

## عنوان مقاله:

Enhancement of oxygen transfer and recombinant hG-CSF production in *Pichia pastoris* fed-batch fermentation

## محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

The high cell density fermentation of recombinant *Pichia pastoris* for human granulocyte colony stimulating factor (hG-CSF) production is a high oxygen demand process. The oxygen demand is usually met by increased agitation rate and use of oxygen-enriched air. However, in this study by using a modified fermentation medium, we can supply adequate oxygen to the microorganisms at relatively lower agitation rates, because of improved oxygen mass-transfer. Conventional fermentations were conducted for the production of hG-CSF by *P. pastoris* at agitation rates of 1000-1200 rpm by using regular basal salt medium. By using extended modified salt medium, oxygen transfer was increased and agitation rate was decreased to 700 rpm. For two above fermentations, the final cell density and hG-CSF concentration reached to  $100 \pm 10$  g/l and  $25 \pm 5$  mg/l, respectively. When agitation rate was decreased from 1200 to 700 rpm for fermentation with BSA medium, the final cell density and hG-CSF concentration decreased to 60 g/l and 10 mg/l respectively. These results showed that, the medium composition is affected oxygen mass transfer .and hG-CSF production in *P. pastoris* high cell density fed-batch fermentation

## کلمات کلیدی:

Fed-batch; Oxygen; *Pichia pastoris*; Methanol

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/45969>

