: Spore trap analysis (I100000)

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This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

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 corrections of results is not a standard practice. 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.

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Document Number: 200091 - Revision Number: 5

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

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

Location:	20906001- TM2001OUTLS		20906001- TM2002LS		20906001- TM2003LS		20906001- TM2004LS		20906001- TM2005OUTLS	
Comments (see below)	None		None		None		None		None	
Lab ID-Version‡:	2446706-1		2446707-1		2446708-1		2446709-1		2446710-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria									2	27
Arthrinium										
Ascospores*	6	320	1	53					1	53
Aureobasidium										
Basidiospores*	30	1,600	6	320					5	270
Bipolaris/Drechslera group										
Botrytis									1	13
Chaetomium									1	13
Cladosporium	17	910	5	270	5	270			16	850
Curvularia										
Epicoccum										
Fusarium										
Myrothecium										
Nigrospora										
Oidium									1	13
Penicillium/Aspergillus types†	12	640	5	270	3	160	2	110	1	53
Pithomyces										
Rusts*									1	13
Smuts*, Periconia, Myxomycetes*	34	450	5	67					8	110
Stachybotrys										
Stemphylium										
Torula	3	40							1	13
Ulocladium	2	27								
Background debris (1-4+)††	2+		4+		2+		1+		2+	
Hyphal fragments/m3	160		27		< 13		< 13		160	
Pollen/m3	93		13		40		13		120	
Skin cells (1-4+)	< 1+		< 1+		< 1+		1+		< 1+	
Sample volume (liters)	75		75		75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>4,000</b>		<b>970</b>		<b>430</b>		<b>110</b>		<b>1,400</b>

**Comments:**

\* 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.

‡ A "Version" greater than 1 indicates amended data.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

**MoldRANGE™: Extended Outdoor Comparison**  
**Outdoor Location: 20906001-TM2001OUTLS**

Fungi Identified	Outdoor data	Typical Outdoor Data by Date†				Typical Outdoor Data by Location‡			
		Month: June				State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
<b>Generally able to grow indoors*</b>									
Alternaria	-	7	40	380	65	7	27	220	57
Bipolaris/Drechslera group	-	7	13	180	18	7	13	120	13
Chaetomium	-	7	13	120	15	7	13	120	19
Cladosporium	910	53	650	8,600	97	53	630	6,700	97
Curvularia	-	7	13	460	13	7	13	230	7
Nigrospora	-	7	13	160	10	7	13	170	8
Penicillium/Aspergillus types	640	27	190	2,100	79	33	210	2,500	86
Stachybotrys	-	7	13	350	3	7	13	290	5
Torula	40	7	13	160	16	7	13	150	12
Ulocladium	27	7	13	67	5	7	13	93	9
<b>Seldom found growing indoors**</b>									
Ascospores	320	13	190	7,200	82	13	110	1,900	71
Basidiospores	1,600	13	270	15,000	93	13	210	7,000	93
Botrytis	-	7	19	200	14	7	20	200	19
Oidium	-	7	13	210	23	7	13	190	20
Rusts	-	7	13	210	27	7	13	250	28
Smuts, Periconia, Myxomycetes	450	10	58	1,300	81	8	40	490	70
<b>TOTAL SPORES/M3</b>	3,987								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 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, 2.5% 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.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

\*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.

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. Wes Frey  
Re: 20906001

Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

**MoldRANGE™: Extended Outdoor Comparison****Outdoor Location: 20906001-TM2005OUTLS**

Fungi Identified	Outdoor data	Typical Outdoor Data by Date†				Typical Outdoor Data by Location‡			
		Month: June				State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
<b>Generally able to grow indoors*</b>									
Alternaria	27	7	40	380	65	7	27	220	57
Bipolaris/Drechslera group	-	7	13	180	18	7	13	120	13
Chaetomium	13	7	13	120	15	7	13	120	19
Cladosporium	850	53	650	8,600	97	53	630	6,700	97
Curvularia	-	7	13	460	13	7	13	230	7
Nigrospora	-	7	13	160	10	7	13	170	8
Penicillium/Aspergillus types	53	27	190	2,100	79	33	210	2,500	86
Stachybotrys	-	7	13	350	3	7	13	290	5
Torula	13	7	13	160	16	7	13	150	12
Ulocladium	-	7	13	67	5	7	13	93	9
<b>Seldom found growing indoors**</b>									
Ascospores	53	13	190	7,200	82	13	110	1,900	71
Basidiospores	270	13	270	15,000	93	13	210	7,000	93
Botrytis	13	7	19	200	14	7	20	200	19
Oidium	13	7	13	210	23	7	13	190	20
Rusts	13	7	13	210	27	7	13	250	28
Smuts, Periconia, Myxomycetes	110	10	58	1,300	81	8	40	490	70
<b>TOTAL SPORES/M3</b>	1,428								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 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, 2.5% 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.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

\*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.

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. Wes Frey  
 Re: 20906001

Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

**Outdoor Summary: 20906001-TM2001OUTLS:**

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Ascospores				320	13 - 160 - 4,500	76
Basidiospores				1,600	13 - 310 - 15,000	91
Cladosporium				910	27 - 510 - 8,900	93
Penicillium/Aspergillus types				640	27 - 210 - 2,500	80
Smuts, Periconia, Myxomycetes				450	7 - 40 - 830	69
Torula				40	7 - 13 - 160	11
Ulocladium				27	7 - 13 - 93	6
<b>Total</b>				<b>3,987</b>		

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: 20906001-TM2002LS**

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 24%	dF: 2 Result: 6.7000 Critical value: 5.9915 Inside Similar: No	Result: 0.8333	dF: 7 Result: 0.9821 Critical value: 0.6786 Outside Similar: Yes	Score: 118 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Ascospores					53
Basidiospores					320
Cladosporium					270
Penicillium/Aspergillus types					270
Smuts, Periconia, Myxomycetes					67
<b>Total</b>					<b>980</b>

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

**Location:** 20906001-TM2003LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 10%	dF: 2 Result: 6.7000 Critical value: 5.9915 Inside Similar: No	Result: 0.4444	dF: 7 Result: 0.5714 Critical value: 0.6786 Outside Similar: No	Score: 115 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					270
Penicillium/Aspergillus types					160
<b>Total</b>					430

**Location:** 20906001-TM2004LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 2%	dF: 2 Result: 6.7000 Critical value: 5.9915 Inside Similar: No	Result: 0.2500	dF: 7 Result: 0.4375 Critical value: 0.6786 Outside Similar: No	Score: 115 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Penicillium/Aspergillus types					110
<b>Total</b>					110

\* 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.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

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

\*\*\*\* 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. Wes Frey  
 Re: 20906001

Date of Receipt: 06-15-2009  
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**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Outdoor Summary: 20906001-TM2005OUTLS:**

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Alternaria					7 - 27 - 400	52
Ascospores					13 - 160 - 4,500	76
Basidiospores					13 - 310 - 15,000	91
Botrytis					7 - 19 - 230	11
Chaetomium					7 - 13 - 130	12
Cladosporium					27 - 510 - 8,900	93
Oidium					7 - 13 - 220	15
Penicillium/Aspergillus types					27 - 210 - 2,500	80
Rusts					7 - 15 - 310	22
Smuts, Periconia, Myxomycetes					7 - 40 - 830	69
Torula					7 - 13 - 160	11
<b>Total</b>						

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: 20906001-TM2002LS**

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 68%	dF: 2 Result: 6.7000 Critical value: 5.9915 Inside Similar: No	Result: 0.6250	dF: 11 Result: 0.9273 Critical value: 0.5273 Outside Similar: Yes	Score: 139 Result: Low

Species Detected	Spores/m3			
	<100	1K	10K	>100K
Ascospores				
Basidiospores				
Cladosporium				
Penicillium/Aspergillus types				
Smuts, Periconia, Myxomycetes				
<b>Total</b>				

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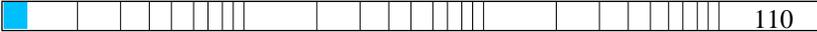
Date of Receipt: 06-15-2009  
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**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Location:** 20906001-TM2003LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 30%	dF: 2 Result: 6.7000 Critical value: 5.9915 Inside Similar: No	Result: 0.3077	dF: 11 Result: 0.6614 Critical value: 0.5273 Outside Similar: Yes	Score: 124 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					270
Penicillium/Aspergillus types					160
<b>Total</b>					430

**Location:** 20906001-TM2004LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 7%	dF: 2 Result: 6.7000 Critical value: 5.9915 Inside Similar: No	Result: 0.1667	dF: 11 Result: 0.4977 Critical value: 0.5273 Outside Similar: No	Score: 117 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Penicillium/Aspergillus types					110
<b>Total</b>					110

\* 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.

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

\*\*\*\* 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.

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM2003LS

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	■				5	270				111
Curvularia					ND	< 13				100
Nigrospora					ND	< 13				100
Penicillium/Aspergillus types†	■				3	160				115
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>430</b>				<b>Final MoldSCORE 115</b>

**Location:** 20906001-TM2004LS

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†	■				2	110				115
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>110</b>				<b>Final MoldSCORE 115</b>

Client: Hygiene Technologies International, Inc.:  
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Date of Receipt: 06-15-2009  
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### **MoldSCORE™: Spore Trap Report**

\*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.

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**MoldSCORE™: Spore Trap Report**

**Outdoor Sample:** 20906001-TM2005OUTLS

Fungi Identified	Outdoor sample spores/m3				Raw count	Spores/m3
	<100	1K	10K	>100K		
<b>Generally able to grow indoors*</b>						
Alternaria					2	27
Bipolaris/Drechslera group					ND	< 13
Chaetomium					1	13
Cladosporium					16	850
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					1	53
Stachybotrys					ND	< 13
Torula					1	13
<b>Seldom found growing indoors**</b>						
Ascospores††					1	53
Basidiospores††					5	270
Botrytis					1	13
Oidium					1	13
Rusts					1	13
Smuts, Periconia, Myxomycetes††					8	110
<b>Total</b>						<b>1,428</b>

**Location:** 20906001-TM2002LS

Fungi Identified	Indoor sample spores/m3				Raw count	Spores/m3
	<100	1K	10K	>100K		
<b>Generally able to grow indoors*</b>						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					5	270
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					5	270
Stachybotrys					ND	< 13
Torula					ND	< 13
<b>Seldom found growing indoors**</b>						
Ascospores††					1	53
Basidiospores††					6	320
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					5	67
<b>Total</b>						<b>980</b>

MoldSCORE‡			Score
100	200	300	
			100
			100
			100
			100
			100
			100
			139
			100
			100
			111
			120
			100
			103
<b>Final MoldSCORE</b>			<b>139</b>

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM2003LS

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	█				5	270	█			106
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Penicillium/Aspergillus types†	█				3	160	█	█		124
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>430</b>	<b>Final MoldSCORE 124</b>			

**Location:** 20906001-TM2004LS

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†	█				2	110	█	█		117
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>110</b>	<b>Final MoldSCORE 117</b>			

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### **MoldSCORE™: Spore Trap Report**

\*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.

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†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.





**EMLab P&K**

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Report for:

**Mr. Wes Frey**  
**Hygiene Technologies International, Inc.: Northern California**  
3127 Bowen Island Street  
West Sacramento, CA 95691

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Regarding:      Project: 20906001  
                         EML ID: 551314

Approved by:

Lab Manager  
Malcolm Moody

Dates of Analysis:  
Spore trap analysis: 06-15-2009

Project SOPs: Spore trap analysis (I100000)

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This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

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 corrections of results is not a standard practice. 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.

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Document Number: 200091 - Revision Number: 5

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Sampling: 06-15-2009  
Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

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

Location:	20906001-TM3001OUTLS		20906001-TM3002LS		20906001-TM3003LS		20906001-TM3004LS	
Comments (see below)	None		None		None		A	
Lab ID-Version‡:	2446715-1		2446716-1		2446717-1		2446718-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria			2	27				
Arthrinium								
Ascospores*			2	110				
Aureobasidium								
Basidiospores*	2	110	14	750			2	110
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	3	160	26	1,400	1	53	3	160
Curvularia								
Epicoccum			1	13				
Fusarium								
Myrothecium								
Nigrospora								
Other brown	1	13	1	13				
Other colorless								
Penicillium/Aspergillus types†	5	270	1	53			4	53
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*	2	27	3	40	1	13	2	27
Stachybotrys			1	13				
Stemphylium			1	13				
Torula	1	13	3	40				
Ulocladium			1	13				
Zygomycetes								
Background debris (1-4+)††	4+		4+		2+		2+	
Hyphal fragments/m3	13		13		< 13		27	
Pollen/m3	27		210		13		13	
Skin cells (1-4+)	1+		2+		1+		1+	
Sample volume (liters)	75		75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>590</b>		<b>2,500</b>		<b>67</b>		<b>350</b>

Comments: A) The 4 raw count *Penicillium/Aspergillus* type spores were present as a single clump.

\* 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.

‡ A "Version" greater than 1 indicates amended data.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

Location:	20906001-TM3005LS		20906001-TM3006LS	
Comments (see below)	B		None	
Lab ID-Version‡:	2446719-1		2446720-1	
	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria	1	13		
Arthrinium				
Ascospores*	1	53		
Aureobasidium				
Basidiospores*	2	110	2	110
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	5	270	7	370
Curvularia				
Epicoccum				
Fusarium				
Myrothecium				
Nigrospora				
Other brown				
Other colorless				
Penicillium/Aspergillus types†	5	67		
Pithomyces				
Rusts*			1	13
Smuts*, Periconia, Myxomycetes*	5	67	5	67
Stachybotrys				
Stemphylium				
Torula				
Ulocladium				
Zygomycetes				
Background debris (1-4+)††	2+		2+	
Hyphal fragments/m3	< 13		< 13	
Pollen/m3	< 13		13	
Skin cells (1-4+)	1+		1+	
Sample volume (liters)	75		75	
<b>§ TOTAL SPORE/m3</b>		<b>570</b>		<b>560</b>

Comments: B) The 5 raw count *Penicillium/Aspergillus* type spores were present as a single clump.

\* 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.

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§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
 TestAmerica Environmental Microbiology Laboratory, Inc.

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Date of Sampling: 06-15-2009  
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**MoldRANGE™: Extended Outdoor Comparison****Outdoor Location: 20906001-TM3001OUTLS**

Fungi Identified	Outdoor data	Typical Outdoor Data by Date†				Typical Outdoor Data by Location‡			
		Month: June				State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
<b>Generally able to grow indoors*</b>									
Alternaria	-	7	40	380	65	7	27	220	57
Bipolaris/Drechslera group	-	7	13	180	18	7	13	120	13
Chaetomium	-	7	13	120	15	7	13	120	19
Cladosporium	160	53	650	8,600	97	53	630	6,700	97
Curvularia	-	7	13	460	13	7	13	230	7
Nigrospora	-	7	13	160	10	7	13	170	8
Other brown	13	7	13	93	34	7	13	80	36
Penicillium/Aspergillus types	270	27	190	2,100	79	33	210	2,500	86
Stachybotrys	-	7	13	350	3	7	13	290	5
Torula	13	7	13	160	16	7	13	150	12
<b>Seldom found growing indoors**</b>									
Ascospores	-	13	190	7,200	82	13	110	1,900	71
Basidiospores	110	13	270	15,000	93	13	210	7,000	93
Rusts	-	7	13	210	27	7	13	250	28
Smuts, Periconia, Myxomycetes	27	10	58	1,300	81	8	40	490	70
<b>TOTAL SPORES/M3</b>	593								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 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, 2.5% of the time it is present in levels above the detection limit and below 53 spores/m<sup>3</sup>. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

\*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.

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. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

**Outdoor Summary: 20906001-TM3001OUTLS:**

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Ascospores	ND				13 - 160 - 4,500	76
Basidiospores	110				13 - 310 - 15,000	91
Cladosporium	160				27 - 510 - 8,900	93
Other brown	13				7 - 13 - 100	32
Penicillium/Aspergillus types	270				27 - 210 - 2,500	80
Smuts, Periconia, Myxomycetes	27				7 - 40 - 830	69
Torula	13				7 - 13 - 160	11
<b>Total</b>	<b>593</b>					

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: 20906001-TM3002LS**

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 419%	dF: 4 Result: 19.2615 Critical value: 9.4877 Inside Similar: No	Result: 0.6667	dF: 12 Result: 0.7098 Critical value: 0.4965 Outside Similar: Yes	Score: 182 Result: Medium

Species Detected	Spores/m3			
	<100	1K	10K	>100K
Alternaria	27			
Ascospores	110			
Basidiospores	750			
Cladosporium	1,400			
Epicoccum	13			
Other brown	13			
Penicillium/Aspergillus types	53			
Smuts, Periconia, Myxomycetes	40			
Stachybotrys	13			
Stemphylium	13			
Torula	40			
Ulocladium	13			
<b>Total</b>	<b>2,485</b>			

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

**Location:** 20906001-TM3003LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 11%	dF: 4 Result: 19.2615 Critical value: 9.4877 Inside Similar: No	Result: 0.5000	dF: 6 Result: 0.3857 Critical value: 0.7714 Outside Similar: No	Score: 103 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					53
Smuts, Periconia, Myxomycetes					13
<b>Total</b>					66

**Location:** 20906001-TM3004LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 59%	dF: 4 Result: 19.2615 Critical value: 9.4877 Inside Similar: No	Result: 0.8000	dF: 6 Result: 0.8286 Critical value: 0.7714 Outside Similar: Yes	Score: 110 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					110
Cladosporium					160
Penicillium/Aspergillus types					53
Smuts, Periconia, Myxomycetes					27
<b>Total</b>					350

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
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 Date of Report: 06-15-2009

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

**Location:** 20906001-TM3005LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 97%	dF: 4 Result: 19.2615 Critical value: 9.4877 Inside Similar: No	Result: 0.6667	dF: 8 Result: 0.7024 Critical value: 0.6190 Outside Similar: Yes	Score: 117 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Alternaria					13
Ascospores					53
Basidiospores					110
Cladosporium					270
Penicillium/Aspergillus types					67
Smuts, Periconia, Myxomycetes					67
<b>Total</b>					<b>580</b>

**Location:** 20906001-TM3006LS

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 94%	dF: 4 Result: 19.2615 Critical value: 9.4877 Inside Similar: No	Result: 0.6000	dF: 7 Result: 0.3304 Critical value: 0.6786 Outside Similar: No	Score: 121 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					110
Cladosporium					370
Rusts					13
Smuts, Periconia, Myxomycetes					67
<b>Total</b>					<b>560</b>

\* 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.

Client: Hygiene Technologies International, Inc.:  
Northern California  
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Date of Sampling: 06-15-2009  
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### **MoldSTAT™: Supplementary Statistical Spore Trap Report**

\*\*\* 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. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

**MoldSCORE™: Spore Trap Report**

**Outdoor Sample:** 20906001-TM3001OUTLS

Fungi Identified	Outdoor sample spores/m3				Raw count	Spores/m3
	<100	1K	10K	>100K		
<b>Generally able to grow indoors*</b>						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium	█				3	160
Curvularia					ND	< 13
Nigrospora					ND	< 13
Other brown	█				1	13
Penicillium/Aspergillus types†	█	█			5	270
Stachybotrys					ND	< 13
Torula	█				1	13
<b>Seldom found growing indoors**</b>						
Ascospores††					ND	< 13
Basidiospores††	█				2	110
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††	█				2	27
<b>Total</b>						<b>593</b>

**Location:** 20906001-TM3002LS

Fungi Identified	Indoor sample spores/m3				Raw count	Spores/m3
	<100	1K	10K	>100K		
<b>Generally able to grow indoors*</b>						
Alternaria	█				2	27
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium	█	█	█		26	1,400
Curvularia					ND	< 13
Epicoccum	█				1	13
Nigrospora					ND	< 13
Other brown	█				1	13
Penicillium/Aspergillus types†	█				1	53
Stachybotrys	█				1	13
Stemphylium	█				1	13
Torula	█				3	40
Ulocladium	█				1	13
<b>Seldom found growing indoors**</b>						
Ascospores††	█				2	110
Basidiospores††	█	█	█		14	750
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††	█				3	40
<b>Total</b>						<b>2,485</b>

MoldSCORE‡			
100	200	300	Score
█			111
█			100
█			100
█	█		182
█			100
█			105
█			100
█			104
█			100
█			121
█			105
█			114
█			105
█	█		143
█	█		173
█			100
█			106
<b>Final MoldSCORE</b>			<b>182</b>

Client: Hygiene Technologies International, Inc.:  
 Northern California  
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 Re: 20906001

Date of Sampling: 06-15-2009  
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 Date of Report: 06-15-2009

**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM3003LS

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					1	53				103
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††					1	13				102
<b>Total</b>						<b>66</b>				<b>Final MoldSCORE 103</b>

**Location:** 20906001-TM3004LS

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					3	160				108
Curvularia					ND	< 13				100
Nigrospora					ND	< 13				100
Penicillium/Aspergillus types†					4	53				101
Stachybotrys					ND	< 13				100
Torula					ND	< 13				100
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13				100
Basidiospores††					2	110				110
Rusts					ND	< 13				100
Smuts, Periconia, Myxomycetes††					2	27				104
<b>Total</b>						<b>350</b>				<b>Final MoldSCORE 110</b>

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM3005LS

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				
Bipolaris/Drechslera group					ND	< 13				
Chaetomium					ND	< 13				
Cladosporium					5	270				
Curvularia					ND	< 13				
Nigrospora					ND	< 13				
Penicillium/Aspergillus types†					5	67				
Stachybotrys					ND	< 13				
Torula					ND	< 13				
<b>Seldom found growing indoors**</b>										
Ascospores††					1	53				
Basidiospores††					2	110				
Rusts					ND	< 13				
Smuts, Periconia, Myxomycetes††					5	67				
<b>Total</b>						<b>580</b>	<b>Final MoldSCORE 117</b>			

**Location:** 20906001-TM3006LS

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				
Bipolaris/Drechslera group					ND	< 13				
Chaetomium					ND	< 13				
Cladosporium					7	370				
Curvularia					ND	< 13				
Nigrospora					ND	< 13				
Penicillium/Aspergillus types†					ND	< 13				
Stachybotrys					ND	< 13				
Torula					ND	< 13				
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13				
Basidiospores††					2	110				
Rusts					1	13				
Smuts, Periconia, Myxomycetes††					5	67				
<b>Total</b>						<b>560</b>	<b>Final MoldSCORE 121</b>			

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Sampling: 06-15-2009  
Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

### **MoldSCORE™: Spore Trap Report**

\*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.





**EMLab P&K**

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Report for:

**Mr. Wes Frey**  
**Hygiene Technologies International, Inc.: Northern California**  
3127 Bowen Island Street  
West Sacramento, CA 95691

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Regarding:      Project: 20906001  
                         EML ID: 551316

Approved by:

Lab Manager  
Malcolm Moody

Dates of Analysis:  
Spore trap analysis: 06-15-2009

Project SOPs: Spore trap analysis (I100000)

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This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

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 corrections of results is not a standard practice. 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.

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Document Number: 200091 - Revision Number: 5

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Sampling: 06-15-2009  
Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

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

Location:	20906001-TM12OUTCL		20906001-TM13CL		20906001-TM14CL		20906001-TM15CL	
Comments (see below)	None		A		None		None	
Lab ID-Version‡:	2446728-1		2446729-1		2446730-1		2446731-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria	1	13						
Arthrinium								
Ascospores*	2	110					1	53
Aureobasidium								
Basidiospores*	29	1,500			1	53	3	160
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	28	1,500			1	53	7	370
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown	1	13						
Other colorless								
Penicillium/Aspergillus types†	4	210	3	40			5	270
Pithomyces								
Rusts*	1	13					1	13
Smuts*, Periconia, Myxomycetes*	8	110					34	450
Stachybotrys								
Stemphylium	1	13						
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	2+		1+		1+		3+	
Hyphal fragments/m3	53		13		< 13		27	
Pollen/m3	13		< 13		< 13		27	
Skin cells (1-4+)	None		< 1+		< 1+		1+	
Sample volume (liters)	75		75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>3,500</b>		<b>40</b>		<b>110</b>		<b>1,300</b>

**Comments:** A) The 3 raw count *Penicillium/Aspergillus* type spores were present as a single clump.

\* 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.

‡ A "Version" greater than 1 indicates amended data.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Sampling: 06-15-2009  
Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

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

Location:	20906001-TM16CL		20906001-TM17CL		20906001-TM18CL		20906001-TM19CL	
Comments (see below)	None		None		None		None	
Lab ID-Version‡:	2446732-1		2446733-1		2446734-1		2446735-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria					1	13		
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*	1	53	1	53	2	110	1	53
Bipolaris/Drechslera group								
Botrytis	1	13						
Chaetomium								
Cladosporium					2	110	1	53
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown								
Other colorless								
Penicillium/Aspergillus types†								
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*					2	27		
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	1+		1+		1+		1+	
Hyphal fragments/m3	< 13		< 13		13		< 13	
Pollen/m3	< 13		< 13		< 13		< 13	
Skin cells (1-4+)	< 1+		< 1+		< 1+		< 1+	
Sample volume (liters)	75		75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>67</b>		<b>53</b>		<b>250</b>		<b>110</b>

**Comments:**

\* 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.

‡ A "Version" greater than 1 indicates amended data.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

Location:	20906001-TM20CL		20906001-TM21CL		20906001-TM22CL		20906001-TM23CL	
Comments (see below)	None		None		None		B	
Lab ID-Version‡:	2446736-1		2446737-1		2446738-1		2446739-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria							1	13
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	1	53	1	53	2	110	29	510
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown								
Other colorless								
Penicillium/Aspergillus types†			1	53				
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula			2	27				
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	1+		1+		1+		2+	
Hyphal fragments/m3	< 13		< 13		< 13		13	
Pollen/m3	< 13		< 13		13		< 13	
Skin cells (1-4+)	< 1+		< 1+		< 1+		1+	
Sample volume (liters)	75		75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>53</b>		<b>130</b>		<b>110</b>		<b>520</b>

Comments: B) 26 of the raw count *Cladosporium* spores were present as a single clump.

\* 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.

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‡ A "Version" greater than 1 indicates amended data.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
 TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Sampling: 06-15-2009  
Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

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

Location:	20906001-TM24CL		20906001-TM25CL		20906001-TM26OUTCL	
Comments (see below)	None		None		None	
Lab ID-Version‡:	2446740-1		2446741-1		2446742-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria					5	67
Arthrinium						
Ascospores*					3	160
Aureobasidium						
Basidiospores*					37	2,000
Bipolaris/Drechslera group					1	13
Botrytis						
Chaetomium						
Cladosporium	1	53	2	110	59	3,100
Curvularia						
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Other brown						
Other colorless						
Penicillium/Aspergillus types†	1	53				
Pithomyces						
Rusts*					3	40
Smuts*, Periconia, Myxomycetes*					12	160
Stachybotrys						
Stemphylium						
Torula			2	27	1	13
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	2+		2+		2+	
Hyphal fragments/m3	< 13		27		40	
Pollen/m3	< 13		< 13		80	
Skin cells (1-4+)	1+		1+		None	
Sample volume (liters)	75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>110</b>		<b>130</b>		<b>5,600</b>

**Comments:**

\* 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.

‡ A "Version" greater than 1 indicates amended data.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Sampling: 06-15-2009  
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Date of Report: 06-15-2009

**MoldRANGE™: Extended Outdoor Comparison**

**Outdoor Location: 20906001-TM12OUTCL**

Fungi Identified	Outdoor data	Typical Outdoor Data by Date†				Typical Outdoor Data by Location‡			
		Month: June				State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
<b>Generally able to grow indoors*</b>									
Alternaria	13	7	40	380	65	7	27	220	57
Bipolaris/Drechslera group	-	7	13	180	18	7	13	120	13
Chaetomium	-	7	13	120	15	7	13	120	19
Cladosporium	1,500	53	650	8,600	97	53	630	6,700	97
Curvularia	-	7	13	460	13	7	13	230	7
Nigrospora	-	7	13	160	10	7	13	170	8
Other brown	13	7	13	93	34	7	13	80	36
Penicillium/Aspergillus types	210	27	190	2,100	79	33	210	2,500	86
Stachybotrys	-	7	13	350	3	7	13	290	5
Stemphylium	13	7	13	67	7	7	13	67	9
Torula	-	7	13	160	16	7	13	150	12
<b>Seldom found growing indoors**</b>									
Ascospores	110	13	190	7,200	82	13	110	1,900	71
Basidiospores	1,500	13	270	15,000	93	13	210	7,000	93
Rusts	13	7	13	210	27	7	13	250	28
Smuts, Periconia, Myxomycetes	110	10	58	1,300	81	8	40	490	70
<b>TOTAL SPORES/M3</b>	3,482								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 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, 2.5% 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.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

\*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.

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. Wes Frey  
Re: 20906001

Date of Sampling: 06-15-2009  
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Date of Report: 06-15-2009

**MoldRANGE™: Extended Outdoor Comparison**

**Outdoor Location: 20906001-TM26OUTCL**

Fungi Identified	Outdoor data	Typical Outdoor Data by Date†				Typical Outdoor Data by Location‡			
		Month: June				State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
<b>Generally able to grow indoors*</b>									
Alternaria	67	7	40	380	65	7	27	220	57
Bipolaris/Drechslera group	13	7	13	180	18	7	13	120	13
Chaetomium	-	7	13	120	15	7	13	120	19
Cladosporium	3,100	53	650	8,600	97	53	630	6,700	97
Curvularia	-	7	13	460	13	7	13	230	7
Nigrospora	-	7	13	160	10	7	13	170	8
Other brown	-	7	13	93	34	7	13	80	36
Penicillium/Aspergillus types	-	27	190	2,100	79	33	210	2,500	86
Stachybotrys	-	7	13	350	3	7	13	290	5
Stemphylium	-	7	13	67	7	7	13	67	9
Torula	13	7	13	160	16	7	13	150	12
<b>Seldom found growing indoors**</b>									
Ascospores	160	13	190	7,200	82	13	110	1,900	71
Basidiospores	2,000	13	270	15,000	93	13	210	7,000	93
Rusts	40	7	13	210	27	7	13	250	28
Smuts, Periconia, Myxomycetes	160	10	58	1,300	81	8	40	490	70
<b>TOTAL SPORES/M3</b>	5,553								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 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, 2.5% 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.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

\*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.

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. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
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**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Outdoor Summary: 20906001-TM12OUTCL:**

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Alternaria				13	7 - 27 - 400	52
Ascospores				110	13 - 160 - 4,500	76
Basidiospores				1,500	13 - 310 - 15,000	91
Cladosporium				1,500	27 - 510 - 8,900	93
Other brown				13	7 - 13 - 100	32
Penicillium/Aspergillus types				210	27 - 210 - 2,500	80
Rusts				13	7 - 15 - 310	22
Smuts, Periconia, Myxomycetes				110	7 - 40 - 830	69
Stemphylium				13	7 - 13 - 67	5
<b>Total</b>				3,482		

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: 20906001-TM13CL**

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.5500 Critical value: 0.5833 Outside Similar: No	Score: 106 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
	Penicillium/Aspergillus types				40
	<b>Total</b>				40

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

**Location:** 20906001-TM14CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 3%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.3636	dF: 9 Result: 0.8125 Critical value: 0.5833 Outside Similar: Yes	Score: 101 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					53
Cladosporium					53
<b>Total</b>					106

**Location:** 20906001-TM15CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 37%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.8000	dF: 9 Result: 0.8167 Critical value: 0.5833 Outside Similar: Yes	Score: 178 Result: Medium	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Ascospores					53
Basidiospores					160
Cladosporium					370
Penicillium/Aspergillus types					270
Rusts					13
Smuts, Periconia, Myxomycetes					450
<b>Total</b>					1,316

Client: Hygiene Technologies International, Inc.:  
 Northern California  
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**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Location:** 20906001-TM16CL

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.1818	dF: 10 Result: 0.3121 Critical value: 0.5515 Outside Similar: No	Score: 103 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					53
Botrytis					13
<b>Total</b>					66

**Location:** 20906001-TM17CL

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.6625 Critical value: 0.5833 Outside Similar: Yes	Score: 103 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					53
<b>Total</b>					53

**Location:** 20906001-TM18CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 7%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.6154	dF: 9 Result: 0.6875 Critical value: 0.5833 Outside Similar: Yes	Score: 108 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Alternaria					13
Basidiospores					110
Cladosporium					110
Smuts, Periconia, Myxomycetes					27
<b>Total</b>					260

Client: Hygiene Technologies International, Inc.:  
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 Re: 20906001

Date of Sampling: 06-15-2009  
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**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Location:** 20906001-TM19CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 3%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.3636	dF: 9 Result: 0.8125 Critical value: 0.5833 Outside Similar: Yes	Score: 101 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					53
Cladosporium					53
<b>Total</b>					106

**Location:** 20906001-TM20CL

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.6625 Critical value: 0.5833 Outside Similar: Yes	Score: 102 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					53
<b>Total</b>					53

**Location:** 20906001-TM21CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 3%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.3333	dF: 10 Result: 0.4242 Critical value: 0.5515 Outside Similar: No	Score: 111 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					53
Penicillium/Aspergillus types					53
Torula					27
<b>Total</b>					133

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

**Location:** 20906001-TM22CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 3%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.6625 Critical value: 0.5833 Outside Similar: Yes	Score: 104 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Cladosporium					110
<b>Total</b>					110

**Location:** 20906001-TM23CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 15%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.3636	dF: 9 Result: 0.4083 Critical value: 0.5833 Outside Similar: No	Score: 118 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Alternaria					13
Cladosporium					510
<b>Total</b>					523

**Location:** 20906001-TM24CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 3%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.3636	dF: 9 Result: 0.7000 Critical value: 0.5833 Outside Similar: Yes	Score: 107 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Cladosporium					53
Penicillium/Aspergillus types					53
<b>Total</b>					106

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
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**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Location:** 20906001-TM25CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 3%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.1818	dF: 10 Result: 0.3121 Critical value: 0.5515 Outside Similar: No	Score: 111 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					110
Torula					27
<b>Total</b>					137

\* 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.

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

**Outdoor Summary: 20906001-TM26OUTCL:**

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Alternaria				67	7 - 27 - 400	52
Ascospores				160	13 - 160 - 4,500	76
Basidiospores				2,000	13 - 310 - 15,000	91
Bipolaris/Drechslera group				13	7 - 13 - 200	18
Cladosporium				3,100	27 - 510 - 8,900	93
Penicillium/Aspergillus types				ND	27 - 210 - 2,500	80
Rusts				40	7 - 15 - 310	22
Smuts, Periconia, Myxomycetes				160	7 - 40 - 830	69
Torula				13	7 - 13 - 160	11
<b>Total</b>				5,553		

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: 20906001-TM13CL**

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.0000	dF: 9 Result: 0.0583 Critical value: 0.5833 Outside Similar: No	Score: 106 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
	Penicillium/Aspergillus types				40
	<b>Total</b>				40

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

**Location:** 20906001-TM14CL

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.4000	dF: 8 Result: 0.7976 Critical value: 0.6190 Outside Similar: Yes	Score: 102 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					53
Cladosporium					53
<b>Total</b>					106

**Location:** 20906001-TM15CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 23%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.7143	dF: 9 Result: 0.5083 Critical value: 0.5833 Outside Similar: No	Score: 179 Result: Medium	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Ascospores					53
Basidiospores					160
Cladosporium					370
Penicillium/Aspergillus types					270
Rusts					13
Smuts, Periconia, Myxomycetes					450
<b>Total</b>					1,316

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

**Location: 20906001-TM16CL**

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.2250 Critical value: 0.5833 Outside Similar: No	Score: 103 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					53
Botrytis					13
<b>Total</b>					66

**Location: 20906001-TM17CL**

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.2222	dF: 8 Result: 0.5833 Critical value: 0.6190 Outside Similar: No	Score: 104 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					53
<b>Total</b>					53

**Location: 20906001-TM18CL**

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 4%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.6667	dF: 8 Result: 0.8452 Critical value: 0.6190 Outside Similar: Yes	Score: 108 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Alternaria					13
Basidiospores					110
Cladosporium					110
Smuts, Periconia, Myxomycetes					27
<b>Total</b>					260

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

**Location: 20906001-TM19CL**

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.4000	dF: 8 Result: 0.7976 Critical value: 0.6190 Outside Similar: Yes	Score: 102 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Basidiospores					53
Cladosporium					53
<b>Total</b>					106

**Location: 20906001-TM20CL**

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.2222	dF: 8 Result: 0.6786 Critical value: 0.6190 Outside Similar: Yes	Score: 101 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					53
<b>Total</b>					53

**Location: 20906001-TM21CL**

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 2%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.3636	dF: 9 Result: 0.0125 Critical value: 0.5833 Outside Similar: No	Score: 111 Result: Low	
Species Detected		Spores/m3			
		<100	1K	10K	>100K
Cladosporium					53
Penicillium/Aspergillus types					53
Torula					27
<b>Total</b>					133

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

**Location:** 20906001-TM22CL

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.2222	dF: 8 Result: 0.6786 Critical value: 0.6190 Outside Similar: Yes	Score: 103 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Cladosporium					110
<b>Total</b>					110

**Location:** 20906001-TM23CL

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: 9%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.4000	dF: 8 Result: 0.5536 Critical value: 0.6190 Outside Similar: No	Score: 114 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Alternaria					13
Cladosporium					510
<b>Total</b>					523

**Location:** 20906001-TM24CL

% 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: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.2458 Critical value: 0.5833 Outside Similar: No	Score: 108 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Cladosporium					53
Penicillium/Aspergillus types					53
<b>Total</b>					106

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Date of Sampling: 06-15-2009  
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**MoldSTAT™: Supplementary Statistical Spore Trap Report**

**Location:** 20906001-TM25CL

<b>% of outdoor total spores/m3</b>	<b>Friedman chi-square* (indoor variation)</b>	<b>Agreement ratio** (indoor/outdoor)</b>	<b>Spearman rank correlation*** (indoor/outdoor)</b>	<b>MoldSCORE**** (indoor/outdoor)</b>	
Result: 2%	dF: 12 Result: 12.1868 Critical value: 21.0261 Inside Similar: Yes	Result: 0.4000	dF: 8 Result: 0.3452 Critical value: 0.6190 Outside Similar: No	Score: 111 Result: Low	
<b>Species Detected</b>		<b>Spores/m3</b>			
		<100	1K	10K	>100K
Cladosporium					110
Torula					27
<b>Total</b>					137

\* 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.

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM14CL

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	█				1	53	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‡‡	█				1	53	101			
Rusts					ND	< 13	100			
Smuts, Periconia, Myxomycetes‡‡					ND	< 13	100			
<b>Total</b>						<b>106</b>	<b>Final MoldSCORE 101</b>			

**Location:** 20906001-TM15CL

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	█	█			7	370	100			
Curvularia					ND	< 13	100			
Nigrospora					ND	< 13	100			
Penicillium/Aspergillus types†	█	█			5	270	130			
Stachybotrys					ND	< 13	100			
Torula					ND	< 13	100			
<b>Seldom found growing indoors**</b>										
Ascospores‡‡	█				1	53	104			
Basidiospores‡‡	█	█			3	160	100			
Rusts	█				1	13	103			
Smuts, Periconia, Myxomycetes‡‡	█	█	█	█	34	450	178			
<b>Total</b>						<b>1,316</b>	<b>Final MoldSCORE 178</b>			

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM16CL

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††					1	53				103
Botrytis					1	13				105
Rusts					ND	< 13				100
Smuts, Periconia, Myxomycetes††					ND	< 13				100
<b>Total</b>						<b>66</b>				<b>Final MoldSCORE 103</b>

**Location:** 20906001-TM17CL

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††					1	53				103
Rusts					ND	< 13				100
Smuts, Periconia, Myxomycetes††					ND	< 13				100
<b>Total</b>						<b>53</b>				<b>Final MoldSCORE 103</b>

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM18CL

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				
Bipolaris/Drechslera group					ND	< 13				
Chaetomium					ND	< 13				
Cladosporium					2	110				
Curvularia					ND	< 13				
Nigrospora					ND	< 13				
Penicillium/Aspergillus types†					ND	< 13				
Stachybotrys					ND	< 13				
Torula					ND	< 13				
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13				
Basidiospores††					2	110				
Rusts					ND	< 13				
Smuts, Periconia, Myxomycetes††					2	27				
<b>Total</b>						<b>260</b>	<b>Final MoldSCORE 108</b>			

**Location:** 20906001-TM19CL

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				
Bipolaris/Drechslera group					ND	< 13				
Chaetomium					ND	< 13				
Cladosporium					1	53				
Curvularia					ND	< 13				
Nigrospora					ND	< 13				
Penicillium/Aspergillus types†					ND	< 13				
Stachybotrys					ND	< 13				
Torula					ND	< 13				
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13				
Basidiospores††					1	53				
Rusts					ND	< 13				
Smuts, Periconia, Myxomycetes††					ND	< 13				
<b>Total</b>						<b>106</b>	<b>Final MoldSCORE 101</b>			

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM20CL

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					1	53				102
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>53</b>				<b>Final MoldSCORE 102</b>

**Location:** 20906001-TM21CL

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					1	53				100
Curvularia					ND	< 13				100
Nigrospora					ND	< 13				100
Penicillium/Aspergillus types†					1	53				107
Stachybotrys					ND	< 13				100
Torula					2	27				111
<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>133</b>				<b>Final MoldSCORE 111</b>

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
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 Date of Report: 06-15-2009

**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM22CL

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	█				2	110	█			104
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>110</b>				<b>Final MoldSCORE 104</b>

**Location:** 20906001-TM23CL

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	█			104
Bipolaris/Drechslera group					ND	< 13	█			100
Chaetomium					ND	< 13	█			100
Cladosporium	█	█			29	510	█			118
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>523</b>				<b>Final MoldSCORE 118</b>

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Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM24CL

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	█				1	53	█			100
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Penicillium/Aspergillus types†	█				1	53	█			107
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>106</b>				<b>Final MoldSCORE 107</b>

**Location:** 20906001-TM25CL

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	█				2	110	█			103
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Penicillium/Aspergillus types†					ND	< 13	█			100
Stachybotrys					ND	< 13	█			100
Torula	█				2	27	█			111
<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>137</b>				<b>Final MoldSCORE 111</b>

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Northern California  
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Re: 20906001

Date of Sampling: 06-15-2009  
Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

### **MoldSCORE™: Spore Trap Report**

\*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.:  
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Date of Sampling: 06-15-2009  
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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM14CL

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	█				1	53	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††	█				1	53	102			
Rusts					ND	< 13	100			
Smuts, Periconia, Myxomycetes††					ND	< 13	100			
<b>Total</b>						<b>106</b>	<b>Final MoldSCORE 102</b>			

**Location:** 20906001-TM15CL

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	█	█			7	370	100			
Curvularia					ND	< 13	100			
Nigrospora					ND	< 13	100			
Penicillium/Aspergillus types†	█	█			5	270	143			
Stachybotrys					ND	< 13	100			
Torula					ND	< 13	100			
<b>Seldom found growing indoors**</b>										
Ascospores††	█				1	53	106			
Basidiospores††	█	█			3	160	100			
Rusts	█				1	13	102			
Smuts, Periconia, Myxomycetes††	█	█	█	█	34	450	179			
<b>Total</b>						<b>1,316</b>	<b>Final MoldSCORE 179</b>			

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM16CL

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††					1	53				103
Botrytis					1	13				105
Rusts					ND	< 13				100
Smuts, Periconia, Myxomycetes††					ND	< 13				100
<b>Total</b>						<b>66</b>	<b>Final MoldSCORE 103</b>			

**Location:** 20906001-TM17CL

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††					1	53				104
Rusts					ND	< 13				100
Smuts, Periconia, Myxomycetes††					ND	< 13				100
<b>Total</b>						<b>53</b>	<b>Final MoldSCORE 104</b>			

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM18CL

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				
Bipolaris/Drechslera group					ND	< 13				
Chaetomium					ND	< 13				
Cladosporium					2	110				
Curvularia					ND	< 13				
Nigrospora					ND	< 13				
Penicillium/Aspergillus types†					ND	< 13				
Stachybotrys					ND	< 13				
Torula					ND	< 13				
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13				
Basidiospores††					2	110				
Rusts					ND	< 13				
Smuts, Periconia, Myxomycetes††					2	27				
<b>Total</b>						<b>260</b>	<b>Final MoldSCORE 108</b>			

**Location:** 20906001-TM19CL

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				
Bipolaris/Drechslera group					ND	< 13				
Chaetomium					ND	< 13				
Cladosporium					1	53				
Curvularia					ND	< 13				
Nigrospora					ND	< 13				
Penicillium/Aspergillus types†					ND	< 13				
Stachybotrys					ND	< 13				
Torula					ND	< 13				
<b>Seldom found growing indoors**</b>										
Ascospores††					ND	< 13				
Basidiospores††					1	53				
Rusts					ND	< 13				
Smuts, Periconia, Myxomycetes††					ND	< 13				
<b>Total</b>						<b>106</b>	<b>Final MoldSCORE 102</b>			

Client: Hygiene Technologies International, Inc.:  
 Northern California  
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Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM20CL

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	█				1	53	█			101
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>53</b>	<b>Final MoldSCORE 101</b>			

**Location:** 20906001-TM21CL

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	█				1	53	█			100
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Penicillium/Aspergillus types†	█				1	53	█			108
Stachybotrys					ND	< 13	█			100
Torula	█				2	27	█			111
<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>133</b>	<b>Final MoldSCORE 111</b>			

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM22CL

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	█				2	110	█			103
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>110</b>	<b>Final MoldSCORE 103</b>			

**Location:** 20906001-TM23CL

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	█			103
Bipolaris/Drechslera group					ND	< 13	█			100
Chaetomium					ND	< 13	█			100
Cladosporium	█	█			29	510	█			114
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>523</b>	<b>Final MoldSCORE 114</b>			

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**MoldSCORE™: Spore Trap Report**

**Location:** 20906001-TM24CL

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	█				1	53	█			100
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Penicillium/Aspergillus types†	█				1	53	█			108
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>106</b>	<b>Final MoldSCORE 108</b>			

**Location:** 20906001-TM25CL

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	█				2	110	█			102
Curvularia					ND	< 13	█			100
Nigrospora					ND	< 13	█			100
Penicillium/Aspergillus types†					ND	< 13	█			100
Stachybotrys					ND	< 13	█			100
Torula	█				2	27	█			111
<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>137</b>	<b>Final MoldSCORE 111</b>			

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Date of Sampling: 06-15-2009  
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### **MoldSCORE™: Spore Trap Report**

\*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.



# HYGIENE TECH

351316

Hygiene Technologies International, Inc.

3625 Del Amo Boulevard, Suite 180  
Torrance, California 90503-1643  
(310) 370-8370  
(310) 370-2474 FAX  
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## Request For Analysis

Project Number/Purchase Order: 20906001 Date Submitted: 6-15-09  
 Project Contact: Wes Frey Turnaround Required: same day rush  
 Lab Destination: TM LAB Lab Contact: Sample Receiving

SAMPLE ID	VOLUME	MEDIA	ANALYSIS REQUESTED
<u>20906001-TM1201CL</u>	<u>75L</u>	<u>Allergens D</u>	<u>Total Fungi 2D</u>
<u>-TM13CL</u>			
<u>-TM14CL</u>			
<u>-TM15CL</u>			
<u>-TM16CL</u>			
<u>-TM17CL</u>			
<u>-TM18CL</u>			
<u>-TM19CL</u>			
<u>-TM20CL</u>			
<u>-TM21CL</u>			
<u>-TM22CL</u>			
<u>-TM23CL</u>			
<u>-TM24CL</u>			
<u>-TM25CL</u>			
<u>-TM2601CL</u>			

Special Instructions: \_\_\_\_\_

1. Sampled by: [Signature] 6/14/09 Received by: \_\_\_\_\_  
 2. Relinquished by: [Signature] 6/14/09 Received by: [Signature] 6-15-09 8:00  
 3. Relinquished by: [Signature] 6/15/09 9:30 Received by: [Signature] 6/15/09 10:17  
 Please include signature, date, and time

Lab Use Only:



## EMLab P&K

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Report for:

**Mr. Wes Frey**  
**Hygiene Technologies International, Inc.: Northern California**  
3127 Bowen Island Street  
West Sacramento, CA 95691

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Regarding:      Project: 20906001  
                         EML ID: 551317

Approved by:

Lab Manager  
Malcolm Moody

Dates of Analysis:  
Spore trap analysis: 06-15-2009

Project SOPs: Spore trap analysis (I100000)

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This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

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 corrections of results is not a standard practice. 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.

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Document Number: 200091 - Revision Number: 5

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

Location:	20906001-TM01CL		20906001-TM02CL		20906001-TM03CL		20906001-TM04CL	
Comments (see below)	None		None		None		None	
Lab ID-Version‡:	2446746-1		2446747-1		2446748-1		2446749-1	
	raw ct.	spores/m3						
Alternaria								
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*							1	53
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium					1	53		
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other colorless								
Penicillium/Aspergillus types†	7	370	2	110	2	110	1	53
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	2+		1+		1+		1+	
Hyphal fragments/m3	13		13		< 13		< 13	
Pollen/m3	< 13		< 13		< 13		< 13	
Skin cells (1-4+)	1+		1+		< 1+		< 1+	
Sample volume (liters)	75		75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>370</b>		<b>110</b>		<b>160</b>		<b>110</b>

**Comments:**

\* 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.  
 ‡ A "Version" greater than 1 indicates amended data.  
 § Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
 TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
Northern California  
C/O: Mr. Wes Frey  
Re: 20906001

Date of Sampling: 06-15-2009  
Date of Receipt: 06-15-2009  
Date of Report: 06-15-2009

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

Location:	20906001-TM05CL		20906001-TM06CL		20906001-TM07CL		20906001-TM08CL	
Comments (see below)	None		None		None		None	
Lab ID-Version‡:	2446750-1		2446751-1		2446752-1		2446753-1	
	raw ct.	spores/m3						
Alternaria								
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*							1	53
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium								
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other colorless								
Penicillium/Aspergillus types†	2	110	2	110	5	270	4	210
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*	1	13	1	13				
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	2+		2+		1+		1+	
Hyphal fragments/m3	13		< 13		< 13		< 13	
Pollen/m3	< 13		13		< 13		< 13	
Skin cells (1-4+)	< 1+		< 1+		1+		< 1+	
Sample volume (liters)	75		75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>120</b>		<b>120</b>		<b>270</b>		<b>270</b>

**Comments:**

\* 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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‡ A "Version" greater than 1 indicates amended data.  
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
TestAmerica Environmental Microbiology Laboratory, Inc.

Client: Hygiene Technologies International, Inc.:  
 Northern California  
 C/O: Mr. Wes Frey  
 Re: 20906001

Date of Sampling: 06-15-2009  
 Date of Receipt: 06-15-2009  
 Date of Report: 06-15-2009

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

Location:	20906001-TM09CL		20906001-TM10CL		20906001-TM11CL	
Comments (see below)	None		None		None	
Lab ID-Version‡:	2446754-1		2446755-1		2446756-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria						
Arthrinium						
Ascospores*						
Aureobasidium						
Basidiospores*	1	53				
Bipolaris/Drechslera group						
Botrytis						
Chaetomium						
Cladosporium	1	53	2	110		
Curvularia						
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†	2	110			1	53
Pithomyces						
Rusts*					1	13
Smuts*, Periconia, Myxomycetes*	1	13			1	13
Stachybotrys						
Stemphylium						
Torula						
Ulocladium	1	13				
Zygomycetes						
Background debris (1-4+)††	3+		2+		2+	
Hyphal fragments/m3	13		27		< 13	
Pollen/m3	< 13		< 13		13	
Skin cells (1-4+)	< 1+		< 1+		1+	
Sample volume (liters)	75		75		75	
<b>§ TOTAL SPORE/m3</b>		<b>240</b>		<b>110</b>		<b>80</b>

**Comments:**

\* 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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 ‡ A "Version" greater than 1 indicates amended data.  
 § Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.  
 TestAmerica Environmental Microbiology Laboratory, Inc.



# HYGIENE TECH

551317

Hygiene Technologies International, Inc.

3625 Del Amo Boulevard, Suite 180  
Torrance, California 90503-1643  
(310) 370-3370  
(310) 370-2474 FAX  
www.hygiene-tech.com

## Request For Analysis

Project Number/Purchase Order: 20906001 Date Submitted: 6-15-09  
 Project Contact: Wes Frey Turnaround Required: Provide samples  
 Lab Destination: EM LAB Lab Contact: \_\_\_\_\_

SAMPLE ID	VOLUME	MEDIA	ANALYSIS REQUESTED
20906001-TM01CL	75L	Allergenic P	Total Fungi ID
-TM02CL			
-TM03CL			
-TM04CL			
-TM05CL			
-TM06CL			
-TM07CL			
-TM08CL			
-TM09CL			
-TM10CL			
-TM11CL			

Special Instructions: \_\_\_\_\_

1. Sampled by: [Signature] 6/12/09 12:30 Received by: \_\_\_\_\_  
 2. Relinquished by: [Signature] 6/14/09 14:30 Received by: [Signature] 6-15-09 0800  
 3. Relinquished by: [Signature] 6-15-09 0830 Received by: [Signature] 6/15/09 1141  
 Please include signature, date, and time

Lab Use Only: