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Abstract

The effect of 60Co-γ irradiation with different doses and dose rates on mycelial growth of *Pleurotus citrinopileatus*was investigated in this study. Mutant strains of the mushroom with high growth rate were obtained through 60Co-γ irradiation at 1.13 kGy/h dose rate. After the regeneration of mycelia, a novel strain having the highest growth rate was screened, which showed an average increase of 21.1% when compared with that of the parental strain. Results of antagonistic test, esterase isozyme and peroxidase isozyme electrophoresis revealed significant genetic differences between the mutant strain and its parent stain. After six generations of continuous cultivation, the mutant strain kept the good growth vigour, thereby displaying high genetic stability.

**Key word ; Yellow oyster, Gamma-radiation, growth rate**