

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Joshua Birkebak, Ph.D. at 10:12 am, Oct 12, 2018

Inspector:	Dylan Graves	Date Collected:	10/4/2018
Project Name:	Fred D. Brown Hall	Date Received:	10/8/2018
Project Number:		Date Reported:	10/11/2018
Assured Bio Identifier:	DG100818-4	Analyst(s):	M. Reed, S. McClurg

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kerckmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Altan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: FBC
Sample ID: FBC
Sample Description: Outside Control

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-1
Sample ID: 1
Sample Description: Floor ■ - Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-2
Sample ID: 2
Sample Description: Floor ■ - Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-3
Sample ID: 3
Sample Description: Floor ■ - Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

4

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-4
Sample ID: 4
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-5
Sample ID: 5
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-6
Sample ID: 6
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-7
Sample ID: 7
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-8
Sample ID: 8
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-9
Sample ID: 9
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-10
Sample ID: 10
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-11
Sample ID: 11
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-12
Sample ID: 12
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

23

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-13
Sample ID: 13
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

15

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-14
Sample ID: 14
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-15
Sample ID: 15
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

15

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-16
Sample ID: 16
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

19

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-17
Sample ID: 17
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

31

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG100818-4-18
Sample ID: 18
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-19
Sample ID: 19
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

32

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-20
Sample ID: 20
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

58

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-21
Sample ID: 21
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

32

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG100818-4-22
Sample ID: 22
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-23
Sample ID: 23
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-24
Sample ID: 24
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

15

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-25
Sample ID: 25
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-26
Sample ID: 26
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-27
Sample ID: 27
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-28
Sample ID: 28
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

24

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-29
Sample ID: 29
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

35

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-30
Sample ID: 30
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-31
Sample ID: 31
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

30

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-32
Sample ID: 32
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

5

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-33
Sample ID: 33
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

5

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-34
Sample ID: 34
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-35
Sample ID: 35
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-36
Sample ID: 36
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

24

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-37
Sample ID: 37
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

9

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-38
Sample ID: 38
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

50

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-39
Sample ID: 39
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

25

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-40
Sample ID: 40
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

6

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-41
Sample ID: 41
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

53

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-42
Sample ID: 42
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-43
Sample ID: 43
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

5

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-4-44

Sample ID: 44

Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp: 41

Stach: 3

Comments: None.



assuredbio™
(865) 813-1700

General Chain of Custody

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com

Inspector: Dylan Graves
Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830
Phone: (865) 813-1700
E-mail: info@assuredbio.com

Project Name: Fred D. Brown Hall		
Project Number:	Inside	Outside
Collection Date: <u>10-4-18</u>	%RH	
Temperature		

For Water Tests		Sample Codes (SC)		B - Bulk		Outside Conditions (Circle all that apply)	
Sampling Time:		MT - M-TRAP®		TL - Tape Lift		C - Clear	TS - Thunderstorm
Residual Chlorine:		SP - Spore Trap		D - Dust		R - Rain	S - Snow
Water Temperature:		SW - Swab		W - Water		W - Wind	O - Other
Sample ID	Description		SC	Total Volume or Area	Comments		
1	Floor	Room	MT	150 L			
2	Floor	Room	MT	150 L			
3	Floor	Room	MT	150 L			
4	Floor	Room	MT	150 L			
5	Floor	Room	MT	150 L			
6	Floor	Room	MT	150 L			
7	Floor	Room	MT	150 L			
8	Floor	Room	MT	150 L			
9	Floor	Room	MT	150 L			
10	Floor	Room	MT	150 L			
11	Floor	Room	MT	150 L			
12	Floor	Room	MT	150 L			

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galsen, or Ward Lab.

Relinquished By: [Signature] Date: 10-4-18 Time: Received By: [Signature] Date: 10-8-18 Time: 9:00 Page 1 of 4



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

[Signature]

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

Outside Conditions (Circle all that apply)

C - Clear TS - Thunderstorm

R - Rain S - Snow

W - Wind O - Other

Sample ID

Description

SC Total Volume or Area

Comments

13	Floor	- Room	MT	150 L	
14	Floor	- Room	MT	150 L	
15	Floor	- Room	MT	150 L	
16	Floor	- Room	MT	150 L	
17	Floor	- Room	MT	150 L	
18	Floor	- Room	MT	150 L	
19	Floor	- Room	MT	150 L	
20	Floor	- Room	MT	150 L	
21	Floor	- Room	MT	150 L	
22	Floor	- Room	MT	150 L	
23	Floor	- Room	MT	150 L	
24	Floor	- Room	MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galson, or Ward Lab.

Relinquished By:

[Signature]

Date:

10-4-18

Time:

Received By:

[Signature]

Date:

10-8-18

Time:

9:00

Project Name:

Fred D. Brown Hall

Project Number:

Collection Date:

10-4-18

%RH

Inside

Outside

Temperature

AB Identifier: (for internal use only)

DE100818-4

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

[Signature]

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

SC

Total Volume or Area

Comments

25	Floor	- Room	MT	150 L	
26	Floor	- Room	MT	150 L	
27	Floor	- Room	MT	150 L	
28	Floor	- Room	MT	150 L	
29	Floor	- Room	MT	150 L	
30	Floor	- Room	MT	150 L	
31	Floor	- Room	MT	150 L	
32	Floor	- Room	MT	150 L	
33	Floor	- Room	MT	150 L	
34	Floor	- Room	MT	150 L	
35	Floor	- Room	MT	150 L	
36	Floor	- Room	MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELLIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Calson, or Ward Lab.

Relinquished By:

[Signature]

Date:

10-5-18

Time:

Received By:

[Signature]

Date: 10-8-18

Time: 9:00

Project Name:

Fred D. Brown Hall

Project Number:

%RH

Inside

Outside

Collection Date:

10-5-18

Temperature

AB Identifier: (for internal use only)

DG100818-4

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	



General Chain of Custody

Company Name: Assured Bio Labs

228 Midway Ln, Suite B, Oak Ridge, TN 37830

E-mail: info@assuredbio.com

Outside Conditions (Circle all that apply)

TS - Thunderstorm

S - Snow

O - Other

Volume or Area

Big 2 (Pen/Asp and Stachybotrys)
Species Identification of Airborne Molds
MoldScan (Direct Exam)
ViaScan Genus ID Fungi
ViaScan Species ID Fungi*
ViaScan Bacterial Colony Count
ViaScan Species ID Bacteria*
ERMI
Survey of Indoor Molds (SIM)
Legionella (Culture)
Legionella (qPCR)
FHA/VA Water Test
Coliform/E. coli Test (+/-)
Other:**

Project Name:
Fred D. Brown Hall

Outside

DE 100818.4

[illegible]

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. ***Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galsen, or Ward Lab

Page 4 of 4

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Olga Khaliukova at 11:13 am, Oct 16, 2018

Inspector:	Shawn McClurg	Date Collected:	10/5/2018
Project Name:	North Carrick Hall	Date Received:	10/9/2018
Project Number:		Date Reported:	10/16/2018
Assured Bio Identifier:	SM100918-99	Analyst(s):	M. Reed

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kerckmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Altan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: NCC
Sample ID: NCC
Sample Description: Control

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

40

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-1
Sample ID: 45
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

29

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-2
Sample ID: 46
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

59

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-3
Sample ID: 47
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

26

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-4
Sample ID: 48
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

159

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-5
Sample ID: 49
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

175

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-6
Sample ID: 50
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

68

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-7
Sample ID: 51
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

5

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-8
Sample ID: 52
Sample Description: Floor ■ - Room ■■■■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

75

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-9
Sample ID: 53
Sample Description: Floor ■ - Room ■■■■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

57

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-10
Sample ID: 54
Sample Description: Floor ■ - Room ■■■■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

62

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-11
Sample ID: 55
Sample Description: Floor ■ - Room ■■■■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

46

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-12
Sample ID: 56
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

27

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-13
Sample ID: 57
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

52

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-14
Sample ID: 58
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

28

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-15
Sample ID: 59
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-16
Sample ID: 60
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-17
Sample ID: 61
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

1

Comments:

Assured Bio Identifier: SM100918-99-18
Sample ID: 62
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-19
Sample ID: 63
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

3

Stach:

1

Comments: None.

Assured Bio Identifier: SM100918-99-20
Sample ID: 64
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100918-99-21
Sample ID: 65
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

19

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: SM100918-99-22
Sample ID: 66
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

31

Stach:

Below Detectable Limits

Comments: None.



assuredbio

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector: Shawn McClary Company Name: Assured Bio Labs

Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700 E-mail: info@assuredbio.com

For Water Tests
Sampling Time: _____
Residual Chlorine: _____
Water Temperature: _____
Sample Codes (SC) B - Bulk
MT - M-TRAP® TL - Tape Lift
SP - Spore Trap D - Dust
SW - Swab W - Water
Outside Conditions (Circle all that apply)
C - Clear TS - Thunderstorm
R - Rain S - Snow
W - Wind O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
45	Floor - Room [REDACTED]	MT	150 L	
46	Floor - Room [REDACTED]	MT	150 L	
47	Floor - Room [REDACTED]	MT	150 L	
48	Floor - Room [REDACTED]	MT	150 L	
49	Floor - Room [REDACTED]	MT	150 L	
50	Floor - Room [REDACTED]	MT	150 L	
51	Floor - Room [REDACTED]	MT	150 L	
52	Floor - Room [REDACTED]	MT	150 L	
53	Floor - Room [REDACTED]	MT	150 L	
54	Floor - Room [REDACTED]	MT	150 L	
55	Floor - Room [REDACTED]	MT	150 L	
56	Floor - Room [REDACTED]	MT	150 L	

*Culture and PCR done at Assured Bio Labs.

Contracted to ELMCO

Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Calson, or Ward Lab.

Relinquished By: _____

Date: _____

Time: _____

Received By: M. Keel

Date: 10-9-18

Time: 11:21 AM

Project Name:

North Carrick Hall

Project Number:

%RH

Inside

Outside

Collection Date:

10-5-18

Temperature

AB Identifier: (for internal use only)

51100918-99

Big 2 (Pen/Asp and Stachybotrys)
Species Identification of Airborne Molds
MoldScan (Direct Exam)
ViaScan Genus ID Fungi
ViaScan Species ID Fungi*
ViaScan Bacterial Colony Count
ViaScan Species ID Bacteria*
ERMI
Survey of Indoor Molds (SIM)
Legionella (Culture)
Legionella (qPCR)
FHA/VA Water Test
Coliform/E. coli Test (+/-)
Other:**



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector: Shawn McClurg

Company Name: Assured Bio Labs

Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear TS - Thunderstorm

R - Rain S - Snow

W - Wind O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
57	Floor - Room 2	MT	150 L	
58	Floor - Room 2	MT	150 L	
59	Floor - Room 2	MT	150 L	
60	Floor - Room 2	MT	150 L	
61	Floor - Room 2	MT	150 L	
62	Floor - Room 2	MT	150 L	
63	Floor - Room 2	MT	150 L	
64	Floor - Room 2	MT	150 L	
65	Floor - Room 2	MT	150 L	
66	Floor - Room 2	MT	150 L	
NCC Control				

Project Name: North Carrick Hall	
Project Number:	%RH
Collection Date: 10-5-18	Temperature
AB Identifier: (for internal use only)	
Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galsen, or Ward Lab.

Relinquished By: _____

Date: _____

Time: _____

Received By: _____

Date: _____

Time: _____

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Olga Khaliukova at 4:02 pm, Oct 16, 2018

Inspector:	Shawn McClurg	Date Collected:	10/9/2018
Project Name:	Clement Hall	Date Received:	10/10/2018
Project Number:		Date Reported:	10/16/2018
Assured Bio Identifier:	SM101018-3	Analyst(s):	M. Reed

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kercsmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Altan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg
Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: CC
Sample ID: CC
Sample Description: Control Outside Composite

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

55

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-1
Sample ID: 67
Sample Description: Floor ■ - Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

57

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-2
Sample ID: 68
Sample Description: Floor ■ - Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-3
Sample ID: 69
Sample Description: Floor ■ Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

52

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-4
Sample ID: 70
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

14

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-5
Sample ID: 71
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-6
Sample ID: 72
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

8

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-7
Sample ID: 73
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

31

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-8
Sample ID: 74
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

57

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-9
Sample ID: 75
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

15

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-10
Sample ID: 76
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

44

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-11
Sample ID: 77
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-12
Sample ID: 78
Sample Description: Floor ■ - Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

362

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-13
Sample ID: 79
Sample Description: Floor ■ - Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-14
Sample ID: 80
Sample Description: Floor ■ Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

29

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-15
Sample ID: 81
Sample Description: Floor ■ Room ■

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

4

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-16
Sample ID: 82
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

40

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-17
Sample ID: 83
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

52

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: SM101018-3-18
Sample ID: 84
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-19
Sample ID: 85
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-20
Sample ID: 86
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

45

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-21
Sample ID: 87
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

95

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: SM101018-3-22
Sample ID: 88
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

6

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-3-23
Sample ID: 89
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.



assuredbioTM

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Company Name: Assured Bio Labs

Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID

Description

SC Total Volume or Area

Comments

✓ 79	Floor	MT	150 L	
✓ 80	Floor	MT	150 L	
✓ 81	Floor	MT	150 L	
✓ 82	Floor	MT	150 L	
✓ 83	Floor	MT	150 L	
✓ 84	Floor	MT	150 L	
✓ 85	Floor	MT	150 L	
✓ 86	Floor	MT	150 L	
✓ 87	Floor	MT	150 L	
✓ 88	Floor	MT	150 L	
✓ 89	Floor	MT	150 L	
CC	Control Outside Sample	MT	300 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galson, or Ward Lab.

Relinquished By: _____

Date: _____

Time: _____

Received By: _____

Date: _____

Time: _____

Page 2 of 2

Project Name:

Clement Hall

Project Number:

%RH

Inside

Outside

Collection Date:

Temperature

AB Identifier: (for internal use only)

SM 101018-3

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Joshua Birkebak, Ph.D. at 5:02 pm, Oct 12, 2018

Inspector:	Hunter Woodall	Date Collected:	10/5/2018
Project Name:	Hess Hall	Date Received:	10/10/2018
Project Number:		Date Reported:	10/12/2018
Assured Bio Identifier:	HW101018-22	Analyst(s):	M. Reed, S. McClurg

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kercksmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Alltan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg
Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: HC
Sample ID: HC
Sample Description: Hess Control

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

2

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-1
Sample ID: 90
Sample Description: [REDACTED] - [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

61

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-2
Sample ID: 91
Sample Description: [REDACTED] - [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-3
Sample ID: 92
Sample Description: [REDACTED] - [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

25

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-4

Sample ID: 93

Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

8

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: HW101018-22-5

Sample ID: 94

Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: HW101018-22-6

Sample ID: 95

Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

25

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: HW101018-22-7

Sample ID: 96

Sample Description: Floor [REDACTED] [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: HW101018-22-8
Sample ID: 97
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-9
Sample ID: 98
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

36

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-10
Sample ID: 99
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

20

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-11
Sample ID: 100
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-12
Sample ID: 101
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

57

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-13
Sample ID: 102
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

23

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-14
Sample ID: 103
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-15
Sample ID: 104
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-16
Sample ID: 105
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-17
Sample ID: 106
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: HW101018-22-18
Sample ID: 107
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-19
Sample ID: 108
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

3

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-20
Sample ID: 109
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-21
Sample ID: 110
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: HW101018-22-22
Sample ID: 111
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

8

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-23
Sample ID: 112
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

8

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-24
Sample ID: 113
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

20

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-25
Sample ID: 114
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

3

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-26
Sample ID: 115
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

23

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-27
Sample ID: 116
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

6

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-28
Sample ID: 117
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-29
Sample ID: 118
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

10

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-30
Sample ID: 119
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

15

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-31
Sample ID: 120
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-32
Sample ID: 121
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

32

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-33
Sample ID: 122
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

25

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-34
Sample ID: 123
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

56

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-35
Sample ID: 124
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-36
Sample ID: 125
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-37
Sample ID: 126
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

20

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-38
Sample ID: 127
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

44

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-39
Sample ID: 128
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

36

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-40
Sample ID: 129
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-41
Sample ID: 130
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

30

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-42
Sample ID: 131
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

39

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-43
Sample ID: 132
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

14

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-44
Sample ID: 133
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-45
Sample ID: 134
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

58

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-46
Sample ID: 135
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-47
Sample ID: 136
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

28

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-48
Sample ID: 137
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

52

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-49
Sample ID: 138
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-50
Sample ID: 139
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

6

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-51
Sample ID: 140
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-52
Sample ID: 141
Sample Description: Floor [REDACTED] - Rooms [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-53
Sample ID: 142
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

21

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-54
Sample ID: 143
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

19

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-55
Sample ID: 144
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

27

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-56
Sample ID: 145
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

22

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-57
Sample ID: 146
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

24

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-58
Sample ID: 147
Sample Description: Floor [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-59
Sample ID: 148
Sample Description: Floor [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

9

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-60
Sample ID: 149
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-61
Sample ID: 150
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-62
Sample ID: 151
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

68

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-63
Sample ID: 152
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

26

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-64
Sample ID: 153
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

14

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-65
Sample ID: 154
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-66
Sample ID: 155
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

22

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-67
Sample ID: 156
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

24

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-68
Sample ID: 157
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

36

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-69
Sample ID: 158
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

53

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-70
Sample ID: 159
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

31

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-71
Sample ID: 160
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

25

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-72
Sample ID: 161
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

16

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-73
Sample ID: 162
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

8

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-74
Sample ID: 163
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

30

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-75
Sample ID: 164
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

63

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-76
Sample ID: 165
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-77
Sample ID: 166
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

20

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-78
Sample ID: 167
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

19

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-79
Sample ID: 168
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

44

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-80
Sample ID: 169
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-81
Sample ID: 170
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

102

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-82
Sample ID: 171
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-83
Sample ID: 172
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

28

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-84
Sample ID: 173
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

5

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-85
Sample ID: 174
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

51

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-86
Sample ID: 175
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

30

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-87
Sample ID: 176
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

3

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-88
Sample ID: 177
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

68

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-89
Sample ID: 178
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

19

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: HW101018-22-90
Sample ID: 179
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

2

Stach:

Below Detectable Limits

Comments: None.



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector: Hunter Woodall Company Name: Assured Bio Labs

Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700 E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____ Sample Codes (SC) B - Bulk
Residual Chlorine: _____ MT - M-TRAP® TL - Tape Lift
Water Temperature: _____ SP - Spore Trap D - Dust
SW - Swab W - Water R - Rain S - Snow
W - Wind O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
90		MT	150 L	
91		MT	150 L	
92		MT	150 L	
93		MT	150 L	
94		MT	150 L	
95		MT	150 L	
96		MT	150 L	
97		MT	150 L	
98		MT	150 L	
99		MT	150 L	
100		MT	150 L	
101		MT	150 L	

Project Name:

Hess Hall

Project Number:

%RH	Inside	Outside

Collection Date: 10/5/18

Temperature

AB Identifier: (for internal use only)

HW101018-22

Big 2 (Pen/Asp and Stachybotrys)
Species Identification of Airborne Molds
MoldScan (Direct Exam)
ViaScan Genus ID Fungi
ViaScan Species ID Fungi*
ViaScan Bacterial Colony Count
ViaScan Species ID Bacteria*
ERMI
Survey of Indoor Molds (SIM)
Legionella (Culture)
Legionella (qPCR)
FHA/VA Water Test
Coliform/E. coli Test (+/-)
Other:**

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galsen, or Ward Lab.

Relinquished By: Hunter Woodall

Date: 10/10/18

Time: 9:50

Received By: Hunter Woodall

Date: 10/10/18

Time: 10:30



General Chain of Custody

Company Name: Assured Bio Labs

228 Midway Ln, Suite B, Oak Ridge, TN 37830

E-mail: info@assuredbio.com

Outside Conditions (Circle all that apply)

C - Clear TS - Thunderstorm

R - Rain
S - Snow

	W - Wind	O - Other
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		
96		
97		
98		
99		
100		

[illegible]

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Gatsco, or Ward Lab

Page 2 of 8

Hess Hall

	Inside	Outside
%RH		

Temperature

HU101018-22



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Company Name: Assured Bio Labs

Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
✓ 114	Floor	MT	150 L	
✓ 115	Floor	MT	150 L	
✓ 116	Floor	MT	150 L	
✓ 117	Floor	MT	150 L	
✓ 118	Floor	MT	150 L	
✓ 119	Floor	MT	150 L	
✓ 120	Floor	MT	150 L	
✓ 121	Floor	MT	150 L	
✓ 122	Floor	MT	150 L	
✓ 123	Floor	MT	150 L	
✓ 124	Floor	MT	150 L	
✓ 125	Floor	MT	150 L	

Project Name:

Hess Hall

Project Number:

Inside	Outside
%RH	
Temperature	

Collection Date:

AB Identifier: (for internal use only)

HU101018-22

Big 2 (Pen/Asp and Stachybotrys)
Species Identification of Airborne Molds
MoldScan (Direct Exam)
ViaScan Genus ID Fungi
ViaScan Species ID Fungi*
ViaScan Bacterial Colony Count
ViaScan Species ID Bacteria*
ERMI
Survey of Indoor Molds (SIM)
Legionella (Culture)
Legionella (qPCR)
FHA/VA Water Test
Coliform/E. coli Test (+/-)
Other:**

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galsen, or Ward Lab.

Relinquished By:

Handwritten signature

Date: 10/10/18

Time: 9:50

Received By:

Handwritten signature

Date: 10/10/18

Time: 10:30



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
126	Floor	MT	150 L	
127	Floor	MT	150 L	
128	Floor	MT	150 L	
129	Floor	MT	150 L	
130	Floor	MT	150 L	
131	Floor	MT	150 L	
132	Floor	MT	150 L	
133	Floor	MT	150 L	
134	Floor	MT	150 L	
135	Floor	MT	150 L	
136	Floor	MT	150 L	
137	Floor	MT	150 L	

Project Name:

Hess Hall

Project Number:

%RH

Collection Date:

Temperature

AB Identifier: (for internal use only)

HU101018-22

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galson, or Ward Lab.

Relinquished By: *Steve Haddock*

Date: 10/10/18

Time: 9:50

Received By: *Steve Haddock*

Date: 10/10/18

Time: 10:30



General Chain of Custody

Company Name: Assured Bio Labs

Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830

E-mail: info@assuredbio.com

Sample Codes (SC)

Outside Conditions (Circle all that apply)

MT - M-TRAP®

C - Clear	TS - Thunderstorm
-----------	-------------------

SP - Spore Trap

R - Rain

SW - Swab

W - Wind

Description

Total Volume or Area

Comments

Big 2 (Pen/Asp and Stachybotrys)

Species Identification of Airborne Molds

MoldScan (Direct Exam)

ViaScan Genus ID Fungi

ViaScan Species ID Fungi*

ViaScan Bacterial Colony Count

ViaScan Species ID Bacteria*

FRM:

Survey of Indoor Molds (SIM)

Legionella (Culture)

Legionella (qPCR)

FHA/VA Water Test

Coliform/E. coli Test (+/-)

Other:**

Project Name:

Hess Hall

Project Number:

%RH

Inside

Outside

Collection Date:

Temperature

AB Identifier: (for internal use only)

40101018-22

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galsion, or Ward Lab

27/01/87

Time: 9:50

Received By: _____

Frank Strick

Date: 10/10/18

Time: 10:30

Page 5 of 8



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

Email: info@assuredbio.com

For Water Tests

Sampling Time: _____
Residual Chlorine: _____
Water Temperature: _____

Sample Codes (SCI)	B - Bulk	Outside Conditions (Circle all that apply)
MT - M-TRAP®	TL - Tape Lift	C - Clear
SP - Spore Trap	D - Dust	R - Rain
SW - Swab	W - Water	S - Snow
		W - Wind
		O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
150	Floor	MT	150 L	
151	Floor	MT	150 L	
152	Floor	MT	150 L	
153	Floor	MT	150 L	
154	Floor	MT	150 L	
155	Floor	MT	150 L	
156	Floor	MT	150 L	
157	Floor	MT	150 L	
158	Floor	MT	150 L	
159	Floor	MT	150 L	
160	Floor	MT	150 L	
161	Floor	MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Gascon, or Ward Lab.

Relinquished By: *Andrew Haddock*

Date: 10/10/18

Time: 9:50

Received By: *Andrew Haddock*

Date: 10/10/18

Time: 10:30

Project Name: Hess Hall

Project Number:

%RH	Inside	Outside

Collection Date:

Temperature

AB Identifier: (for internal use only)

H10101018-22

Big 2 (Pen/Asp and Stachybotrys)
Species Identification of Airborne Molds
MoldScan (Direct Exam)
ViaScan Genus ID Fungi
ViaScan Species ID Fungi*
ViaScan Bacterial Colony Count
ViaScan Species ID Bacteria*
ERMI
Survey of Indoor Molds (SIM)
Legionella (Culture)
Legionella (qPCR)
FHA/VA Water Test
Coliform/E. coli Test (+/-)
Other:**



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

Outside Conditions (Circle all that apply)

B - Bulk

TL - Tape Lift

D - Dust

W - Water

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
162	Floor	MT	150 L	
163	Floor	MT	150 L	
164	Floor	MT	150 L	
165	Floor	MT	150 L	
166	Floor	MT	150 L	
167	Floor	MT	150 L	
168	Floor	MT	150 L	
169	Floor	MT	150 L	
170	Floor	MT	150 L	
171	Floor	MT	150 L	
172	Floor	MT	150 L	
173	Floor	MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SOS Galson, or Ward Lab.

Relinquished By: *[Signature]*

Date: 10/10/18

Time: 9:50

Received By: *[Signature]*

Date: 10/10/18

Time: 12:30

Project Name:

Hess Hall

Project Number:

Collection Date:

%RH

Temperature

Inside

Outside

AB Identifier: (for internal use only)

HU101018-22

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	



General Chain of Custody

Company Name: Assured Bio Labs

228 Midway Ln, Suite B, Oak Ridge, TN 37830

E-mail: info@assuredbio.com

Sample Codes (SC)

B - Bulk

Outside Conditions (Circle all that apply)

MT - M-TRAP®

TL - Tape Lift

C - Clear
TS - Thunderstorm

SP - Spore Trap

D - Dust

R - Rain

S - Snow

SW - Swab

W - Water

W - Win

0 - Other

[illegible]

Hess Hall

	Inside	Outside
%RH		

Temperature

HW101018-22

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Olga Khaliukova at 2:35 pm, Oct 16, 2018

Inspector:	Shawn McClurg	Date Collected:	10/8/2018
Project Name:	Massey Hall	Date Received:	10/10/2018
Project Number:		Date Reported:	10/16/2018
Assured Bio Identifier:	SM101018-1	Analyst(s):	M. Reed

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kerckmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Altan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: MC
Sample ID: MC
Sample Description: Massey Outdoor Control Composite

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-1
Sample ID: 180
Sample Description: [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

11

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-2
Sample ID: 181
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

19

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-3
Sample ID: 182
Sample Description: [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

3

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-4
Sample ID: 183
Sample Description: [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

48

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-5
Sample ID: 184
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

22

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-6
Sample ID: 185
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

29

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-7
Sample ID: 186
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

65

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-8
Sample ID: 187
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

9

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-9
Sample ID: 188
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-10
Sample ID: 189
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

25

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-11
Sample ID: 190
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-12
Sample ID: 191
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-13
Sample ID: 192
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

108

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-14
Sample ID: 193
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

31

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-15
Sample ID: 194
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

22

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-16
Sample ID: 195
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-17
Sample ID: 196
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

51

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: SM101018-1-18
Sample ID: 197
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-19
Sample ID: 198
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

22

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-20
Sample ID: 199
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

47

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-21
Sample ID: 200
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

38

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: SM101018-1-22
Sample ID: 201
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

39

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-23
Sample ID: 202
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

10

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-24
Sample ID: 203
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

39

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-25
Sample ID: 204
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

30

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-26
Sample ID: 205
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

60

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-27
Sample ID: 206
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

20

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-28
Sample ID: 207
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-29
Sample ID: 208
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

5

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-30
Sample ID: 209
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

40

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-31
Sample ID: 210
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-32
Sample ID: 211
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-33
Sample ID: 212
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

2

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-34
Sample ID: 213
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-35
Sample ID: 214
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-36
Sample ID: 215
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-37
Sample ID: 216
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

49

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-38
Sample ID: 217
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

23

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-39
Sample ID: 218
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

11

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-40
Sample ID: 219
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

32

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-41
Sample ID: 220
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

36

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-1-42
Sample ID: 221
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

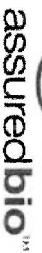
PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.



General Chain of Custody

Project Name: **Massey Hall**

Project Number:

108.18

	Inside	Outside
%RH		

Collection Date:

Temperature

AB Identifier: (for internal use only)

SM161018-1

Inspector:

Shallon M. King

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sample Codes (SC)

B - Bulk

Outside Conditions (Circle all that apply)

Sampling Time: _____

MT - M-TRAP®

TL - Tape Lift

C - Clear	TS - Thunderstorm
-----------	-------------------

Residual Chlorine

SP - Spore Trap

D - Dust

R - Rain
S - Snow

Water Temperature

SW - Swa

W - Water

W - Wind O - Other

[illegible]

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Gaisson, or Ward Lab.

Relinquished By:

Date:

Time

Received By:

Date:

Time: 9:00

Page 1 of 4



General Chain of Custody

Project Name:			Massey Hall		
Project Number:			Inside	Outside	
	%RH				
Collection Date:					

Collection Date:

Temperature

Inspector:

Company Name: Assured Bio Labs

AB Identifier: (for internal use only)

SM 101018-7

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sample Codes (SC)

B - Bulk

Outside Conditions (Circle all that apply)

Sampling Time: _____

MT-M-TRAP®

TL - Tape Lift

C - Clear

TS - Thunderstorm

Residual Chlorine:

SP - Spore Trap

D - Dust

R - Rain

S - Snow

Water Temperature

SW - Swab

W - Water

W - Wind

O - Other

Sample ID

Description

SC

Total Volume or Area

Comments

Big 2 (Pen/Asp and Stachybotrys)
Species Identification of Airborne Molds
MoldScan (Direct Exam)
ViaScan Genus ID Fungi
ViaScan Species ID Fungi*
ViaScan Bacterial Colony Count
ViaScan Species ID Bacteria*
ERMI
Survey of Indoor Molds (SIM)
Legionella (Culture)
Legionella (qPCR)
FHA/VA Water Test
Coliform/E. coli Test (+/-)
Other:**

[illegible]

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galsco, or Ward Lab

Relinquished By:

Date:

Time:

Received By:

Date:

89-01-01

Time: 9:00

Page 3 of 4



General Chain of Custody

Company Name: Assured Bio Labs

Phone: (865) 813-1700

E-mail: info@assuredbio.com

Outside Conditions (Circle all that apply)

C - Clear	TS - Thunderstorm
-----------	-------------------

R - Rain
S - Snow

W - Wind O - Other

Comments

1

Page 4 of 4

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Olga Khaliukova at 12:10 pm, Oct 16, 2018

Inspector:	Dylan Graves	Date Collected:	10/9/2018
Project Name:	Morrill Hall	Date Received:	10/10/2018
Project Number:		Date Reported:	10/16/2018
Assured Bio Identifier:	DG101018-4	Analyst(s):	M. Reed, S. McClurg

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kercsmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Altan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg
Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: MC
Sample ID: MC
Sample Description: Morrill Control

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

40

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-1
Sample ID: 222
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-2
Sample ID: 223
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

14

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-3
Sample ID: 224
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-4
Sample ID: 225
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-5
Sample ID: 226
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-6
Sample ID: 227
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

39

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-7
Sample ID: 228
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

33

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-8
Sample ID: 229
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

14

Stach:

Below Detectable Limits

Comments:

None.

Assured Bio Identifier: DG101018-4-9
Sample ID: 230
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

38

Stach:

Below Detectable Limits

Comments:

None.

Assured Bio Identifier: DG101018-4-10
Sample ID: 231
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments:

None.

Assured Bio Identifier: DG101018-4-11
Sample ID: 232
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

78

Stach:

Below Detectable Limits

Comments:

None.

Assured Bio Identifier: DG101018-4-12
Sample ID: 233
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-13
Sample ID: 234
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

6

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-14
Sample ID: 235
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

16

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-15
Sample ID: 236
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

31

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-16
Sample ID: 237
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

64

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-17
Sample ID: 238
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

26

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG101018-4-18
Sample ID: 239
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-19
Sample ID: 240
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

10

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-20
Sample ID: 241
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

27

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-21
Sample ID: 242
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

67

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG101018-4-22
Sample ID: 243
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

64

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-23
Sample ID: 244
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

6

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-24
Sample ID: 245
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-25
Sample ID: 246
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

67

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-26
Sample ID: 247
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

54

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-27
Sample ID: 248
Sample Description: [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-28
Sample ID: 249
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-29
Sample ID: 250
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-30
Sample ID: 251
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-31
Sample ID: 252
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

14

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-32
Sample ID: 253
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

84

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-33
Sample ID: 254
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

51

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-34
Sample ID: 255
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

24

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-35
Sample ID: 256
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

31

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-36
Sample ID: 257
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

16

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-4-37
Sample ID: 258
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

91

Stach:

Below Detectable Limits

Comments: None.



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Dylan Givens

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
✓ 222	Floor [Redacted]	MT	150 L	
✓ 223	Floor [Redacted]	MT	150 L	
✓ 224	Floor [Redacted]	MT	150 L	
✓ 225	Floor [Redacted]	MT	150 L	
✓ 226	Floor [Redacted]	MT	150 L	
✓ 227	Floor [Redacted]	MT	150 L	
✓ 228	Floor [Redacted]	MT	150 L	
✓ 229	Floor [Redacted]	MT	150 L	
✓ 230	Floor [Redacted]	MT	150 L	
✓ 231	Floor [Redacted]	MT	150 L	
✓ 232	Floor [Redacted]	MT	150 L	
✓ 233	Floor [Redacted]	MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EHS, SGS Gabson, or Ward Lab.

Relinquished By: [Signature]

Date:

10-9-18

Time:

Received By:

[Signature]

Date:

10-10-18

Time:

9:00

Project Name:

Morrill Hall

Project Number:

%RH	Inside	Outside

Collection Date:

10-9-18

Temperature

AB Identifier: (for internal use only)

DG101018-4

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
234	F100	MT	150 L	
235	F100	MT	150 L	
236	F100	MT	150 L	
237	F100	MT	150 L	
238	F100	MT	150 L	
239	F100	MT	150 L	
240	F100	MT	150 L	
241	F100	MT	150 L	
242	F100	MT	150 L	
243	F100	MT	150 L	
244	F100	MT	150 L	
245	F100	MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galsen, or Ward Lab.

Relinquished By: *[Signature]*

Date:

10-9-18

Time:

Received By: *[Signature]*

Date: 10-10-18

Time: 9:00

Project Name:

Morrill Hall

Project Number:

%RH	Inside	Outside

Collection Date:

10-9-18

Temperature

AB Identifier: (for internal use only)

D6101018-4

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Description

SC

Total Volume or Area

Comments

✓ 246	Floor		MT	150 L	
✓ 247	Floor		MT	150 L	
✓ 248	Floor		MT	150 L	
✓ 249	Floor		MT	150 L	
✓ 250	Floor		MT	150 L	
✓ 251	Floor		MT	150 L	
✓ 252	Floor		MT	150 L	
✓ 253	Floor		MT	150 L	
✓ 254	Floor		MT	150 L	
✓ 255	Floor		MT	150 L	
✓ 256	Floor		MT	150 L	
✓ 257	Floor		MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galson, or Ward Lab.

Relinquished By: *[Signature]*

Date: 10-9-18

Time:

Received By: *[Signature]*

Date: 10-10-18

Time: 9:00

Project Name:

Morrill Hall

Project Number:

%RH	Inside	Outside

Collection Date:

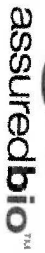
10-89-18

Temperature

AB Identifier: (for internal use only)

26101018-4

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	



General Chain of Custody

Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830

E-mail: info@assuredbio.com

Outside Conditions (Circle all that apply)

C - Clear
TS - Thunderstorm

rain -

1111A8 - AA

Comments

1

1

[illegible]

Page 4 of 4

Morrill Hall

	Inside	Outside
%RH		

Temperature

DE 101018-4

Big 2 (Pen/Asp and Stachybotrys)
Species Identification of Airborne Molds
MoldScan (Direct Exam)
ViaScan Genus ID Fungi
ViaScan Species ID Fungi*
ViaScan Bacterial Colony Count
ViaScan Species ID Bacteria*
ERMI
Survey of Indoor Molds (SIM)
Legionella (Culture)
Legionella (qPCR)
FHA/VA Water Test
Coliform/E. coli Test (+/-)
Other:**

Other:**

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Joshua Birkebak, Ph.D. at 10:20 am, Oct 12, 2018

Inspector:	Dylan Graves	Date Collected:	10/5/2018
Project Name:	Orange Hall	Date Received:	10/8/2018
Project Number:		Date Reported:	10/11/2018
Assured Bio Identifier:	DG100818-6	Analyst(s):	M. Reed

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kerckmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Altan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: OC
Sample ID: OC
Sample Description: Outside Control

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-1
Sample ID: 259
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-2
Sample ID: 260
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

24

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-3
Sample ID: 261
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-4
Sample ID: 262
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

36

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-5
Sample ID: 263
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

6

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-6
Sample ID: 264
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-7
Sample ID: 265
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-8
Sample ID: 266
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

3

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-9
Sample ID: 267
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-10
Sample ID: 268
Sample Description: [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

50

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-11
Sample ID: 269
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-12
Sample ID: 270
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-13
Sample ID: 271
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

26

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-14
Sample ID: 272
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-15
Sample ID: 273
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

29

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-16
Sample ID: 274
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-17
Sample ID: 275
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG100818-6-18
Sample ID: 276
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-19
Sample ID: 277
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

2

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-20
Sample ID: 278
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

15

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-21
Sample ID: 279
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG100818-6-22
Sample ID: 280
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

16

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-23
Sample ID: 281
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

61

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG100818-6-24

Sample ID: 282

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

25

Stach:

Below Detectable Limits

Comments: None.



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector: <u>Alan Gares</u>	Company Name: Assured Bio Labs
Company Address: <u>228 Midway Ln, Suite B, Oak Ridge, TN 37830</u>	
Phone: (865) 813-1700	E-mail: <u>info@assuredbio.com</u>
For Water Tests	
Sampling Time: _____	Sample Codes (SC) _____
Residual Chlorine: _____	MT - M-TRAP®
Water Temperature: _____	SP - Spore Trap
Sample ID	SW - Swab
Description	B - Bulk TL - Tape Lift D - Dust W - Water
259 F100	SC
260 F100	MT 150 L
261 F100	MT 150 L
262 F100	MT 150 L
263 F100	MT 150 L
264 F100	MT 150 L
265 F100	MT 150 L
266 F100	MT 150 L
267 F100	MT 150 L
268 F100	MT 150 L
269 F100	MT 150 L
270 F100	MT 150 L

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galson, or Ward Lab.

Relinquished By: MM

Date: 10-5-18

Time: _____

Received By: MSH

Date: 10-8-18

Time: 7:00

Project Name: <u>Orange Hall</u>	
Project Number: _____	
Collection Date: <u>10-5-18</u>	%RH _____
AB Identifier: (for internal use only) <u>D6100818-6</u>	Temperature _____
Inside _____ Outside _____	
Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:** _____	



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector: <u>Alan Grant</u>	Company Name: Assured Bio Labs
Company Address: <u>228 Midway Ln, Suite B, Oak Ridge, TN 37830</u>	
Phone: (865) 813-1700	E-mail: <u>info@assuredbio.com</u>
For Water Tests	
Sampling Time: _____	Sample Codes (SC):
Residual Chlorine: _____	MT - M-TRAP®
Water Temperature: _____	SP - Spore Trap
	SW - Swab
Sample ID	Description
271	Floor [Redacted] - R
272	Floor [Redacted] - R
273	Floor [Redacted] - R
274	Floor [Redacted] - R
275	Floor [Redacted] - R
276	Floor [Redacted] - R
277	Floor [Redacted] - R
278	Floor [Redacted] - R
279	Floor [Redacted] - R
280	Floor [Redacted] - R
281	Floor [Redacted] - R
282	Floor [Redacted] - R

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SCS Galson, or Ward Lab.

Relinquished By: Orange Control

Date: 10-5-18

Time: MT 3:00

Received By: ECR

Date: 10-8-18

Time: 9:00

Project Name: Orange Hall			
Project Number: _____			
Collection Date: <u>10-5-18</u>	%RH	Inside	Outside
AB Identifier: (for internal use only) <u>D6 100818-6</u>	Temperature		
Big 2 (Pen/Asp and Stachybotrys)			
Species Identification of Airborne Molds			
MoldScan (Direct Exam)			
ViaScan Genus ID Fungi			
ViaScan Species ID Fungi*			
ViaScan Bacterial Colony Count			
ViaScan Species ID Bacteria*			
ERMI			
Survey of Indoor Molds (SIM)			
Legionella (Culture)			
Legionella (qPCR)			
FHA/VA Water Test			
Coliform/E. coli Test (+/-)			
Other:** _____			

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Joshua Birkebak, Ph.D. at 4:39 pm, Oct 12, 2018

Inspector:	Shawn McClurg	Date Collected:	10/4/2018
Project Name:	Reese Hall	Date Received:	10/8/2018
Project Number:		Date Reported:	10/12/2018
Assured Bio Identifier:	SM100818-5	Analyst(s):	M. Reed

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kercksmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Alltan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg
Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: RC
Sample ID: RC
Sample Description: Reese Control

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

95

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100818-5-1
Sample ID: 283
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100818-5-2
Sample ID: 284
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

30

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100818-5-3
Sample ID: 285
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100818-5-4

Sample ID: 286

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

13

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: SM100818-5-5

Sample ID: 287

Sample Description: [REDACTED] Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

30

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: SM100818-5-6

Sample ID: 288

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: SM100818-5-7

Sample ID: 289

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

15

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: SM100818-5-8

Sample ID: 290

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

Stach:

Comments: None.

Spores/Cubic Meter

Below Detectable Limits

Below Detectable Limits

Assured Bio Identifier: SM100818-5-9

Sample ID: 291

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

Stach:

Comments: None.

Spores/Cubic Meter

8

Below Detectable Limits

Assured Bio Identifier: SM100818-5-10

Sample ID: 292

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

Stach:

Comments: None.

Spores/Cubic Meter

64

Below Detectable Limits

Assured Bio Identifier: SM100818-5-11

Sample ID: 293

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

Stach:

Comments: None.

Spores/Cubic Meter

14

Below Detectable Limits

Assured Bio Identifier: SM100818-5-12

Sample ID: 294

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

70

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: SM100818-5-13

Sample ID: 295

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: SM100818-5-14

Sample ID: 296

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

31

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: SM100818-5-15

Sample ID: 297

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: SM100818-5-16
Sample ID: 298
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

20

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100818-5-17
Sample ID: 299
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

22

Stach:

113

Comments:

Assured Bio Identifier: SM100818-5-18
Sample ID: 300
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

137

Comments: None.

Assured Bio Identifier: SM100818-5-19
Sample ID: 301
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM100818-5-20

Sample ID: 302

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

35

Stach:

Below Detectable Limits

Comments: None.

Spores/Cubic Meter

Assured Bio Identifier: SM100818-5-21

Sample ID: 303

Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact

Sample Type: Mtrap

Sample Volume: 150 L

Assay

PenAsp:

32

Stach:

Below Detectable Limits

Comments:

Spores/Cubic Meter



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector: Shawn McClurg

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time:

Residual Chlorine:

Water Temperature:

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
283		MT	150 L	
284		MT	150 L	
285		MT	150 L	
286		MT	150 L	
287		MT	150 L	
288		MT	150 L	
289		MT	150 L	
290		MT	150 L	
291		MT	150 L	
292		MT	150 L	
293		MT	150 L	
294		MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Gaisson, or Ward Lab.

Relinquished By:

Date:

Time:

Received By:

Date:

Time:

Project Name:

Reese Hall

Project Number:

%RH

Inside

Outside

Collection Date:

10-4-18

Temperature

AB Identifier: (for internal use only)

SM 100818-5

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector: Shawn McLurg Company Name: Assured Bio Labs

Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700 E-mail: info@assuredbio.com

For Water Tests

Sampling Time: _____

Residual Chlorine: _____

Water Temperature: _____

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
295	Floo	MT	150 L	
296	Floo	MT	150 L	
297	Floo	MT	150 L	
298	Floo	MT	150 L	
299	Floo	MT	150 L	
300	Floo	MT	150 L	
301	Floo	MT	150 L	
302	Floo	MT	150 L	
303	Floo	MT	150 L	
RC	Reese Control <u>SM</u>			
	<u>10/24/18</u>			

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SCS Galsion, or Ward Lab.

Relinquished By: _____ Date: _____ Time: _____ Received By: Shawn McLurg Date: 10-8-18 Time: 9:00 Page 2 of 2

Project Name:

Reese Hall

Project Number:

%RH _____ Inside _____ Outside _____

Collection Date:

10-4-18

Temperature _____

AB Identifier: (for internal use only)

SM 100818-5

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com

REVISED

10:04 am, Oct 18, 2018



REVIEWED

By Olga Khaliukova at 10:04 am, Oct 18, 2018

Inspector:	Dylan Graves	Date Collected:	10/16/2018
Project Name:	Reese Hall - Retest	Date Received:	10/16/2018
Project Number:	2	Date Reported:	10/18/2018
Assured Bio Identifier:	DG101618-30	Analyst(s):	M. Reed, S. McClurg

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kercsmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Alltan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg
Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)



Big Two

Assays PenAsp and Stach

Assured Bio Identifier: DG101618-30-1
Sample ID: 1
Sample Description: [REDACTED] - Composite Dust

Sample Condition: Intact
Sample Type: Swab
Sample Unit: 1 Swab

Assay

Cells/Swab

PenAsp:

304

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG101618-30-2
Sample ID: 2
Sample Description: [REDACTED] - mTrap Air

Sample Condition: Intact
Sample Type: mTrap
Sample Unit: 150 L

Assay

Spores/m³

PenAsp:

38

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG101618-30-4
Sample ID: 4
Sample Description: [REDACTED] - Inside HVAC Comp.

Sample Condition: Intact
Sample Type: Swab
Sample Unit: 1 Swab

Assay

Cells/Swab

PenAsp:

941,677

Stach:

Below Detectable Limits

Comments:



Big Two

Assays PenAsp and Stach

Assured Bio Identifier: DG101618-30-6
Sample ID: 6
Sample Description: [REDACTED] - Composite Dust

Sample Condition: Intact
Sample Type: Swab
Sample Unit: 1 Swab

Assay

Cells/Swab

PenAsp:

174

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG101618-30-7
Sample ID: 7
Sample Description: [REDACTED] - mTrap Air

Sample Condition: Intact
Sample Type: mTrap
Sample Unit: 150 L

Assay

Spores/m³

PenAsp:

38

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG101618-30-9
Sample ID: 9
Sample Description: [REDACTED] - Inside HVAC Comp.

Sample Condition: Intact
Sample Type: Swab
Sample Unit: 1 Swab

Assay

Cells/Swab

PenAsp:

1,043,421

Stach:

Below Detectable Limits

Comments:



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector: <u>Wlan Graves</u>	Company Name: <u>Assured Bio Labs</u>			
Company Address:				
Phone:	E-mail:			
For Water Tests	Sample Codes (SC)	B - Bulk	Outside Conditions (Circle all that apply)	
Sampling Time: _____	MT - M-TRAP®	TL - Tape Lift	C - Clear	TS - Thunderstorm
Residual Chlorine: _____	SP - Spore Trap	D - Dust	R - Rain	S - Snow
Water Temperature: _____	SW - Swab	W - Water	W - Wind	O - Other
Sample ID	Description	SC	Total Volume or Area	Comments
1	- Composite Dust	SW		—
2	- m Trap Air	SP	150	16565
3	- Air	SP	25	2339171
4	Inside HVAC Comp	SW		—
5	Inside Sink Wall	SP	10	2339172
6	Composite Dust	SW		—
7	m Trap Air	SP	150	16867
8	Air	SP	25	2339131
9	Inside HVAC Comp	SW		—
10	Inside Sink Wall	SP	10	2339151
11	Outdoor Control	SP	25	2339132

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galson, or Ward Lab.

Relinquished By: Wlan Graves

Date: 10-16-18

Time: _____

Received By: Hunter Woodall

Date: 10/16/18

Time: 3:10pm Page _____ of _____

Project Name: <u>Roose Hall - Retest</u>	AB Identifier: (for internal use only) <u>DG101618-30</u>		
Project Number: <u>2</u>	%RH	Inside	Outside
Collection Date: <u>10-16-18</u>	Temperature		
Big 2 (Pen/Asp and Stachybotrys)			
Species Identification of Airborne Molds			
MoldScan (Direct Exam)			
ViaScan Genus ID Fungi			
ViaScan Species ID Fungi*			
ViaScan Bacterial Colony Count			
ViaScan Species ID Bacteria*			
ERMI			
Survey of Indoor Molds (SIM)			
Legionella (Culture)			
Legionella (qPCR)			
FHA/VA Water Test			
Coliform/E. coli Test (+/-)			
Other:**			

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Olga Khaliukova at 1:18 pm, Oct 17, 2018

Inspector:	Hunter Woodall	Date Collected:	10/9/2018
Project Name:	Stokely Hall	Date Received:	10/10/2018
Project Number:		Date Reported:	10/17/2018
Assured Bio Identifier:	SM101018-2	Analyst(s):	M. Reed, S. McClurg

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kercsmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Altan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg
Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: SC
Sample ID: SC
Sample Description: Stokely Control

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

25

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-1
Sample ID: 304
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

24

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-2
Sample ID: 305
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

11

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-3
Sample ID: 306
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-4
Sample ID: 307
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

13

Stach:

Below Detectable Limits

Comments:

None.

Assured Bio Identifier: SM101018-2-5
Sample ID: 308
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

23

Stach:

Below Detectable Limits

Comments:

None.

Assured Bio Identifier: SM101018-2-6
Sample ID: 309
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments:

None.

Assured Bio Identifier: SM101018-2-7
Sample ID: 310
Sample Description: [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

79

Stach:

Below Detectable Limits

Comments:

None.

Assured Bio Identifier: SM101018-2-8
Sample ID: 311
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-9
Sample ID: 312
Sample Description: [REDACTED] Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

40

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-10
Sample ID: 313
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-11
Sample ID: 314
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-12
Sample ID: 315
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-13
Sample ID: 316
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

1

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-14
Sample ID: 317
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

22

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-15
Sample ID: 318
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

31

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-16
Sample ID: 319
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

16

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-17
Sample ID: 320
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: SM101018-2-18
Sample ID: 321
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

11

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-19
Sample ID: 322
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

4

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-20
Sample ID: 323
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-21
Sample ID: 324
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: SM101018-2-22
Sample ID: 325
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

25

Stach:

1

Comments: None.

Assured Bio Identifier: SM101018-2-23
Sample ID: 326
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-24
Sample ID: 327
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

47

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-25
Sample ID: 328
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

29

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-26
Sample ID: 329
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

29

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-27
Sample ID: 330
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

63

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-28
Sample ID: 331
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-29
Sample ID: 332
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

6

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-30
Sample ID: 333
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-31
Sample ID: 334
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

19

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-32
Sample ID: 335
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-33
Sample ID: 336
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

3

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-34
Sample ID: 337
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

45

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-35
Sample ID: 338
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

82

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: SM101018-2-36
Sample ID: 339
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

11

Stach:

Below Detectable Limits

Comments: None.



assuredbioTM

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

AB

General Chain of Custody

Inspector: Hunter Woodall		Company Name: Assured Bio Labs	
Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830			
Phone: (865) 813-1700		E-mail: info@assuredbio.com	
For Water Tests		Sample Codes (SC)	
Sampling Time: _____	MT - M-TRAP®	B - Bulk	Outside Conditions (Circle all that apply)
Residual Chlorine: _____	SP - Spore Trap	TL - Tape Lift	C - Clear
Water Temperature: _____	SW - Swab	D - Dust	R - Rain
		W - Water	S - Snow
			W - Wind
			O - Other
Sample ID	Description	SC	Total Volume or Area
304	F10	MT	150 L
305	F10	MT	150 L
306	F10	MT	150 L
307	F10	MT	150 L
308	F10	MT	150 L
309	F10	MT	150 L
310	F10	MT	150 L
311	F10	MT	150 L
312	F10	MT	150 L
313	F10	MT	150 L
314	F10	MT	150 L
315	F10	MT	150 L

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SOS Galsen, or Ward Lab.

Relinquished By: *Hunter Woodall*

Date: 10/10/18

Time: _____

Received By: *SM*

Date: 10-10-18

Time: 9:00

Project Name: Stokeley Hall

Project Number: _____

%RH

Collection Date: 10/9/18

Temperature

AB Identifier: (for internal use only)

10-10-18 6A

SM

10-10-18-2

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHAVA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	



assuredbioTM

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

E-mail: info@assuredbio.com

For Water Tests

Sampling Time:

Residual Chlorine:

Water Temperature:

Sample Codes (SC)

MT - M-TRAP[®]

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
316	Floc	MT	150 L	
317	Floc	MT	150 L	
318	Floc	MT	150 L	
319	Floc	MT	150 L	
320	Floc	MT	150 L	
321	Floc	MT	150 L	
322	Floc	MT	150 L	
323	Floc	MT	150 L	
324	Floc	MT	150 L	
325	Floc	MT	150 L	
326	Floc	MT	150 L	
327	Floc	MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galson, or Ward Lab.

Relinquished By:

Date:

Time:

Received By:

G. M. R.

Date:

10-10-18

Time:

9:00

Project Name:

Stokely Hall

Project Number:

Collection Date:

%RH

Temperature

Temperature

Inside

Outside

AB Identifier: (for internal use only)

10-10-18 gm SM

SM

101018-2

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:		Company Name: Assured Bio Labs		
Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830				
Phone: (865) 813-1700		E-mail: info@assuredbio.com		
For Water Tests		Sample Codes (SC)		
Sampling Time:	MT - M-TRAP®	B - Bulk	Outside Conditions (Circle all that apply)	
Residual Chlorine:	SP - Spore Trap	TL - Tape Lift	C - Clear	TS - Thunderstorm
Water Temperature:	SW - Swab	D - Dust	R - Rain	S - Snow
		W - Water	W - Wind	O - Other
Sample ID	Description	SC	Total Volume or Area	Comments
328	F100	MT	150 L	
329	F100	MT	150 L	
330	F100	MT	150 L	
331	F100	MT	150 L	
332	F100	MT	150 L	
333	F100	MT	150 L	
334	F100	MT	150 L	
335	F100	MT	150 L	
336	F100	MT	150 L	
337	F100	MT	150 L	
338	F100	MT	150 L	
339	F100	MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galsen, or Ward Lab.

Relinquished By:

Date:

Time:

Received By:

Date:

Time:

Page 3 of 3

Project Name:

Stokely Hall

Project Number:

%RH

Inside

Outside

Collection Date:

Temperature

AB Identifier: (for internal use only)

10-10-18 am

SM #20 101018-2

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHAVA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	

Big 2 Panel

PenAsp¹ and Stach² Assays

228 Midway Lane, Suite B
Oak Ridge, Tennessee 37830
Toll Free: (866) 547-1727
Local: (865) 813-1700
Fax: (865) 813-1705
Email: info@assuredbio.com
www.assuredbio.com



REVIEWED

By Olga Khaliukova at 4:09 pm, Oct 16, 2018

Inspector:	Dylan Graves	Date Collected:	10/8/2018
Project Name:	Volunteer Hall	Date Received:	10/10/2018
Project Number:		Date Reported:	10/16/2018
Assured Bio Identifier:	DG101018-5	Analyst(s):	M. Reed, S. McClurg

Selected References

Haugland, R. A., S. J. Vesper and L. J. Wymer. 1999. Quantitative measurement of *Stachybotrys chartarum* conidia using real-time detection of PCR products with the TaqManTM fluorogenic probe system. *Molecular and Cellular Probes* 13:329-340.

Meklin, T. M., R. A. Haugland, T. Reponen, M. Varma, Z. Lummus, D. Bernstein, L. J. Wymer and S. J. Vesper. 2004. Quantitative PCR analysis of house dust can reveal abnormal mold conditions. *Journal of Environmental Monitoring* 6:615-620.

Vesper, S. J. 2006. Developing the EPA Relative Moldiness Index[®] based on mold-specific quantitative PCR. *The Synergist* April 2006:39-43.

Vesper, S. J., C. McKinstry, C. Yang, R. A. Haugland, C. M. Kerckmar, I. Yike, M. D. Schluchter, H. L. Kirchner, J. Sobolewski, T. M. Altan and D. G. Dearborn. 2006. Specific molds associated with asthma in water-damaged homes. *Journal of Occupational and Environmental Medicine* 48:852-858.

Vesper, S., C. McKinstry, P. Ashley, R. Haugland, K. Yeatts, K. Bradhan and E. Svendsen. 2007. Quantitative PCR analysis of molds in the dust from homes of asthmatic children in North Carolina. *Journal of Environmental Monitoring* 9:826-830.

Accreditation

Assured Bio Labs, LLC is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC; Lab ID # 183867) in the Environmental Microbiology accreditation program for "qPCR - Mold Specific qPCR" Fields of Testing as documented by the Scope of Accreditation Certificate and associated Scope. AIHA-LAP, LLC accreditation complies with the ISO/IEC Standard 17025:2005 requirements, but this does not imply ISO certification or registration."

Limitations

ASSURED BIO LABS, LLC MAKES NO WARRANTIES AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. INSPECTOR ACKNOWLEDGES THAT ASSURED BIO LABS, LLC HAS NOT INSPECTED THE SUBJECT PROPERTY AND THAT THE INSPECTOR IS SOLELY RESPONSIBLE FOR CHOOSING THE LOCATION OF SAMPLE COLLECTION. ASSURED BIO LABS, LLC SHALL NOT BE LIABLE TO INSPECTOR FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES TO PROPERTY OR PERSONAL INJURY WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT, OR OTHERWISE, EVEN IF ASSURED BIO LABS, LLC HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL ASSURED BIO LABS, LLC BE LIABLE FOR DAMAGES UNDER OR ARISING OUT OF THIS REPORT IN AN AMOUNT EXCEEDING THE AMOUNT PAID BY THE INSPECTOR TO ASSURED BIO LABS, LLC FOR THIS ANALYSIS AND REPORT. THIS REPORT IS FOR THE SOLE USE OF THE INSPECTOR AND CREATES NO THIRD PARTY BENEFICIARIES OR RIGHTS HEREUNDER.

Methods of Analysis

Assured Bio Labs uses the following methods for the MSQPCR analysis: CD 23: Data Reporting for MSQPCR Testing, CD 143: Preparation, Processing, and Analysis of MSQPCR Samples, CD 225: Bead Based DNA Extraction

Notes

¹The PenAsp assay detects species of the genera *Aspergillus*, *Penicillium*, and *Paecilomyces variotii*.

²The Stach assay detects *Stachybotrys chartarum* also commonly referred to as "toxic black mold."

Reporting Limits

Method Detection Limit (MDL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit (RL): The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Values less than one will be rounded up to one per reported unit.

Method Detection Limits (in Spores)

Stac – 0.1624, PenAsp – 0.2161

Reporting Limit Calculations

Unless otherwise stated in comments, the following equations are used to calculate the reporting limit per sample: Dust RL – MDL/5 mg
Swab RL – MDL/1 swab, Unconcentrated Liquid RL – MDL/0.1 ml, Concentrated Liquid RL – MDL/ml filtered, MTrap RL – MDL × (1000/L sampled)

Assured Bio Identifier: VHC
Sample ID: VHC
Sample Description: Volunteer Hall Control

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 300 L

Assay

Spores/Cubic Meter

PenAsp:

17

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-1
Sample ID: 340
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

29

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-2
Sample ID: 341
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

8

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-3
Sample ID: 342
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

22

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-4
Sample ID: 343
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

16

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-5
Sample ID: 344
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-6
Sample ID: 345
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

38

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-7
Sample ID: 346
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

19

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-8
Sample ID: 347
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

66

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-9
Sample ID: 348
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-10
Sample ID: 349
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

67

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-11
Sample ID: 350
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

31

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-12
Sample ID: 351
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-13
Sample ID: 352
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-14
Sample ID: 353
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

30

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-15
Sample ID: 354
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

24

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-16
Sample ID: 355
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

5

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-17
Sample ID: 356
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

9

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG101018-5-18
Sample ID: 357
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-19
Sample ID: 358
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-20
Sample ID: 359
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

32

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-21
Sample ID: 360
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

61

Stach:

Below Detectable Limits

Comments:

Assured Bio Identifier: DG101018-5-22
Sample ID: 361
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

16

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-23
Sample ID: 362
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-24
Sample ID: 363
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

18

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-25
Sample ID: 364
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

34

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-26
Sample ID: 365
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

Below Detectable Limits

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-27
Sample ID: 366
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

7

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: DG101018-5-28
Sample ID: 367
Sample Description: [REDACTED] - Room [REDACTED]

Sample Condition: Intact
Sample Type: Mtrap
Sample Volume: 150 L

Assay

Spores/Cubic Meter

PenAsp:

12

Stach:

Below Detectable Limits

Comments: None.



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:

Dylan Graves

Company Name: Assured Bio Labs

Company Address:

228 Midway Ln, Suite B, Oak Ridge, TN 37830

Phone: (865) 813-1700

Email: info@assuredbio.com

For Water Tests

Sampling Time:

Residual Chlorine:

Water Temperature:

Sample Codes (SC)

MT - M-TRAP®

SP - Spore Trap

SW - Swab

B - Bulk

TL - Tape Lift

D - Dust

W - Water

Outside Conditions (Circle all that apply)

C - Clear

R - Rain

W - Wind

TS - Thunderstorm

S - Snow

O - Other

Sample ID	Description	SC	Total Volume or Area	Comments
✓ 340	F100	MT	150 L	
✓ 341	F100	MT	150 L	
✓ 342	F100	MT	150 L	
✓ 343	F100	MT	150 L	
✓ 344	F100	MT	150 L	
✓ 345	F100	MT	150 L	
✓ 346	F100	MT	150 L	
✓ 347	F100	MT	150 L	
✓ 348	F100	MT	150 L	
✓ 349	F100	MT	150 L	
✓ 350	F100	MT	150 L	
✓ 351	F100	MT	150 L	

Project Name:

Volunteer Hall

Project Number:

%RH

Inside

Outside

Collection Date:

10-8-18

Temperature

AB Identifier: (for internal use only)

106101018-5

Big 2 (Pen/Asp and Stachybotrys)	
Species Identification of Airborne Molds	
MoldScan (Direct Exam)	
ViaScan Genus ID Fungi	
ViaScan Species ID Fungi*	
ViaScan Bacterial Colony Count	
ViaScan Species ID Bacteria*	
ERMI	
Survey of Indoor Molds (SIM)	
Legionella (Culture)	
Legionella (qPCR)	
FHA/VA Water Test	
Coliform/E. coli Test (+/-)	
Other:**	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELLIM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Huffman Labs, Indoor Biotechnologies, EMS, SGS Galson, or Ward Lab.

Relinquished By:

ADN

Date: 10-8-18

Time:

Received By:

GM

Date: 10-10-18

Time: 9:00



assuredbio™

Assured Bio Labs, LLC
228 Midway Lane, Suite B
Oak Ridge, TN 37830
www.assuredbio.com
info@assuredbio.com
(865) 813-1700

General Chain of Custody

Inspector:		Company Name: Assured Bio Labs		
Company Address: 228 Midway Ln, Suite B, Oak Ridge, TN 37830				
Phone: (865) 813-1700		E-mail: info@assuredbio.com		
For Water Tests		Sample Codes (SC)		
Sampling Time: _____	MT - M-TRAP®	B - Bulk	Outside Conditions (Circle all that apply)	
Residual Chlorine: _____	SP - Spore Trap	TL - Tape Lift	C - Clear	TS - Thunderstorm
Water Temperature: _____	SW - Swab	D - Dust	R - Rain	S - Snow
		W - Water	W - Wind	O - Other
Sample ID	Description	SC	Total Volume or Area	Comments
✓ 352	F100	MT	150 L	
✓ 353	F100	MT	150 L	
✓ 354	F100	MT	150 L	
✓ 355	F100	MT	150 L	
✓ 356	F100	MT	150 L	
✓ 357	F100	MT	150 L	
✓ 358	F100	MT	150 L	
✓ 359	F100	MT	150 L	
✓ 360	F100	MT	150 L	
✓ 361	F100	MT	150 L	
✓ 362	F100	MT	150 L	
✓ 363	F100	MT	150 L	

*Culture and PCR done at Assured Bio Labs, sequencing subcontracted to ELM Bio. **Please specify other analysis. Some nonstandard analyses may be subcontracted to Hufman Labs, Indoor Biotechnologies, EMS, SGS Galson, or Ward Lab.

Relinquished By: blm

Date: 10-8-18

Time: _____

Received By: GMK

Date: 10-10-18

Time: 9:00

Project Name:

Volunteer Hall

Project Number:

%RH

Inside

Outside

Collection Date: 10-8-18

Temperature

AB Identifier: (for internal use only)

DG101018-5

Big 2 (Pen/Asp and Stachybotrys)
Species Identification of Airborne Molds
MoldScan (Direct Exam)
ViaScan Genus ID Fungi
ViaScan Species ID Fungi*
ViaScan Bacterial Colony Count
ViaScan Species ID Bacteria*
ERMI
Survey of Indoor Molds (SIM)
Legionella (Culture)
Legionella (qPCR)
FHA/VA Water Test
Coliform/E. coli Test (+/-)
Other:**

