US BioTek LABORATORIES

Environmental Fungal Count

Company:

Address:

Sample Type:

Accession #:

Collected:

Received:

Completed:

Procedure Type:
Quantitative PCR (Polymerase Chain Reaction)

Code	Test	Value (Fungal Elements / ML)
AALT	Alternaria alternata	1,629
AFLAV	Aspergillus flavus	0
AFUMI	Aspergillus fumigatus	0
ANIG	Aspergillus niger	3,351
AOCHR	Aspergillus ochraceus	0
APENI	Aspergillus penicillioides	913
ASP25	Aspergillus terreus	0
AVERS	Aspergillus versicolor	0
CAU	Candida auris	0
CGLOB	Chaetomium globosum	0
FUS14	Fusarium solani	0
GEO		0
PBREV	Penicillium brevicompactum	9,871
PCHRY	Penicillium chrysogenum	994,356
STAC	Stachybotrys chartarum	0
WSEBI	Wallemia sebi	5,831

MOLD	MYCOTOXIN PRODUCED	POTENTIAL HEALTH ISSUES
Alternaria alternata	Alternariol	Spores can be found in damp, poorly ventilated homes, contributing to sick building syndrome [1]. Alternariol has been reported to be mutagenic [2].
Aspergillus flavus	Gliotoxin, Aflatoxin	*A. flavus* is the second leading cause of invasive aspergillosis in immunocompromised patients. Particularly common clinical syndromes associated with *A. flavus* include: chronic granulomatous sinusitis, keratitis, cutaneous aspergillosis, wound infections and osteomyelitis following trauma and inoculation [3, 4]. Can cause liver cancer in humans [5].
Aspergillus fumigatus	Gliotoxin, Aflatoxin	*A. fumigatus* is frequently found in homes and buildings [1]. It is considered to be an opportunistic pathogen, meaning it rarely infects healthy individuals, but is the leading cause of invasive aspergillosis (IA) in immunocompromised individuals such as cancer, HIV or transplant patients [2].
Aspergillus niger	Ochratoxin, Gliotoxin	*A. niger* produces gliotoxin, which has been identified in the sera of humans and mice with aspergillosis. Causes immunosuppression in patients [8].
Aspergillus ochraceus	Ochratoxin	Ochratoxin has been demonstrated to be Nephrotoxic, Hepatotoxic, and Carcinogenic and is a potent teratogen and immune-suppressant [8]. It has also been associated with urinary tract infections and bladder cancer [9].
Aspergillus penicillioides	Unknown	*A. penicillioides* is commonly found indoors [10]. Infection has been confirmed in pulmonary aspergillosis [11] and fungal aneurysm [12].
Aspergillus terreus	Gliotoxin, Citirin	Inhalation of fungal spores, which travel down along the respiratory tract, cause the typical respiratory infection [6].
Aspergillus versicolor	Sterigmatocystin	*A. versicolor* is one of the most frequently found molds in water-damaged buildings. *A. versicolor* is known to produce a mycotoxin called sterigmatocystin a potentially carcinogenic and hepatotoxic mycotoxin. It is primarily toxic to the liver and kidneys [7].
Candida auris	Unknown	*C. auris* can be found in healthcare facilities and can be spread through contact with infected patients and equipment. *C.auris* can cause blood stream infections, wound infections and ear infections [13].
Chaetomium globosum	Chaetoglobosins	*C. globosum* is a common indoor fungal contaminant of water damaged homes or buildings. Like *Stachybotrys*, *C. globosum* spores are relatively large and due to their mode of release are not as easily airborne as are some other molds [11].
Fusarium species	Fumonisins; Zearalenone	*Fusarium* can cause superficial infections such as keratitis or onychomycosis in healthy individuals and disseminated infections in immunocompromised patients [12].
Penicillium brevicompactum	Ochratoxin A	Producer of the toxin Ochratoxin *A. Fungal* particles depend on the relative humidity [14]. Can lead to chronic Rhinosinusitis if breathed in high concentrations [15].
Penicillium chrysogenum	Ochratoxin A	Producer of the toxin Ochratoxin *A. Fungal* particles depend on the relative humidity [14]. Can lead to chronic Rhinosinusitis if breathed in high concentrations [16]. High levels are correlated with the development of sick building syndrome [17].
Stachybotrys chartarum	Macrocyclic Trichothecenes	*S. chartarum*, commonly known as black mold, is highly toxic to humans. Nausea, vomiting, diarrhea, burning erythema, ataxia, chills, fever, hypotension, hair loss and confusion are symptoms in individuals living or working inside *Stachybotrys* infested homes and buildings [10].
Wallemia sebi	Walleminol	Spores from *Wallemia* are significant allergens. Inhalation exposure of spores can lead to conditions such as asthma, hypersensitivity, or pulmonary fibrosis [23].

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