

عنوان مقاله:

APPRAISAL AND COMPARISON OF GROWTH KINETIC MODELS IN BIOLOGICAL SWEETENING PROCESS OF NATURAL GAS

محل انتشار:

اولین همایش ملی تکنولوژی های نوین در شیمی و پتروشیمی (سال: 1393)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

The present study described here is focused on biodesulfurization of natural gas in a batch culture using active microorganisms. The microorganisms used for the removal of hydrogen sulfide were isolated from a Ramsar hot spring. The experiments were conducted with mixed gas at operating temperature of 25,30,35,40 and 45 °c. Two kinetic models such as; Logistic and Monod models in a batch culture were used to describe the microbial growth and substrate utilization. At low pressure (1atm), the bacterial behavior was substrate related and growth dependent. In operating temperature of 35 °c, maximum cell dry weight of 0.512 was obtained with Logistic model. The obtained regression values for Logistic model were reasonably acceptable for all operating temperature. As the gas temperature was increased to 45 °c, the inhibition coefficient may be dominated in growth kinetic. As the gas temperature increased the inhibition coefficient increased

کلمات کلیدی:

Biodesulfurization, Hydrogen sulfide, Kinetic parameters, Logistic, Monod model

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