

عنوان مقاله:

Biochemical study of a laccase from microorganisms of gut extract of termite

محل انتشار:

چهارمین کنگره بین المللی توسعه کشاورزی، منابع طبیعی، محیط زیست و گردشگری ایران (سال: 1398)

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خلاصه مقاله:

Laccase enzyme is considered as one of the major single electron catalyzers which do not need additional cofactor. Oxidation of phenolic compounds is an urgent need at textile and tailored industries, biological refinements and pulp and paper production. One of their major capabilities is decolorization of synthetic dyes, which make significant problems by entering into the environment through the industries effluents. In the present study, laccase was isolated from microorganisms (Bacillus CF96) of the termite digestive system, purified and optimized efficiently. After the isolation of Bacillus CF96, the extracellular laccase was purified based on various biochemical assessments. The K_m , V_{max} , half-life, optimal temperature, and bleaching capability were determined. Results showed, the laccase half-life at optimal temperature (60) was 148 minutes, K_m and V_{max} were 0.737 mM and 100.5 U/mL, respectively.

کلمات کلیدی:

laccase; oxidation; biological refinements

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