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Know More Spores®

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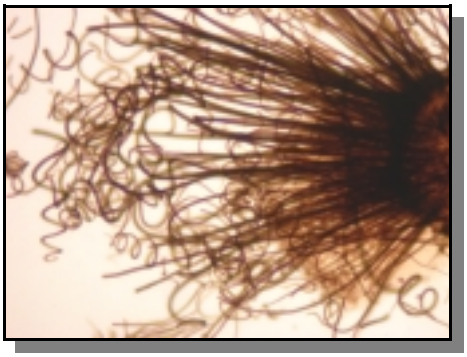
Chaetomium

Chaeto is from the Greek meaning long flowing hair. Chaetomium is a common spore typically found on deteriorating wood products or water damaged materials containing cellulose.



Chaetomium is classified in the taxonomic Phylum Ascomycota, the Ascomycetes. The spores grow in an ascus (sack) usually containing 4 to 8 spores per sack. The spores are ejected into the air under the right conditions. Young colonies have a cottony texture and are white. As the colony matures the color changes to olive or gray with long hair-like fruiting bodies, hence the Greek origin of the name. Spores are dark colored and lemon shaped. The spores are large, usually greater than 10 microns in length, and do not remain airborne very long. Chaetomium requires constant moisture and a carbon based nutrient source to grow. Wet drywall, which contains cellulose, is an excellent host. Because of Chaetomium's high settling rate it is rarely observed on outdoor air samples. Finding it on an inside sample generally indicates that the source is indoors. Other good hosts for Chaetomium are water damaged carpets, wallpaper, window frames, and baseboards.

The most common species of Chaetomium is C. globosum. It is interesting that in addition to being a source of fungal infections in immunocompromised humans, it is also the source of potent antifungal substances used to fight fungal infections in certain plants. Some of the documented human fungal infections have caused diseases including pneumonia, cerebral mycosis, invasive mycosis, and cerebral abscess. In all these cases the patient was immunocompromised. It has also been the documented cause of superficial skin, fingernail, and toenail infections.

Some aspects of C. globosum are beneficial. Two antifungal substances known as chaetoviridins A and B were purified from C. globosum. Chaetoviridin A was shown to suppress the development of rice blast and wheat leaf rust by over 80%. Tomato late blight was also moderately controled by Chaetoviridin A.

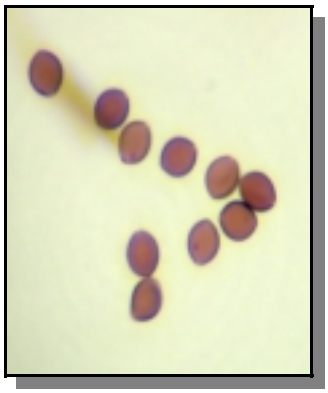
C. globosum spores can survive at room temperature for months awaiting a water and nutrient source. Sub-freezing temperatures preserve it very well. In 1991 a frozen prehistoric man was discovered in the Alps near the Austrian / Italian border. Viable C. globosum spores were found in the straw lining his boots. These spores were, amazingly, over 5,000 years old.

MOLD ANALYSIS—CAPABILITIES

Direct Microscopy Analysis for Mold Spores
- Spore Trap/Air Sample
- Surface Tape Lift Sample
- Surface Swab Sample
- Surface Vacuum Dust Sample
- Bulk Sample
- Water Sample

Special points of interest:

- ***Spores are large and not likely to stay airborne***
- ***Source of human fungal infection***
- ***Grows on water-damaged wood products and dry-wall***



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