

عنوان مقاله:

Effect of magnetic field on lipid peroxidation, proline and hydrogen peroxide contents of *Silybum marianum*

محل انتشار:

بیستمین کنگره ملی و هشتمین کنگره بین‌المللی زیست‌شناسی ایران (سال: 1397)

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نویسندگان:

Maryam Mansourkhaki - Chemistry Department, Islamic Azad University, Buinzahra Branch, Buinzahra, Iran

Halimeh Hassanpour - Aerospace Research Institute, Ministry of Science Research and Technology, Tehran
۱۴۶۶۵-۸۳۴, Iran

Malak Hekmati - Chemistry Department, Islamic Azad University, Buinzahra Branch, Buinzahra, Iran

خلاصه مقاله:

Silybum marianum is a medicinal plant belonging to Asteraceae family. The magnetic field is an abiotic stress and is used for the growth and secondary metabolite induction. In this study, the effect of magnetic field on H₂O₂, proline and lipid peroxidation were studied in leaves and roots of *S. marianum* seedlings. After seed germination, seedlings were exposed under different magnetic field (0, 2, 4 and 6 mT) for 1 hour. Seedlings were cultured in Hoagland medium and were placed in greenhouse conditions for daily 16/8 h light-dark photoperiod, and day/night temperature regime of 20/18°C. The seedlings were harvested for physiological analysis and growth after 4 weeks. Results showed that the magnetic field increased significantly lipid peroxidation at 6 mT, while decreased this parameter at 2 and 4 mT. Proline content decreased significantly in root and leaf with an increase of magnetic field intensity. The H₂O₂ level was decreased at 2 and 4 mT and increased to 6 mT. It seems magnetic field at proper intensity can decrease free radicals by induction of antioxidant activity

کلمات کلیدی:

Silybum marianum, Magnetic field, Lipid peroxidation, Proline, Hydrogen peroxide

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