

Extracellular Enzymes of the White Rot Fungi

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The culture growth fluids of several white rot fungi were investigated for their enzymatic activity and compared to that of *Pycnoporus cinnabarinus* (Jacq.) Fr. A fluorometric technique was used to assay all enzymes with the exception of laccase, for which a colorimetric method was used. An enzyme exhibiting activity similar to that of a lipase or esterase was detected in the culture fluids of the fungi *Lentinus edodes*, two strains of *Pleurotus ostreatus* (Jacq.: Fr.) Kumm., *Agaricus blazei* Murr., and a *Ganoderma* species. This enzyme was particularly active in *Pycnoporus cinnabarinus*. The enzyme alkaline

phosphatase was found to be present in the culture fluid of each organism, and it was found that all organisms except *Pycnoporus cinnabarinus* contained detectable levels of 3-galactosidase. It was found that both strains of *Pleurotus ostreatus*, *Ganoderma* sp., and *Agaricus blazei* displayed laccase activity, as did *Pycnoporus cinnabarinus*. An active penicillin V acylase enzyme was detected in *P. cinnabarinus*, both strains of *Pleurotus*, and the *Ganoderma* sp. Glutathione *S*-transferase was not found to be present in any of the organisms tested.