

## عنوان مقاله:

Isolation of polycarbonate degrading bacteria from environmental sources

## محل انتشار:

همایش بین المللی بحران های زیست محیطی ایران و راهکارهای بهبود آن (سال: ۱۳۹۱)

تعداد صفحات اصل مقاله: ۶

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## خلاصه مقاله:

In recent years plastic materials were used in many applications, because of their strength, light weight and durability. But development of methods for safe deposition of plastic materials has not been in conformity with their production. This causes plastic accumulation in the environment and creates health and environmental problems. The aim of this study was isolation and identification of degrading polycarbonate bacteria. Sampling was taken from garden soil and pieces of polycarbonate films buried under suitable conditions. Then, Heterotrophic plate count of bacteria and fungi was done in each sample. After enrichment and purification, polycarbonate-degrading bacteria were screened by using clear zone method, in poly carbonate supplemented mineral media and identified with the help of microscopic and macroscopic methods and biochemical tests. The presence of lipase and amylase enzymes was also determined. Finally biodegradation studies were performed as follows: ۱- The assessment of soil buried polycarbonate films weight after ۹ month. ۲- The plate assessment of biodegradation process by clear-zone test. *Bacillus cereus* and *Bacillus megaterium* showed polycarbonate degradation activity

## کلمات کلیدی:

*Bacillus cereus* , *Bacillus megaterium*, Polycarbonate degradation

## لینک ثابت مقاله در پایگاه سیویلیکا:

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