

## **Studies on mass production and shelf life of *Paecilomyces lilacinus***

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**ABSTRACT :** *Paecilomyces lilacinus* reached its peak growth on 14<sup>th</sup> day (6.42g) indicating its optimum growth period. Among the different media tested Sabour's dextrose broth (6.62g) was significantly superior over all other broths tested, Rose Bengal broth (5.02g) was moderately good followed by Richard's synthetic broth (4.35 g). The temperature of 20°C was found to be significantly superior compared to other temperature levels by recording the maximum dry mycelial weight of 8.14 g and it was followed by 25°C with 7.80g. Maximum dry mycelial weight was obtained at 20°C (8.14g), whereas optimum temperature range was 20-25°C and fungal growth and sporulation was maximum between 10-30 °C. Similarly maximum dry mycelial weight was obtained at pH 9 (5.40 g). Among different carrier materials used to prepare commercial formulation of *P. lilacinus* talc based formulation was best with highest CFU count of  $42 \times 10^8$  followed by FYM with  $39 \times 10^6$  CFU count. After 240 days to 360 days there was significant decline in CFU count and even after 360 days it did not attain below prescribed level. Results of this study indicate that *P. lilacinus* formulation can be used up to one year.

**Key Words :** *Paecilomyces lilacinus*, formulation, carrier material and shelf life.