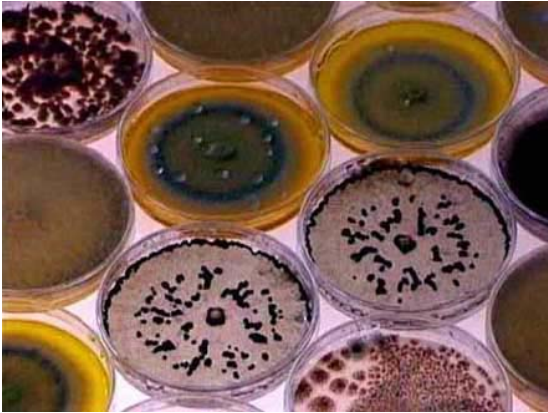




## ***Mould Growth Challenge Testing***

Moulds or fungi are distributed universally throughout the surface of the Earth and its atmosphere. They are plant organisms, either single-celled or made of cellular filaments. Unlike the shrubs in our garden or pot plants in our home, moulds lack green colouring matter and do not need light for growth.



In active growth, moulds readily form cobweb-like branching arms known as hyphae, from which spores project into the air. The spores, which are often produced in enormous numbers, are the means by which moulds reproduce. They can be likened to plant seeds, becoming detached, germinating and making new growth.

On the surface of most organic materials there is a wide variety of fungal spores capable of starting colonies of mould growth. Whether or not the particular spores present will develop depends upon a number of factors including moisture content, temperature and the chemical composition of the substrate.

Mould spores may be able to survive over long periods that are unfavourable to growth. However, given the right conditions of temperature and humidity, these spores will germinate resulting in the potential for extensive mould growth. Moulds can germinate from their own food source stored within the spore, but for growth they need an additional source of nutrients – organic materials such as proteins, carbohydrate and cellulose.



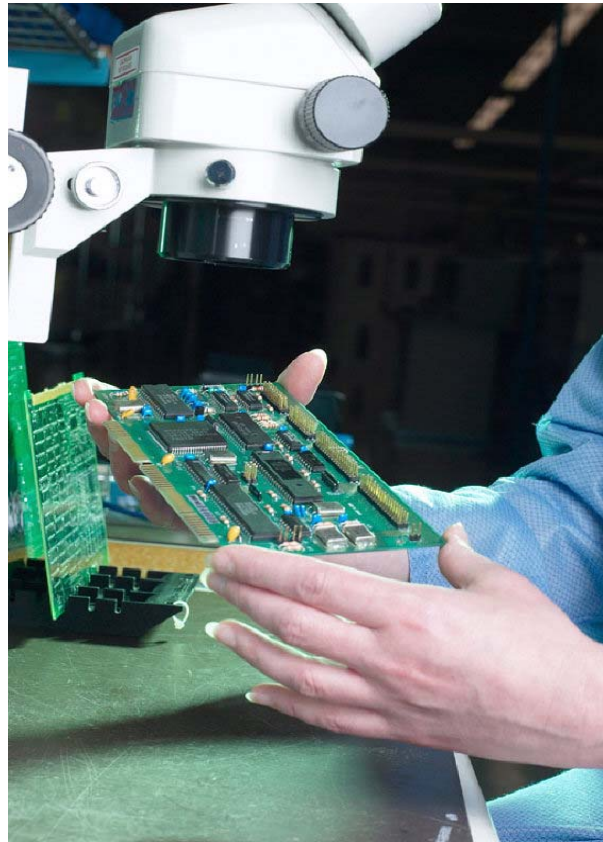


There are about a quarter of a million different species of mould known to man. Some are familiar in everyday life such as the growth of moulds on foodstuffs including fruit, bread and cheese or as the black mould seen within damp buildings. Although some moulds have adapted to grow under almost every environmental condition on Earth, most prefer warm and damp conditions.

The growth of mould can damage instrument electronics and printed circuit board assemblies through short circuits and the effects of corrosion. Active mould growth can exude organic acids

which may lead to additional functional failures.

When items are subjected to mould growth challenge testing, optimum conditions are used to accelerate the potential for growth to occur. Depending upon the requirements of the test specification, the items to be tested are infected with a mixture of fresh mould spores taken from actively growing cultures. The test items are then held under conditions of high humidity and elevated temperature for the prescribed test period. Some test specifications may require temperature and humidity conditions to be cycled.



***Catomance Technologies has the capability to offer the widest range of mould growth challenge tests.***