

ABSTRACT:

The capacities of glucose in the decolorization process of an azo dye, Reactive Black 5 (RB5), by two white rot basidiomycetes, *Pleurotus* sp. F019 and *Trametes* sp. F054 were investigated. The results indicated that the dye degradation by the two fungi was extremely correlated with the presence of glucose in the culture and the process of fungi growth. Decolorization of 200 mg dye/l was increased from 62% and 69% to 100% within 20-25 h with the increase of glucose from 5 to 15 g/l, and the activity of manganese dependent peroxidase (MnP) increased by 2-9 fold in this case. Hydrogen peroxide of 0.55 mg/l and 0.43 mg/l were detected in 10 h in *Pleurotus* sp. F019 and *Trametes* sp. F054 cultures.