Preservation Technique of Filamentous Fungi Based on Inactive Metabolism at Indonesian Culture Collection (InaCC)

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Abstract	Preservation is the act of preserving to keep, maintain, and conserve microbial strains to ensure their optimal viability and genetic stability. A wide variety of preservation techniques are available for preserving filamentous fungi. Most of the metabolically inactive preservation, such as freezing, cryopreservation, lyophilization, or L-drying, is widely accepted for long-term preservation of filamentous fungi with minimum viability loss and genetic changes. This study determined the viability and effectiveness of freezing or cryopreservation method in a fungal assemblage from the Indonesian Culture Collection (InaCC). The viability and growth rate of 40 fungal strains from InaCC were tested after three years of storage in the electric deep freezer (-80 degrees C with 10% glycerol and 5% trehalose as cryoprotectant). The results showed that 95% of the observed strains could maintain their viability and growth rate after cryopreserved and storage for more than three years at -80 degrees C. However, 5% of them showed a low growth rate and loss of viability. It was concluded that the cryopreservation technique by freezing at -80 degrees C is suitable to maintain the viability of filamentous fungal cultures.
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