



## ABSTRACT

Extracellular laccase enzyme was produced from the locally isolated strain of *Pleurotus ostreatus* ( $151.944 \pm 0.481$  U/ml). Optimum temperature and pH for laccase production was  $30^{\circ}\text{C}$  and 5, respectively. Laccase production was enhanced by the addition of 0.5 mM copper sulfate that was an inducer for laccase production. Addition of 1.5% glucose as a carbon source and 1% yeast extract as nitrogen source in the culture medium increased the laccase production. Ammonium sulfate precipitation was performed for the partial purification of laccase. SDS-PAGE analysis showed that the laccase had a molecular weight of 63 kDa with a purification fold of approximately 5.43 and specific activity of 0.75 U/mg at 85%. Decolorization of Crystal violet, Congo red and Bromophenol blue was upto 95, 93 and 84.12%, respectively.