

## عنوان مقاله:

Biodegradation of glyphosate herbicide by *Salinicoccus* spp isolated from Qom Hoze-soltan lake, Iran

## محل انتشار:

مجله مدیریت ومهندسی بهداشت محیط, دوره 2, شماره 1 (سال: 1394)

تعداد صفحات اصل مقاله: 6

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## خلاصه مقاله:

**Background:** Glyphosate (N-phosphonomethyl Glycine) is an organophosphorus pesticide with dangerous effects on the environment. In this study, the biodegradation of glyphosate herbicide by halophilic bacteria isolated from Qom Hoze-Soltan Lake has been investigated. **Methods:** After sampling and bacterial isolation, native halophilic strains grown in the presence of glyphosate at a wavelength of 660 nm and also the disappearance of the glyphosate in the plates at a wavelength of 220 nm were determined and the dominant bacteria were isolated. Biochemical, molecular (according to the 16S rRNA sequence), antibiotic, and the Minimum Inhibitory Concentration (MIC) test was performed for the dominant bacteria. Analysis of the remaining glyphosate herbicide was performed by HPLC analysis after derivation with FMOC-Cl. **Results:** According to the results of the biochemical, antibiotic and molecular 16S rRNA tests, the native halophilic isolates with the ability to biodegrade glyphosate were gram positive cocci very similar to *Salinicoccus* spp. The results of HPLC showed that *Salinicoccus* spp is able to biodegrade glyphosate herbicide. **Conclusion:** The native bacteria in Qom Hoze-soltan lake, Iran can be used for biodegradation of glyphosate herbicide.

## کلمات کلیدی:

Glyphosate, Biodegradation, *Salinicoccus* spp

## لینک ثابت مقاله در پایگاه سیویلیکا:

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