

论文

无花果叶超氧化物歧化酶的分离、纯化及性质研究

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摘要:

以我国山东无花果树(Brunswike, 原产法国Ficus carica)树叶为原料, 采用缓冲液抽提、硫酸铵分级、DEAE-Sepharose Fast Flow阴离子交换层析和Sephacryl S-100 HR分子筛层析分离纯化得到电泳纯CuZn-SOD, 并对其酶学性质进行研究.

关键词: 无花果树叶 超氧化物歧化酶 分离纯化

Separation, Purification and Properties of Superoxide Dismutase from *Ficus carica* Leaves

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Abstract:

A CuZn-SOD from *Ficus carica* leaves was separated and purified with ammonium sulfate fractionation, DEAE-Sepharose fast flow chromatography and Sephacryl S-100 HR chromatography techniques. One major bright band was achieved on polyacrylamide gel electrophoresis stained with nitroblue tetrazolium (NBT). The molecular weight of the enzyme subunit was determined by SDS-PAGE to be about 17800. We investigated the physical and chemical properties of the enzyme, and characterized its kinetic properties, such as the optimal pH, optimal temperature and the effect of chemical reagents and metal ions on the SOD. The results show that the stability of this purified SOD appeared to be better than other SODs reported. The analysis results of circular dichroism spectrum reveals that the enzyme possessed approximate 12.78% of α -helix in its secondary structure.

Keywords: *Ficus carica* leaves Superoxide dismutase Separation and purification

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