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Optimization of the mycelial growth and exo-polysaccharide production in submerged culture of *Phellinus linteus* KCTC 6190

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Optimization of submerged culture conditions for the production of exo-polysaccharide from *Phellinus linteus* KCTC 6190 was studied. The optimal temperature and initial pH for both mycelial growth and exo-polysaccharide production by *Phellinus linteus* KCTC 6190 in shake flask culture were found to be 30oC and 4.0, respectively. Sucrose and corn steep powder were the most suitable carbon and nitrogen source for both mycelial growth and exo-polysaccharide production. Optimal medium composition was determined to be sucrose 50 g/l, corn steep powder 3 g/l, KH2PO4 0.68 g/l and CaCl2 0.55 g/l. Under optimal culture conditions, the maximum exo-polysaccharide production in a 5-l stirred-tank fermenter indicated 2.43 g/l after 14 d of fermentation.