

Overview

Thermophilic fungi are those species with the ability to grow at temperatures between 20°-55°C. While most fungal species cannot grow at temperatures between 45°-50°C thermophiles actually thrive under these conditions. Of the 70,000 formally recorded fungi species only around 30 species have the ability to grow at these elevated temperatures. On the other end of the scale thermophiles do not do well at lower temperatures. While some species can grow at temperatures at or slightly above 20°C there optimum range is between 35°C-50°C.

Commonly Found Places

Perhaps the best known and most common isolation location for thermophilic fungi is self heating compost. Compost constitutes a large outdoor reservoir where many species such as *Mucor pusillus* and *Aspergillus fumigatus* thrive. *A. fumigatus* along with several other species are building related fungi and can be isolated from the indoor environment.

Health concerns

Aspergillus fumigatus has well known allergenic properties that can cause health problems. This species is the most common mold pathogen that affects humans and has well documented health effects. *Aspergillus* spores are normally found in the air we breath and the main avenue of infection is through the lungs. It is known to cause several conditions such as aspergillosis, allergic bronchopulmonary aspergillosis, aspergilloma, and hypersensitivity pneumonitis (Vincken and Roels, 1984; Kramer et al., 1989; Marsh et al., 1979). These severe health conditions most often occur in immune compromised individuals, but they can occur in healthy individuals as well. It has also been known to exacerbate pre-existing conditions such as asthma (Marsh et al., 1979). Because of this *A. fumigatus* is a major concern in health care environments.



References

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