

论文

生物絮凝剂产生菌的筛选及培养条件优化

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摘要:

从林下土壤中筛选得一株产絮凝剂的细菌XMx-1(其产生的絮凝剂命名为XMx-1F); 研究表明: 玉米淀粉、玉米浆是廉价的碳氮源; 通过乙醇提取的方法, 从发酵液离心后的上清液中获得絮凝剂粗产品7.685g / L; 通过蒽酮反应、紫外扫描以及红外扫描等多种方法手段分析确认XMx-1F是以多糖为主的高分子絮凝剂, 多糖含量为77-87%; 在实际废水处理方面, 通过XMx-1F对模拟洗煤废水的应用研究表明, 其应用到处理实际洗煤废水中的前景是可观的.

关键词: 微生物絮凝剂 廉价培养基 多糖 红外光谱 洗煤废水

Screening of microbe producing flocculant and optimization on its cultural conditions

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Abstract:

A strain was screened from soil, and named XMx-1(the bioflocculant produced byXMx-1 named XMx-1F), which has the highest flocculating activity. Cornstarch and the corn steep liquor were chosen as carbon and nitrogen sources. 7.685g / L XMx-1F raw product was obtained from the supernatant by using ethanol. The XMx-1F is mainly composed of polysaccharide, which was determined by Anthrone reaction, ultraviolet spectroscope method and Infrared spectra. The polysaccharide content is 77-87%. In the treatment of high SS waste water, XMx-1F shows high flocculating activity. Study of XMx-1F flocculating coal-washing wastewater indicates the actual application potential of XMx-1F.

Keywords: bioflocculant cost-effective medium polysaccharide Infrared spectra coal washing waste water

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