

## عنوان مقاله:

Isolation and identification of bioethanol producer *Saccharomyces cerevisiae* from Iran s alcohol producer manufactures

## محل انتشار:

بیستمین کنگره ملی و هشتمین کنگره بین‌المللی زیست‌شناسی ایران (سال: ۱۳۹۷)

تعداد صفحات اصل مقاله: ۱

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## خلاصه مقاله:

Reducing fossil fuels, increasing fuel prices and carbon dioxide emissions, and concern about climate change are encouraging factors for biofuels production. Microbial biofuels are liquid and gaseous fuels which produced by microorganisms. Bioethanol is a suitable alternative biofuel for petroleum-based fuels. For the industrial and high-scale production of bioethanol, the first step is the isolation of suitable yeast strain with high tolerance to ethanol and high-level ethanol production. Hence, the aim of this study was Isolation of industrial strain *Saccharomyces cerevisiae* with high tolerance to ethanol from Iran s alcohol manufactures. Sampling from several Iran s alcohol manufactures was carried out for the isolation of *Saccharomyces cerevisiae* with the highest ethanol production and tolerance. Selected yeast strain was examined by morphological, biochemical tests such as sugars fermentation, absorption of nitrogen compounds and carbon compounds, and also molecular test. The selected yeast strain produced ۸% ethanol and tolerated ۱۲% ethanol. The morphological, biochemical and molecular tests confirmed that the yeast strain is *Saccharomyces cerevisiae*, and this strain was named *Saccharomyces cerevisiae* Sahand ۱۰۱. The isolated industrial yeast strain with the suitable characteristics in terms of ethanol production and tolerance to ethanol can be used for further studies and increase ethanol production by optimization methods at the level of flask and bioreactor.

## کلمات کلیدی:

Isolation, Identification, Biofuel, Yeast, Bioethanol

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