

ERAtch Environmental Mold Spore Glossary



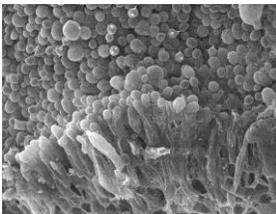
Alternaria: A rapidly growing fungus that produces a grayish-white colony that becomes greenish-black within five days at 25°C (77°F). It is found worldwide and is very common. It can be isolated from air, plants, foodstuffs, soil, carpets, and textiles. It can be an opportunistic human pathogen causing a hypersensitivity pneumonitis and an immediate hypersensitivity-type I extrinsic asthma and disease that is very common in individuals with atopic disease. 40-50 species of this genus.



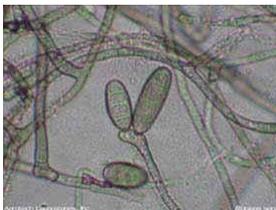
Ascospores: Ascospores are the spores produced by the membranes of ascomycetes. Size and shape (circular to elongated) are greatly variable. May be unicellular or multicellular in structure. Development takes place within asci (a type of fruiting body), responsible for sexual propagation. Many of the Ascospores become air-borne and can be trapped from the ambient air also. More numerous during early morning hours and after a light rain.



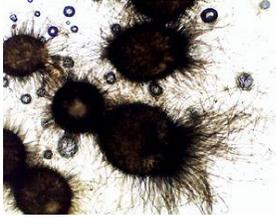
Aspergillus: Rapidly growing fungi that produce pigmented colonies that are some shade of green, yellow, brown, or black within ten days at 25°C (77°F). It is very common worldwide. It can be isolated from air, plants, foodstuffs, soil, sand beaches, caves and mines, activated sludge, mangrove swamps, fresh water, compost, animal dung, silage, fodder, and cotton fabrics in the tropics. Can be found indoors on many substrates including soil, plants, wood, drywall, etc. Some species are thermotolerant. Some species are allergenic and other species produce powerful mycotoxins. They are one of the most common causes of systemic fungal disease in humans and animals causing primarily acute or chronic respiratory tract infections. Spores of Aspergillus and Penicillium are typically the same size and shape, so these are often reported as Penicillium/Aspergillus. The two can be distinguished only if the spore bearing structures are observed in a culture with a microscope. Approximately 200 species of this genus.



Basidiospores: Spores that are produced by a class of fungi called basidiomycetes. Includes the mushrooms, toadstools, boletes, wood bracket fungi, and puffballs. Basidiospores have the potential to produce a variety of toxins. Members of this family produce type I and III fungal hypersensitivity reactions.



Bipolaris: A rapidly-growing fungus that produces a grayish-brown to black colony, within seven days at 25°C (77°F). It can produce the mycotoxin sterigmatocystin which can cause liver and kidney damage in humans and animals. It is found worldwide and is commonly isolated from soil, sand, plants, birds, and cotton fabrics. Rarely an opportunistic human pathogen.



Chaetomium: A rapidly-growing fungus that produces a white to yellow to yellowish-green colony, within ten days at 25°C (77°F). It may produce an earthy odor. It is found worldwide. It is an important cause of decay of cotton and other cellulose materials; cause of soft rot in wood and fruit rot; and is important in the decomposition of plant material in composts. It can be isolated from dung, straw, bird feathers, soil and plants. It may be associated with allergic disease. Approximately 81 species in this genus. When found indoors, indicates a long-term wet building materials.



Cladosporium: A slow-growing fungus that produces a velvety, dark greenish-brown to blackish colony with an olivaceous-black reverse at 25°C (77°F) in 5-10 days. Cladosporium can grow at temperatures as low as 0°C (32°F), so it can be found growing on refrigerated foods. Cladosporium species are found worldwide and are among the most common fungi found in the air, soil, foodstuffs, paint, textiles, bird feathers, and on plants. Rarely, it can be an opportunistic human pathogen causing chromoblastomycosis. It can cause a hypersensitivity pneumonitis and an immediate hypersensitivity – type I extrinsic asthma. Approximately 40 species in this genus, and can be found indoors on most materials.



Curvularia: A rapidly-growing fungus that produces a gray, brown, or black colony with a dark reverse, within five days at 25°C (77°F). The hyphae, conidiophores, and conidia are pigmented olivaceous-brown (dematiaceous). It is found worldwide and is very common. It can be isolated from the air, plants (especially grasses), sand dune soil, and soil. Rarely, it can be an opportunistic human pathogen causing allergic reactions, eye (corneal) infections, mycetoma, and infections in immunocompromised patients. Approximately 30 species in this genus.



Epicoccum: A moderately rapid-growing fungus that produces a yellowish-orange colony with a red reverse within seven days at 25°C (77°F). May produce a yellow, orange, red, or brown diffusible pigment. It is found worldwide and is very common. It is found in air, plants, grains, textiles, animals, foodstuffs, and paper products. It can cause allergic disease in humans. Approximately 70 species in this genus.



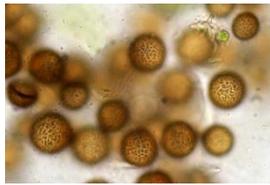
Fusarium: Colonies are usually fast growing, pale or bright-colored (depending on the species) with or without a cottony aerial mycelium. The color of the thallus varies from whitish to yellow, pink, red or purple shades. Most Fusarium species are soil fungi and have a worldwide distribution. Found indoors only at very wet locations. Some are plant pathogens, causing root and stem rot, vascular wilt or fruit rot. Several species have emerged as important opportunistic pathogens in humans causing hyalohyphomycosis (especially in burn victims and bone marrow transplant patients), mycotic keratitis and onychomycosis. Approximately 70 species in this genus.



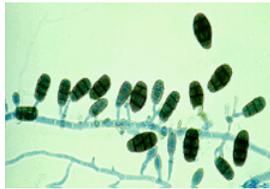
Myxomycetes: Fungus-like organisms within the kingdom Protista, commonly known as true slime molds. They exhibit characteristics of both protozoans (one-celled microorganisms) and fungi. Distributed worldwide, they usually occur in decaying plant material. About 500 species have been described. Found growing indoors rarely, except in very wet locations with long-term moisture.



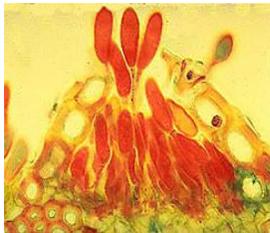
Penicillium: A slow to rapidly-growing fungus that produces green, blue-green, yellow-green, gray-green, orange to red colony with an uncolored or yellow, orange, yellowish-brownish, deep red to reddish-purple reverse, within fourteen days at 25°C (77°F). It is a common fungus isolated worldwide and can be isolated from air, soil, plants, sand, sewage, swamps, caves, fresh and salt water, compost, cotton, cellulose, textiles, leather, wooden furniture, dust, wallpaper, wallpaper glue, wood, and behind paint. Some species produce a mycotoxin. Rarely an opportunistic human pathogen in corneal infections and systemic infections. Spores of Aspergillus and Penicillium are the same size and shape, so these are often reported as Penicillium/Aspergillus. The two can be distinguished only if the spore-bearing structures are observed in a culture with a microscope. Approximately 200 species in this genus.



Periconia: A widespread outdoor fungus commonly found on stalks of grasses, herbaceous stems, dead leaves or leaf spots. They are found on soil, blackened and dead plants, and are associated with other fungi. Approximately 100 species in this genus.



Pithomyces: A rapidly-growing fungus that produces a white, later dark gray colony within eight days at 25°C (77°F). It has worldwide distribution and has been isolated from air, soil, plants, decaying plants, decaying paper, and bird feathers. There have not been any reports of human infections. Approximately 30 species in this genus.



Rusts: Rusts are plant diseases caused by pathogenic fungi of the order Pucciniales. Rust fungi are highly specialized parasites with several unique features. A single species may produce up to five morphologically and cytologically distinct spore-producing structures. During late spring or early summer, yellow orange or brown, hairlike or ligulate structures called telia grow on the leaves or emerge from bark of woody hosts such as Juniperus species. These telia produce teliospores which will germinate into aerial basidiospores, spreading and causing further infection. Rusts are not found indoors except as a parasitic plant pathogen as it needs a living host for growth. Approximately 5,000 species in this genus.



Stachybotrys: (Sometimes referred to as “Toxic Black Mold”.) A rapidly-growing fungus that produces a white colony that becomes black with age with a reverse that is white but becomes black. Growth occurs within five days when incubated at 25°C (77°F). It has worldwide distribution and is commonly isolated from soil, desert soil, saline soil, sewage sludge, compost, seawater, fresh water, decaying plant substrates, moldy hay and straw, vegetables and grasses, bird feathers, frescoes of a monastery, wall paper, gypsum board, and wood wall panels. It is capable of decomposing cellulose, chitin, and wool. It produces trichothecene mycotoxins in its mycelium that causes stachybotryotoxicosis in animals and humans. Animal stachybotryotoxicosis is caused by the ingestion of mycotoxin contaminated food. In man, stachybotryotoxicosis is caused by the inhalation of the mycotoxin which produces upper respiratory and/or neurologic symptoms, including dermatitis, coughing, rhinitis, irritated throat, fever, headache, feebleness and fatigue. Approximately 30 species in this genus.



Torula: A rapidly-growing fungus that produces a dark brown colony within ten days at 25oC (77oF). It has worldwide distribution but is very common in temperate climates. It can be isolated from air, soil, decaying plants, wood, fresh water, sea water, bird nesting materials, and nuts. Grows indoors on cellulose containing materials such as jute, old sacking, wicker, straw baskets, wood, and paper. There have not been any reports of human infections, however, it can cause allergic disease. Approximately 80 species in this genus.



Ulocladium: A rapidly-growing fungus that produces a brown, or black colony with a dark reverse, within five days at 25oC (77oF). The hyphae, conidiophores, and conidia are pigmented olivaceous-brown (dematiaceous). It is found worldwide and is very common. It can be isolated from the air, plants, rotten wood, paper, textiles and soil. Ulocladium may also be found on textiles, fibers, wood, paper, paint, and tapestries. It can also found on water-damaged building material such as gypsum board, and requires a high amount of water. There have not been any reports of human infections. Approximately 20 species in this genus.