

**Mycologix™ Fungal Spore Differentiation**

**Analysis:** AccuScience Premium Level 3 Fungal Spore Count™  
**Client:** RK Environmental  
 Phillipsburg, NJ  
**Contact:** McGuinness, Michael  
**Project ID:** RK-SB

**QLAB Job No.:** ME230810-17  
**Date Sampled:** 8/9/2023  
**Date Received:** 8/10/2023  
**Date Reported:** 8/10/2023

**Reviewed by:** WT**Approved by:** Wei-Chih Tang, Ph.D., Lab Director

Lab Sample No.	ME230810-17(14)			ME230810-17(15)			ME230810-17(16)		
Sample ID	RK-SB-OAR1			RK-SB-OAR2			RK-SB-105		
Sample Location	Air Reference			Air Reference			Rm 105		
Sample Type (Device)	Air (Allergenco-D)			Air (Allergenco-D)			Air (Allergenco-D)		
Air Volume	75 L			75 L			75 L		
Date Analyzed	8/10/2023			8/10/2023			8/10/2023		
Total Concentration (counts/m³)**	11,000 cts/m³			7,300 cts/m³			650 cts/m³		
Mycologix Profile Group 1, 2 & 3	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%
<b>1. Common Dominant Spores</b>	DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³		
Ascospores, non-specified (O)	49	650	6	34	450	6	34	450	69
Basidiospores (O,I)	748	10,000	91	495	6,600	91	15	200	31
Cladosporium, Group HM (O)	4	53	<1	15	200	3			
Aspergillus/Penicillium-like, DOT (O) #Cluster-Chain-Loose Spore Profile™									
Cladosporium, Group C (O,I)	11	150	1						
Cladosporium, Group S (I)									
Aspergillus/Penicillium-like (I,O) ## Cluster-Chain-Loose Spore Profile™ Cluster(s)									
<b>2. Indoor Hydrophilic Fungi#</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Stachybotrys (I)									
Chaetomium (I)									
Ulocladium (I)									
Memnoniella (I)									
Trichoderma (I)									
Scopulariopsis (I)									
<b>3. Others</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Hyphal fragment (O,I)	1	13	<1	2	27	<1			
Alternaria (O,I)									
Cercospora (O)									
Curvularia (O,I)									
Drechslera/Bipolaris-like (O)									
Epicoccum (O)									
Fusarium (O,I)	1	13	<1						
Myxomycetes/Smuts/Periconia (O,I)									
Nigrospora (O)									
Pithomyces (O)	2	27	<1						
Rusts (O)									
Unknown (O,I)	2	27	<1	1	13	<1			
<b>Skin Cells Rating</b>	None			None			Low		
<b>Debris Rating</b>	2 (6 - 25%)			1 (≤ 5%)			2 (6 - 25%)		
<b>Note</b>									

\*: cts/smp: counts per sample. \*\*: All concentrations are rounded to two digits of significant figures. Total concentrations/percentages may not be equal to the sum of individual concentrations/percentages due to rounding. #: Water-loving indoor fungi (min Aw ≥0.89). Absence of hydrophilic fungi does not exclude the possibility of a water damage history. DL: detection limit (analytical sensitivity). LQL: Lower quantitation limit = 20 x DL. Upper quantitation limit depends on sample conditions. ## Asp/Pen-like spores: Loose: 1 to 2 spores; Chain: 3 to 9 spores; Cluster: 10 spores or more. O: Mostly outdoor origin with rare exceptions; I: Mostly indoor origin with rare exceptions. Distinct Outdoor Type (DOT): Distinct outdoor Asp/Pen spores that can be easily differentiated from indoor Asp/Pen spores. DOT is specific to the batch of samples collected at the same time and cannot be used for other batches.



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Lab Sample No.	ME230810-17(17)			ME230810-17(18)			ME230810-17(19)		
Sample ID	RK-SB-201			RK-SB-202			RK-SB-202 SB		
Sample Location	Rm 201			Rm 202			Rm 202A		
Sample Type (Device)	Air (Allergenco-D)			Air (Allergenco-D)			Air (Allergenco-D)		
Air Volume	75 L			75 L			75 L		
Date Analyzed	8/10/2023			8/10/2023			8/10/2023		
Total Concentration (counts/m³)**	560 cts/m³			160 cts/m³			310 cts/m³		
Mycologix Profile Group 1, 2 & 3	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%
<b>1. Common Dominant Spores</b>	DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³		
Ascospores, non-specified (O)	15	200	36						
Basidiospores (O,I)	26	350	62	8	110	67	23	310	100
Cladosporium, Group HM (O)									
Aspergillus/Penicillium-like, DOT (O) #Cluster-Chain-Loose Spore Profile™									
Cladosporium, Group C (O,I)				4	53	33			
Cladosporium, Group S (I)									
Aspergillus/Penicillium-like (I,O) ## Cluster-Chain-Loose Spore Profile™ Cluster(s)									
<b>2. Indoor Hydrophilic Fungi#</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Stachybotrys (I)									
Chaetomium (I)									
Ulocladium (I)									
Memnoniella (I)									
Trichoderma (I)									
Scopulariopsis (I)									
<b>3. Others</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Hyphal fragment (O,I)									
Alternaria (O,I)									
Cercospora (O)									
Curvularia (O,I)									
Drechslera/Bipolaris-like (O)									
Epicoccum (O)									
Fusarium (O,I)									
Myxomycetes/Smuts/Periconia (O,I)									
Nigrospora (O)									
Pithomyces (O)									
Rusts (O)									
Unknown (O,I)	1	13	2						
<b>Skin Cells Rating</b>	Low			Low			Low		
<b>Debris Rating</b>	2 (6 - 25%)			2 (6 - 25%)			2 (6 - 25%)		
<b>Note</b>									

\*: cts/smp: counts per sample. \*\*: All concentrations are rounded to two digits of significant figures. Total concentrations/percentages may not be equal to the sum of individual concentrations/percentages due to rounding. #: Water-loving indoor fungi (min Aw ≥0.89). Absence of hydrophilic fungi does not exclude the possibility of a water damage history. DL: detection limit (analytical sensitivity). LQL: Lower quantitation limit = 20 x DL. Upper quantitation limit depends on sample conditions. ## Asp/Pen-like spores: Loose: 1 to 2 spores; Chain: 3 to 9 spores; Cluster: 10 spores or more. O: Mostly outdoor origin with rare exceptions; I: Mostly indoor origin with rare exceptions. Distinct Outdoor Type (DOT): Distinct outdoor Asp/Pen spores that can be easily differentiated from indoor Asp/Pen spores. DOT is specific to the batch of samples collected at the same time and cannot be used for other batches.



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Lab Sample No.	ME230810-17(20)			ME230810-17(21)			ME230810-17(22)		
Sample ID	RK-SB-203			RK-SB-204			RK-SB-205		
Sample Location	Rm 203			Rm 204			Rm 205		
Sample Type (Device)	Air (Allergenco-D)			Air (Allergenco-D)			Air (Allergenco-D)		
Air Volume	75 L			75 L			75 L		
Date Analyzed	8/10/2023			8/10/2023			8/10/2023		
Total Concentration (counts/m³)**	480 cts/m³			180 cts/m³			300 cts/m³		
Mycologix Profile Group 1, 2 & 3	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%
<b>1. Common Dominant Spores</b>	DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³		
Ascospores, non-specified (O)	4	53	11						
Basidiospores (O,I)	23	310	64	4	53	30	19	250	83
Cladosporium, Group HM (O)									
Aspergillus/Penicillium-like, DOT (O) #Cluster-Chain-Loose Spore Profile™									
Cladosporium, Group C (O,I)	6	80	17				4	53	17
Cladosporium, Group S (I)									
Aspergillus/Penicillium-like (I,O) ## Cluster-Chain-Loose Spore Profile™	3	40	8	8	110	63			
Cluster(s)	0% - 100% - 0%			0% - 0% - 100%					
<b>2. Indoor Hydrophilic Fungi#</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Stachybotrys (I)									
Chaetomium (I)									
Ulocladium (I)									
Memnoniella (I)									
Trichoderma (I)									
Scopulariopsis (I)									
<b>3. Others</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Hyphal fragment (O,I)									
Alternaria (O,I)									
Cercospora (O)									
Curvularia (O,I)									
Drechslera/Bipolaris-like (O)									
Epicoccum (O)									
Fusarium (O,I)									
Myxomycetes/Smuts/Periconia (O,I)									
Nigrospora (O)									
Pithomyces (O)									
Rusts (O)									
Unknown (O,I)				1	13	7			
<b>Skin Cells Rating</b>	Low			Low			Low		
<b>Debris Rating</b>	2 (6 - 25%)			2 (6 - 25%)			2 (6 - 25%)		
<b>Note</b>									

\*: cts/smp: counts per sample. \*\*: All concentrations are rounded to two digits of significant figures. Total concentrations/percentages may not be equal to the sum of individual concentrations/percentages due to rounding. #: Water-loving indoor fungi (min Aw ≥0.89). Absence of hydrophilic fungi does not exclude the possibility of a water damage history. DL: detection limit (analytical sensitivity). LQL: Lower quantitation limit = 20 x DL. Upper quantitation limit depends on sample conditions. ## Asp/Pen-like spores: Loose: 1 to 2 spores; Chain: 3 to 9 spores; Cluster: 10 spores or more. O: Mostly outdoor origin with rare exceptions; I: Mostly indoor origin with rare exceptions. Distinct Outdoor Type (DOT): Distinct outdoor Asp/Pen spores that can be easily differentiated from indoor Asp/Pen spores. DOT is specific to the batch of samples collected at the same time and cannot be used for other batches.

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Lab Sample No.	ME230810-17(23)			ME230810-17(24)			ME230810-17(25)		
Sample ID	RK-SB-206			RK-SB-207			RK-SB-209		
Sample Location	Rm 206			Rm 207			Rm 209		
Sample Type (Device)	Air (Allergenco-D)			Air (Allergenco-D)			Air (Allergenco-D)		
Air Volume	75 L			75 L			75 L		
Date Analyzed	8/10/2023			8/10/2023			8/10/2023		
Total Concentration (counts/m³)**	2,900 cts/m³			760 cts/m³			620 cts/m³		
Mycologix Profile Group 1, 2 & 3	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%
<b>1. Common Dominant Spores</b>	DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³		
Ascospores, non-specified (O)	23	310	11	8	110	14	8	110	18
Basidiospores (O,I)	163	2,200	76	49	650	86	26	350	56
Cladosporium, Group HM (O)									
Aspergillus/Penicillium-like, DOT (O) #Cluster-Chain-Loose Spore Profile™									
Cladosporium, Group C (O,I)	8	110	4				4	53	9
Cladosporium, Group S (I)									
Aspergillus/Penicillium-like (I,O) ## Cluster-Chain-Loose Spore Profile™	21	280	10				8	110	18
Cluster(s)	0% - 100% - 0%						0% - 0% - 100%		
<b>2. Indoor Hydrophilic Fungi#</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Stachybotrys (I)									
Chaetomium (I)									
Ulocladium (I)									
Memnoniella (I)									
Trichoderma (I)									
Scopulariopsis (I)									
<b>3. Others</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Hyphal fragment (O,I)									
Alternaria (O,I)									
Cercospora (O)									
Curvularia (O,I)									
Drechslera/Bipolaris-like (O)									
Epicoccum (O)									
Fusarium (O,I)									
Myxomycetes/Smuts/Periconia (O,I)									
Nigrospora (O)									
Pithomyces (O)									
Rusts (O)									
Unknown (O,I)									
<b>Skin Cells Rating</b>	Trace			Trace			Trace		
<b>Debris Rating</b>	2 (6 - 25%)			1 (≤ 5%)			1 (≤ 5%)		
<b>Note</b>									

\*: cts/smp: counts per sample. \*\*: All concentrations are rounded to two digits of significant figures. Total concentrations/percentages may not be equal to the sum of individual concentrations/percentages due to rounding. #: Water-loving indoor fungi (min Aw ≥0.89). Absence of hydrophilic fungi does not exclude the possibility of a water damage history. DL: detection limit (analytical sensitivity). LQL: Lower quantitation limit = 20 x DL. Upper quantitation limit depends on sample conditions. ## Asp/Pen-like spores: Loose: 1 to 2 spores; Chain: 3 to 9 spores; Cluster: 10 spores or more. O: Mostly outdoor origin with rare exceptions; I: Mostly indoor origin with rare exceptions. Distinct Outdoor Type (DOT): Distinct outdoor Asp/Pen spores that can be easily differentiated from indoor Asp/Pen spores. DOT is specific to the batch of samples collected at the same time and cannot be used for other batches.



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Lab Sample No.	ME230810-17(26)			ME230810-17(27)			ME230810-17(28)		
Sample ID	RK-SB-210			RK-SB-211			RK-SB-212		
Sample Location	Rm 210			Rm 211			Rm 212		
Sample Type (Device)	Air (Allergenco-D)			Air (Allergenco-D)			Air (Allergenco-D)		
Air Volume	75 L			75 L			75 L		
Date Analyzed	8/10/2023			8/10/2023			8/10/2023		
Total Concentration (counts/m³)**	840 cts/m³			750 cts/m³			3,900 cts/m³		
Mycologix Profile Group 1, 2 & 3	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%	cts/smp*	counts/m³	%
<b>1. Common Dominant Spores</b>	DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³			DL = 53; LQL = 1100 cts/m³		
Ascospores, non-specified (O)	8	110	13				15	200	5
Basidiospores (O,I)	26	350	42	45	600	80	102	1,400	36
Cladosporium, Group HM (O)	19	250	30						
Aspergillus/Penicillium-like, DOT (O) #Cluster-Chain-Loose Spore Profile™									
Cladosporium, Group C (O,I)				4	53	7			
Cladosporium, Group S (I)									
Aspergillus/Penicillium-like (I,O) ## Cluster-Chain-Loose Spore Profile™	10	130	15	7	93	12	170	2,300	59
Cluster(s)	0% - 60% - 40%			0% - 100% - 0%			16% - 35% - 49%		
							1 cluster(s) of 17, 11 spores		
<b>2. Indoor Hydrophilic Fungi#</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Stachybotrys (I)									
Chaetomium (I)									
Ulocladium (I)									
Memnoniella (I)									
Trichoderma (I)									
Scopulariopsis (I)									
<b>3. Others</b>	DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³			DL = 13; LQL = 270 cts/m³		
Hyphal fragment (O,I)									
Alternaria (O,I)									
Cercospora (O)									
Curvularia (O,I)									
Drechslera/Bipolaris-like (O)									
Epicoccum (O)									
Fusarium (O,I)									
Myxomycetes/Smuts/Periconia (O,I)									
Nigrospora (O)									
Pithomyces (O)									
Rusts (O)									
Unknown (O,I)									
<b>Skin Cells Rating</b>	Trace			Trace			Trace		
<b>Debris Rating</b>	1 (≤ 5%)			1 (≤ 5%)			1 (≤ 5%)		
<b>Note</b>									

\*: cts/smp: counts per sample. \*\*: All concentrations are rounded to two digits of significant figures. Total concentrations/percentages may not be equal to the sum of individual concentrations/percentages due to rounding. #: Water-loving indoor fungi (min Aw ≥ 0.89). Absence of hydrophilic fungi does not exclude the possibility of a water damage history. DL: detection limit (analytical sensitivity). LQL: Lower quantitation limit = 20 x DL. Upper quantitation limit depends on sample conditions. ## Asp/Pen-like spores: Loose: 1 to 2 spores; Chain: 3 to 9 spores; Cluster: 10 spores or more. O: Mostly outdoor origin with rare exceptions; I: Mostly indoor origin with rare exceptions. Distinct Outdoor Type (DOT): Distinct outdoor Asp/Pen spores that can be easily differentiated from indoor Asp/Pen spores. DOT is specific to the batch of samples collected at the same time and cannot be used for other batches.