U.S. Micro-Solutions, Inc. * 302 Unity Plaza * Latrobe, PA 15650
Phone: (724) 853-4047 Fax: (724) 853-4049 AIHA-LAP, LLC EMLAP # 103009
www.usmslab.com

Customer Name:	**U.S. Micro-Solutions, Inc.**	**Sample Date:**	**January 11, 2019**
Customer Address:	**302 Unity Plaza**	**Date Received:**	**January 12, 2019**
	Latrobe, PA 15650	**Date of Report:**	**January 21, 2019**
Customer Phone:	**(724) 853-4047**	**Fax:**	**(724) 853-4049**
PO Number:		**Attention:**	
Project Name/Number:	**IAQ Sample Report**		

Customer sample numbers below are uniquely identified by prefixing Laboratory # 12345-19

Culturable Bioaerosol Sample(s) (Sets) - Analytical Method USMS-M002 & USMS-B002

Sample Number	Media	Sample Description	Results of Microbial Analysis			Raw CTs
1	TSA	Sample 1	Total Bacterial Count	23	CFU/m³ of air	
			Bacillus spp. - 20 CFU/m³			20
			Micrococcus/Kocuria spp. - 2 CFU/m³			2
			Coagulase-negative Staphylococcus spp. - 1 CFU/m³			1
Total Raw Count: 23						
Total Volume: 1000.0 liters of air						
Analytical Sensitivity: 1 CFU/m³ of air						
1F	IMA	Sample 1	Total Fungal Count	136	CFU/m³ of air	
			Cladosporium spp. - 111 CFU/m³			111
			Penicillium spp. - 20 CFU/m³			20
			Non-sporulating hyaline fungus - 5 CFU/m³			5
Total Raw Count: 136						
Total Volume: 1000.0 liters of air						
Analytical Sensitivity: 1 CFU/m³ of air						
2	TSA	Sample 2	Total Bacterial Count	< 1	CFU/m³ of air	
				No growth		
Total Raw Count: <1						
Total Volume: 1000.0 liters of air						
Analytical Sensitivity: 1 CFU/m³ of air						
2F	IMA	Sample 2	Total Fungal Count	< 1	CFU/m³ of air	
				No growth		
Total Raw Count: <1						
Total Volume: 1000.0 liters of air						
Analytical Sensitivity: 1 CFU/m³ of air						

Results relate only to the samples tested. Results are reported as calculated. For biological data, the first and/or second digit should be considered significant.

Technical Manager: Herbert Layman

Herbert Layman, BS, SM, CIEC

Bacillus spp. - Bacillus species are gram-positive, rod-shaped bacteria that are ubiquitous in nature. They form spores that are resistant to heat, desiccation, radiation, and disinfectants. Dissemination of spores via aerosols and dust contributes to contamination of indoor environments. Most species have little or no pathogenic potential with the exception of Bacillus cereus group, which can cause opportunistic local and systemic infections.

Micrococcus/Kocuria spp. - Micrococcus and Kocuria species are gram-positive, spherical bacteria which are widespread in nature and commonly found, along with coagulase-negative Staphylococcus spp., as normal flora on the skin of humans and mammals. They are carried on the skin of most (~96%) people, with M. luteus being the predominant species. Animal and dairy products are considered secondary sources. While these organisms are generally non-pathogenic, they may act as opportunistic pathogens.

Coagulase-negative Staphylococcus spp.- Coagulase-negative staphylococci (CoNS) are gram-positive, spherical bacteria. The major habitats of CoNS are the skin and mucous membranes of mammals and birds. In humans, S. epidermidis is the most frequently isolated staphylococcal species colonizing the body surface. A few of the CoNS are important human pathogens and include S. epidermidis, S. haemolyticus, S. lugdunensis, and S. saprophyticus. CoNS have been increasingly recognized as health-care associated pathogens, particularly in patients with indwelling medical devices.

Cladosporium spp. - Cladosporium species are ubiquitous with worldwide distribution and are the most common mold on dead organic matter and in the air. The highest concentrations outdoors of Cladosporium species occur in summer and early fall in temperate areas. Cladosporium species are common in indoor environments and often isolated from the surface of fiberglass duct liners around return and supply ducts, shower walls & curtains, and basement walls. They are usually found indoors in numbers less than outdoor numbers.

Penicillium spp. - Penicillium species are fungi with worldwide distribution over a broad range of climates in soil, decaying vegetation, and foods. They are the most abundant genus of mesophilic fungi in temperate soils. About 200 species have been identified. They are indoor contaminants commonly found in carpet, wallpaper, and inside fiberglass duct insulation. High viable or spore trap air counts may be detected where water damaged materials such as drywall, wallpaper, wood, and wood products are present. Human infection with species other than P. marneffei are very rare.

Non-sporulating fungi - under usual laboratory conditions, some fungi do not readily produce spores (conidia) and cannot be identified microscopically. These fungi are generally called non-sporulating hyaline (clear-transparent) fungi or non-sporulating dematiaceous (dark or pigmented) fungi. Often these unidentified fungi fall into the division Basidiomycota which include the rusts, smuts, mushrooms, and shelf fungi. Strictly filamentous basidiomycetes cause wood rot and can be obligate plant pathogens.

End of Report