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

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

Culturable Bioaerosol Sample(s) (Sets) - Analytical Method MIC 03, MIC 04, MIC 18

| Sample Number | Media | Sample Description | Results of Microbial Analysis | Raw CTs |
|---|-------|--------------------|--|-------------------------------|
| 1 | TSA | Sample 1 | Total Bacterial Count | 115 CFU/m ³ of air |
| | | | Bacillus spp. | 100 CFU/m ³ 20 |
| | | | Micrococcus/Kocuria spp. | 10 CFU/m ³ 2 |
| | | | Coagulase-negative Staphylococcus spp. | 5 CFU/m ³ 1 |
| | | | Total Raw Count: 23 | |
| Total Volume: 200.0 liters of air | | | | |
| Analytical Sensitivity: 5 CFU/m ³ of air | | | | |

| Sample Number | Media | Sample Description | Results of Microbial Analysis | Raw CTs |
|---|-------|--------------------|--------------------------------|-------------------------------|
| 1F | IMA | Sample 1 | Total Fungal Count | 680 CFU/m ³ of air |
| | | | Cladosporium spp. | 555 CFU/m ³ 111 |
| | | | Penicillium spp. | 100 CFU/m ³ 20 |
| | | | Non-sporulating hyaline fungus | 25 CFU/m ³ 5 |
| | | | Total Raw Count: 136 | |
| Total Volume: 200.0 liters of air | | | | |
| Analytical Sensitivity: 5 CFU/m ³ of air | | | | |

Sample Report

| Sample Number | Media | Sample Description | Results of Microbial Analysis | Raw CTs | |
|---|-------|--------------------|-------------------------------|-------------------------------|--|
| 2 | TSA | Sample 2 | Total Bacterial Count | < 5 CFU/m ³ of air | |
| | | | No growth | | |
| | | | Total Raw Count: <1 | | |
| Total Volume: 200.0 liters of air | | | | | |
| Analytical Sensitivity: 5 CFU/m ³ of air | | | | | |

| Sample Number | Media | Sample Description | Results of Microbial Analysis | Raw CTs | |
|---|-------|--------------------|-------------------------------|-------------------------------|--|
| 2F | IMA | Sample 2 | Total Fungal Count | < 5 CFU/m ³ of air | |
| | | | No growth | | |
| | | | Total Raw Count: <1 | | |
| Total Volume: 200.0 liters of air | | | | | |
| Analytical Sensitivity: 5 CFU/m ³ 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.

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Technical Manager: *Deanna L. Kiska*

Deanna L. Kiska, Ph.D.

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.