Effect of Dissolved Oxygen Concentration on Superoxide Dismutase Production by *Humicola lutea* Cells

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Cultures of the fungal strain *Humicola lutea* 110 were grown in a 3-l bioreactor. Effects of dissolved oxygen concentration (DO) on cell growth, intracellular protein content and antioxidant enzyme activities (SOD and catalase) were investigated. Controlling DO from 20 to 60% lead to: (I). The lethal phase of growth was reached faster; (ii) strong reduction of the intracellular protein content, and (iii) increase of antioxidant enzyme activities. The most efficient SOD biosynthesis was achieved at the 1st maximum of activity in the culture grown under DO uncontrolled conditions.