



Email: IAQ@hayesmicrobial.com
www.hayesmicrobial.com/lims/

Analysis Report prepared for

Top Choice Home Inspection

12841 Iowa Ave NE
Alliance, OH 44601
Ph.: (330) 238-1267

Job Number:
Job Name: Hoffmeyer
Date Sampled: 10-12-2014
Date Analyzed: 10-14-2014
Report Date: 10-14-2014

AIHA EMPAT Laboratory ID# 188863
EPA Laboratory ID# VA01419



NVLAP Lab Code: 500096-0



LAB #188863

AIHA Accredited
Environmental Microbiology



Certified Clinical Microbiologist

Texas Dept. of State
Health Services

Mold License: LAB1021
Asbestos License: 300435



HAYES

MICROBIAL CONSULTING
3005 East Boundary Terrace, #F
Midlothian, VA 23112, USA
804.562.3435 Fax: 804.447.5562

HMC #14017186

Top Choice Home Inspection
12841 Iowa Ave NE
Alliance, OH 44601

October 14, 2014

Client Job Number:
Client Job Name: Hoffmeyer

Dear Top Choice Home Inspection,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On October 14, 2014 we received 4 samples by FedEx for the job referenced above.

The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial Consulting. In no event, shall Hayes Microbial Consulting or any of its employees be liable for lost profits or any special, incidental or consequential damages arising out of your use of the test results.

Steve Hayes, BSMT(ASCP)
Laboratory Director
Hayes Microbial Consulting, LLC



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Spore Trap Analysis
SOP #HMC101

HMC #14017186

Job Number:		Job Name: Hoffmeyer	Date Collected: 10/12/2014
Collected by: Todd Hoffmeyer			Date Received: 10/14/2014
Email: topchoiceinspections@yahoo.com			Date Reported: 10/14/2014

HMC ID Number	14017186 - 1	14017186 - 2	14017186 - 3
Sample ID#	1989283	1989281	1989284
Sample Name	Outside (Baseline)	Inside Wall	Basement
Sample Volume	40 liters	15 liters	25 liters
Limit of Detection	25 spores/M3	67 spores/M3	40 spores/M3
Background	2	4	3
Fragments	ND	200 /M3	840 /M3

Organism	14017186 - 1			14017186 - 2			14017186 - 3		
	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total
Alternaria	1	25	1.3%						
Ascospores	32	800	41.6%				3	120	< 1%
Aspergillus Penicillium	7	175	9.1%	1248	83200	96.0%	1760	70400	> 99%
Basidiospores	9	225	11.7%						
Bipolaris Drechslera									
Chaetomium									
Cladosporium	25	625	32.5%	52	3467	4.0%	5	200	< 1%
Curvularia									
Epicoccum									
Fusarium									
Memnoniella									
Myxomycetes	3	75	3.9%						
Pithomyces									
Stachybotrys									
Stemphylium									
Torula									
Ulocladium									
Unspecified Spore									
Total	77	1925		1300	86667		1768	70720	

Water Damage Indicator Common Allergen Slightly Higher than Outside Air Significantly Higher than Outside Air Ratio Abnormality

Signature: Stephen N. Hayes

Date: 10/14/2014

Reviewed by: P. Ramesh

Date: 10/14/2014



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Direct ID Analysis
SOP #HMC102

HMC #14017186

Job Number:		Job Name: Hoffmeyer	Date Collected: 10/12/2014
Collected by: Todd Hoffmeyer			Date Received: 10/14/2014
Email: topchoiceinspections@yahoo.com			Date Reported: 10/14/2014

HMC ID Number: 14017186 - 4		Sample Media: Tape	
Sample ID Number: Tape		Sample Name: Basement Wall	
Organism	Spore Estimate	Mycelial Estimate	Note
Ascospores	Moderate	ND	
Aspergillus Penicillium	Moderate	ND	

Signature: Stephen N. Hayes

Date: 10/14/2014

Reviewed by: P. Ramesh

Date: 10/14/2014



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Spore Trap Information

HMC #14017186

Limit of Detection	The Limit of Detection is the lowest number of spores that can be detected based on the total volume of the sample collected and the percentage of the slide that is counted. At Hayes Microbial, 100% of the slide is read so the LOD is based solely on the total volume. Raw spore counts that exceed 500 spores will be estimated.
Blanks	Results have not been corrected for field or laboratory blanks.
Background	<p>The Background is the amount of debris that is present in the sample. This debris consists of skin cells, dirt, dust, pollen, drywall dust and other organic and non-organic matter. As the background density increases, the likelihood of spores, especially small spores such as those of Aspergillus and Penicillium may be obscured. The background is rated on a scale of 1 to 4 and each level is determined as follows:</p> <p>ND : No background detected. (Pump or cassette malfunction.) Recollect sample.</p> <p>1 : <5% of field occluded. No spores will be uncountable.</p> <p>2 : 5-25% of field occluded.</p> <p>3 : 25-75% of field occluded.</p> <p>4 : 75-90% of field occluded.</p> <p>5 : >90% of field occluded. Suggest recollection of sample.</p>
Fragments	Fragments are small pieces of fungal mycelium or spores. They are not identifiable as to type and when present in very large numbers, may indicate the presence of mold amplification.
Indoor/Outdoor Comparisons	There are no national standards for the numbers of fungal spores that may be present in the indoor environment. As a general rule and guideline that is widely accepted in the indoor air quality field, the numbers and types of spores that are present in the indoor environment should not exceed those that are present outdoors at any given time. There will always be some mold spores present in "normal" indoor environments. The purpose of sampling and counting spores is to help determine whether an abnormal condition exists within the indoor environment and if it does, to help pinpoint the area of contamination. Spore counts should not be used as the sole determining factor of mold contamination. There are many factors that can cause anomalies in the comparison of indoor and outdoor samples due to the dynamic nature of both of those environments.
Water Damage Indicators	These molds are commonly seen in conditions of prolonged water intrusion and usually indicate a problem.
Common Allergens	Although all molds are potential allergens, these are the most common allergens that may be found indoors.
Slightly Higher than Outside Air	The spore count is slightly higher than the outside count and may or may not indicate a source of contamination.
Significantly Higher than Outside Air	The spore count is significantly higher than the outdoor count and probably indicates a source of contamination.
Ratio Abnormality	The types of spores found indoors should be similar to the ones that were identified in the outdoor sample. Significant increases (more than 25%) in the ratio of a particular spore type may indicate the presence of abnormal levels of mold, even if the total number of spores of that type is lower in the indoor environment than it was outdoors.
Color Note	Fungi that are present in indoor samples at levels lower than 200 per cubic meter are considered insignificant. Insignificant spore counts are not color coded on the report.



Additional Information for Direct Identification Analysis

Spore Estimate	
ND	None Detected
Rare	Less than 10 spores
Light	10 - 99 spores
Moderate	100 - 999 spores
Heavy	1000 - 9999 spores
Very Heavy	10000 or greater spores

Mycelial Estimate		
ND	None Detected	No active growth at site
Trace	Very small amount of Mycelium	Probably no active growth at site
Few	Some Mycelium	Possible active growth at site
Many	Large amount of Mycelium	Probable active growth at site



Alternaria

Habitat: Commonly found outdoors in soil and decaying plants. Indoors, it is commonly found on window sills and other horizontal surfaces.

Health Effects: A common allergen and has been associated with hypersensitivity pneumonitis. Alternaria is capable of producing toxic metabolites which may be associated with disease in humans or animals. Occasionally an agent of onychomycosis, ulcerated cutaneous infection and chronic sinusitis, principally in the immunocompromised patient.

Ascospores

Habitat: A large group consisting of more than 3000 species of fungi. Common plant pathogens and outdoor numbers become very high following rain. Most of the genera are indistinguishable by spore trap analysis and are combined on the report.

Health Effects: Health affects are poorly studied, but many are likely to be allergenic.

Aspergillus|Penicillium

Habitat: The most common fungi isolated from the environment. Very common in soil and on decaying plant material. Are able to grow well indoors on a wide variety of substrates.

Health Effects: This group contains common allergens and many can cause hypersensitivity pneumonitis. They may cause extrinsic asthma, and many are opportunistic pathogens. Many species produce mycotoxins which may be associated with disease in humans and other animals. Toxin production is dependent on the species and on the food source for the fungus. Some of these toxins have been found to be carcinogenic.

Basidiospores

Habitat: A common group of Fungi that includes the mushrooms and bracket fungi. They are saprophytes and plant pathogens. In wet conditions they can cause structural damage to buildings.

Health Effects: Common allergens and are also associated with hypersensitivity pneumonitis.

Cladosporium

Habitat: One of the most common genera worldwide. Found in soil and plant debris and on the leaf surfaces of living plants. The outdoor numbers are lower in the winter and often relatively high in the summer, especially in high humidity. The outdoor numbers often spike in the late afternoon and evening. Indoors, it can be found growing on textiles, wood, sheetrock, moist window sills and in HVAC supply ducts.

Health Effects: A common allergen, producing more than 10 allergenic antigens and a common cause of hypersensitivity pneumonitis.

Myxomycetes

Habitat: Found on decaying plant material and as a plant pathogen.

Health Effects: Some allergenic properties reported, but generally pose no health concerns to humans.
