

عنوان مقاله:

ISOLATION OF BLACK YEASTS FROM OIL FIELDS OF AHVAZ; POTENTIAL BIOREMEDIATION CANDIDATES

محل انتشار:

نوزدهمین کنگره بین المللی میکروب شناسی ایران (سال: 1397)

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خلاصه مقاله:

Background and Aim: Black yeasts are highly resistant against environmental stresses such as drought, and extreme temperature. They belong to different fungal kingdoms like: Chaetothyriales, and Eurotiales. They are ecologically diverse and can be seen in oil polluted lands. Black yeasts isolated from polluted lands show potential for remediation of toxic compounds, present in the same field and could be applied in bioremediation studies. **Methods:** Soil samples from oil fields of Ahvaz were collected. From each soil sample, ten gram was diluted in PBS buffer and shaken for half an hour. From the upper layer, 0.5 ml was transferred to PDA media containing 0.05 mg/l chloramphenicol and mycosel agar. Plates were incubated at 27° C for two weeks and monitored routinely for presence of any black colony. Isolates were identified by morphological characters. Molecular method using ITS sequencing was applied and strains were completely identified at species level. **Results:** From 25 soil samples, 15 strains were isolated and purified. These strains were identified by molecular methods. The ITS sequences were blasted in <https://www.ncbi.nlm.nih.gov/> and were identified as *Exophiala xenobiotica*. **Conclusion:** *Exophiala xenobiotica* was named after its properties for degradation of xenobiotics. These strains were isolated from oil fields of Ahvaz and identified as *E. xenobiotica*. The isolates as achieved from contaminated lands, show promises for being able to grow in those lands and to be applied as a new bioremediation strategy. Black yeast fungi have many advantages over .bacteria which have been used in soil bioremediations as they can grow in more harsh environments

کلمات کلیدی:

Black yeast, soil remediation, *Exophiala xenobiotica*, ITS sequencing

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