

The Production of Citric Acid by Submerged Fermentation from Cassava using Mold Culture

by

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Abstract

Study on citric acid production by submerged fermentation using Aspergillus niger, strain FKU 29 was carried out in laboratory scale, using 500 ml. flask and 2.5 liter fermentor. The production medium contained 10% hydrolysed cassava starch and 0.03% KH_2PO_4 , 0.03% K_2HPO_4 , 0.03% MgCO_3 , 0.03% NH_4NO_3 , pH 4.0 . Optimum condition for citric acid production was carried out by using 2.5 liter fermentor with inoculum size 1.0% (10^7 spores/ml.), agitation 250 rpm. at 30 ° C and addition of 0.5% of CaCO_3 after 12 hrs. cultivation. The highest citric acid production of 85.5 g/g was obtained after 7 days of cultivation by using the fermentor.