

عنوان مقاله:

Study the effect of salt stress on antioxidant compounds of artichoke under invitro conditions

محل انتشار:

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خلاصه مقاله:

Artichoke (*Cynara scolymus*) is one of the oldest herbs and nowadays because of its ingredient is concerned by pharmaceutical industry. Abiotic stresses including salinity, changes the metabolic pathways of cultured cells and leads to the production of secondary metabolites. This study was aimed to determine the effect of salt stress on antioxidant compounds of callus focusing on the phenol, flavonoid, and chlorogenic acid and caffeic acid production under in vitro conditions. The present study was carried out as two separate experiments as direct culture (cultured explant) on MS solid medium with different salinity concentrations (0, 50, 150, 300, 600, 1200 μM NaCl) and indirect culture (callus culture) in different salin concentrations of 0, 50, 150, 300, 600, 1200, 2000, 4000, 6000 and 75000 μM NaCl. Four weeks after culture the mentioned compounds were measured via distinctive methods. Results showed that, versus to indirect culture radical scavenging percentage, the content of chlorogenic acid and caffeic acid were significantly influenced by salinity and the highest amount of them were recorded in the samples in which treated with 300 μM NaCl, control and 600 μM NaCl, respectively. In indirect culture no significant difference was observed on other phenolic compounds and antioxidant activity except caffeic acid.

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کلمات کلیدی:

Artichoke, Callus, Phenol, Flavonoid

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