

Big 2 Panel

PenAsp¹ and Stach² Assays

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Inspector:	Assured Bio	Date Collected:	1/22/2020
Project Name:	Example Report	Date Received:	1/22/2020
Project Number:	1	Date Reported:	1/22/2020
Assured Bio Identifier:	AB012220-99	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. 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."

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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 – 0.1616, PenAsp – 0.2162

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: AB012220-99-1
Sample ID: 1
Sample Description: Upstairs

Sample Condition: Intact
Sample Type: Swab
Sample Volume: 1 Swab

Assay

Cells/Swab

PenAsp:

6

Stach:

Below Detectable Limits

Comments: None.

Assured Bio Identifier: AB012220-99-2
Sample ID: 2
Sample Description: Downstairs

Sample Condition: Intact
Sample Type: Swab
Sample Volume: 1 Swab

Assay

Cells/Swab

PenAsp:

433,049

Stach:

3

Comments: None.

Assured Bio Identifier: AB012220-99-3
Sample ID: 3
Sample Description: Basement

Sample Condition: Intact
Sample Type: Swab
Sample Volume: 1 Swab

Assay

Cells/Swab

PenAsp:

13,564,374

Stach:

5,158

Comments: None.
