

XSPOR TECHNOLOGIES CASE STUDY THREE

128 Main Street Vernon, CT 06066

Project Description: 128 Main Street is a 2640 square foot building which was built in 1924. It was converted into a four-unit apartment building. Two tenants complained about mold and had threatened to sue the landlord.

The two apartments tested positive for elevated levels of mold in November 2022. The testing method used was air testing which established highly elevated levels of for *Stachybotrys* at 9,317 (raw count) and 123,916 (Count/cm squared) in a crawl space in the basement. The two basement apartments which abutted the crawl space tested for *Stachybotrys* at 7 (raw count) and 93 (Count/cm squared) and for *Stachybotrys* at 6 (raw count) and 80 (Count/cm squared).

Traditional Remediation Cost Estimate: The owner received an estimate to remediate the mold by removing and replacing contaminated building materials of \$80,000.00 dollars. This proposal essentially called for the gutting of the two basement apartments.

Resolution by Xspor Technologies: The owner elected to retain the services of the licensee for Xspor Technologies in Connecticut to address this mold problem. The licensee atomized the building using the EnzyCleanse product followed by the use of an air scrubber and HEPA vacuuming the affected area. This approach avoided the need for removing and replacing contaminated building material.

Investigation by Xspor Technologies: Xspor Technologies licensee consulted with one of the Xspor Technologies scientists, Dr. Cardiman, about the extremely high reading of *Stachybotrys* in the crawl space and the lower levels of *Stachybotrys* found in the basement apartments. It was determined that the lower levels of *Stachybotrys* found in the basement apartments was likely caused by mold spores leaking through electrical sockets from the crawl space and that the actual source of the problem was excessive moisture in the crawl space.

A physical inspection of the basement apartment showers revealed that the shower exhaust hoses had become detached and were pumping moist air into the crawl space. The shower exhaust systems were replaced and the exhaust hoses properly reconnected.

Post-treatment compliance: Testing was performed using air sampling method. Staychbotrys was reduced to zero by both raw count and count/cm squared) in the crawl space and one of the basement apartments the other basement apartment the raw count for Staychbotrys was 2 (raw count) and 13. (See attached Post Test Results).

Third Apartment Treated: The owner subsequently requested a third apartment (apartment 130) be tested for mold during the post-compliance testing. This apartment came back with an elevated level of Penicillium Aspergillus. The raw count was 178 and count/cm squared was 2,367. It was determined that the elevated levels of Penicillium Aspergillus were a tenant caused problem which had resulted from pet cats constantly urinating on the carpeting. The carpeting was removed, and the apartment atomized using Xspor Technologies EnzyCleanse product followed by HEPA Vacuuming and air scrubbing.

Post compliance testing showed zero levels of Penicillium Aspergillus in apartment 130. The landlord was advised to retain a sample of the carpet as evidence of what caused the elevated levels of Penicillium Aspergillus in the event the tenant decided to assert a legal claim against the landlord.

Xspor Technologies Actual Cost: The costs to the owner for Xspor Technologies service \$3,450.00 dollars or about one dollar and fifty cents per square foot.

PREPARED FOR: BFB GREEN

TEST ADDRESS: 128 EAST MAIN STREET VERNON, CT 06066

Detailed Mold Report

(WATER-INDICATING FUNGI, IF PRESENT, ARE SHOWN BELOW IN RED)

Analysis Method	Air Analysis			Air Analysis			Air Analysis			Air Analysis		
Lab Sample #	52627784-1			52627784-2			52627784-3			52627784-4		
Sample Identification	33835532			33835530			33835528			33835531		
Sample Location	OUTSIDE			UTILITY ROOM			DINING ROOM			CENTER APT.		
Sample Type/ Metric	Air-O-Cell/150L			Air-O-Cell/75L			Air-O-Cell/75L			Air-O-Cell/75L		
Analysis Date	Sun November 06, 2022			Sun November 06, 2022			Sun November 06, 2022			Sun November 06, 2022		
Determination	CONTROL			PROBLEM			PROBLEM			PROBLEM		
Fungal Types Identified	Raw Count	Spores/m ³	% of Total	Raw Count	Spores/m ³	% of Total	Raw Count	Spores/m ³	% of Total	Raw Count	Spores/m ³	% of Total
**INDOOR PROBLEM FUNGI												
Penicillium	---	---	---	---	---	---	---	---	---	1	13	4
Stachybotrys	---	---	---	9,317	123,916	99	7	93	58	6	80	30
**Non-Problem Fungi												
Alternaria	1	7	2	---	---	---	1	13	8	---	---	---
Basidiospores	25	168	61	1	13	<1	3	40	25	3	40	15
Chaetomium	---	---	---	2	27	<1	---	---	---	---	---	---
Cladosporium	6	40	14	---	---	---	1	13	8	---	---	---
Penicillium/Aspergillus	---	---	---	50	665	<1	---	---	---	10	133	50
Stachybotrys	9	60	21	*	*	*	*	*	*	*	*	*
TOTAL SPORE COUNT*	41	280	100	9,400	120,000	100	12	160	100	20	270	100
Minimum Detection Limit	7			14			14			14		

Comments/ Definitions

Raw Count: Actual number of spores observed and counted.

Spores/m³: Spores per cubic meter.

% of Total: Percentage of a particular spore in relation to total number of spores.

Present = growth observed.

---: Spore type was not observed.

*: Indicates to look above at the names in red under "indoor problem fungi".

CONTROL samples are normally taken outside a building to provide a baseline from which samples on the interior of the building are compared. Outside air is considered normal whatever the mold counts may be. The LIGHT DEBRIS present in the sample likely had no effect on the accuracy of the mold count.

Mold concentrations in the air are ABNORMAL and based on the mold counts, you likely have a mold source from which spores are able to become airborne and are an exposure concern to the occupants. The LIGHT DEBRIS present in the sample likely had no effect on the accuracy of the mold count.

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*Indoor Problem Fungi are generally capable of growing on wetted building materials.

**Non-Problem Fungi are less capable or do not grow on wetted building materials. They are commonly found in the air outside and infiltrate into indoor air naturally. High numbers of any one of these spore types as compared to the Control sample may indicate that they are growing on wetted building material indoors.

Spore types not listed in this report were not observed.

Background debris estimates the amount of non-spore particles. Increasing amount of debris will affect the accuracy of the spore counts. Total percent may not equal 100% due to rounding.

*Total Spore Counts are reported to 2 significant figures.



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TEST ADDRESS: 128 EAST MAIN STREET VERNON, CT 06066

Detailed Mold Report

(WATER-INDICATING FUNGI, IF PRESENT, ARE SHOWN BELOW IN RED)

Analysis Method	Air Analysis			Air Analysis			Air Analysis			Air Analysis		
Lab Sample #	52632664-1			52632664-2			52632644-3			52632664-4		
Sample Identification	33835523			33835516			33835517			33835512		
Sample Location	OUTSIDE			UTILITY ROOM			APARTMENT 126			APARTMENT 130		
Sample Type/ Metric	Air-O-Cell/150L			Air-O-Cell/75L			Air-O-Cell/75L			Air-O-Cell/75L		
Analysis Date	Sun November 18, 2022			Sun November 18, 2022			Sun November 18, 2022			Sun November 18, 2022		
Determination	CONTROL			NORMAL			NORMAL			PROBLEM		
Fungal Types Identified	Raw Count	Spores/m ³	% of Total	Raw Count	Spores/m ³	% of Total	Raw Count	Spores/m ³	% of Total	Raw Count	Spores/m ³	% of Total
**INDOOR PROBLEM FUNGI												
Penicillium/Aspergillus	---	---	---	---	---	---	---	---	---	178	2,367	95
**Non-Problem Fungi												
Ascospores	---	---	---	1	13	19	2	27	11	1	13	<1
Basidiospores	4	27	36	1	13	19	9	120	52	6	80	3
Cladosporium	3	20	27	2	27	40	1	13	5	---	---	---
Epicoccum	1	7	9	1	13	19	---	---	---	---	---	---
Penicillin/Aspergillus	3	20	27	---	---	---	---	---	---	*	*	*
Smut/Myxomycetes	---	---	---	---	---	---	2	27	11	1	13	<1
Spegazzinia	---	---	---	---	---	---	1	13	5	---	---	---
Stachbotrys	---	---	---	---	---	---	2	27	11	---	---	---
TOTAL SPORE COUNT*	11	74	100	5	66	100	17	230	100	190	2,500	100
Minimum Detection Limit	7			14			14			14		

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