

عنوان مقاله:

The effect of *Cakile maritima* Scop. on kinetic parameters of cabbage, guaiacol peroxidase

محل انتشار:

اولین کنفرانس بین المللی زیست شناسی گیاهان دارویی (سال: 1401)

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خلاصه مقاله:

Peroxidase (PODS; EC ۱.۱۱.۱.X) in different living organisms, including animals, plants, and microorganisms have wide applications in various fields of medical biochemistry, biotechnology, food industry and their attractiveness has been increased on the study of detoxifying and removal of organic contaminants from wastewaters. The in vitro effect of methanol extract of *Cakile maritima* on the peroxidase was investigated and the kinetic parameters were measured. The peroxidase (POD) activity from fresh cabbage extract was evaluated using the spectrophotometric method. The enzyme activity in the crude extract and final dialysate was monitored at ۴۷۰ nm with H_2O_2 as substrate and guaiacol as an electron donor in phosphate-citrate buffer pH ۵ and at ۵۵°C. For the H_2O_2 substrate, the K_m and V_{max} values were found as ۰.۳۷ mM and ۶.۰۵ mM/min. The extract of *Cakile maritima* has shown the inhibitory effect as noncompetitive on the peroxidase. Therefore, these results could be useful for the prevention and treatment of certain disease, which peroxidase enzyme plays a vital role.

کلمات کلیدی:

Cabbage, Peroxidase, Guaiacol, Medicinal plants, *Cakile maritima*

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