

Preservation of Fungi by using Mineral Oil and Silica gel in Laboratories for Teaching Purposes

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Abstract: The preservation and maintenance of stock cultures are required for microbiological pathological biotechnological and research studies. The laboratories in Universities maintain a series of stock cultures for teaching purposes. The maintenance of fungal cultures by sub culturing has been a common practice which involves much time and labour. In this study, two preservation techniques namely storage under mineral oil and silica gel storage were carried out to determine the suitability of the techniques for various fungi. Fungal species *Aspergillus*, *Penicillium*, *Saprolegnia*, *Sclerotium*, *Cercospora*, *Colletotrichum*, *Rhizopus*, *Helminthosporium*, *Trichoderma*, *Curvularia*, *Pythium*, and *Phytophthora* were collected from various sources and cultured on suitable media. The viability of the different fungal cultures was tested by transferring them onto suitable media every year. *Aspergillus*, *Penicillium*, *Rhizopus*, *Sclerotium*, *Helminthosporium*, *Trichoderma* and *Curvularia* species survived seven years storage in the silica gel method. This method was not found to be suitable for *Pythium* and *Phytophthora*. *Aspergillus* and *Penicillium* remained viable for six years when stored under mineral oil whereas *Saprolegnia*, *Cercospora*, *Sclerotium* and *Colletotrichum* needed sub culturing every two years. Even though sophisticated technology such as liquid nitrogen storage is available for preservation nowadays, it is very expensive. Thus the above two methods of preservation of fungi would be beneficial for laboratories in Universities and schools with limited resources.

Keywords: Fungi, Mineral oil, Preservation, Silica gel