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Inhibitory Effect of Product and Substrate under Dihydroxyacetone Production from Glycerol

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Abstract : In this work the growth of *Gluconobacteroxidans* was evaluated in dihydroxyacetone production by fermentation of glycerol considering different substrate concentrations to identify the inhibition effect. The cell growth was measured at 20, 50 and 100 g/l of initial glycerol concentration. The rate of biomass growth was inhibited at higher glycerol, DHA and biomass concentrations. This was confirmed by the goodness of fit of a mathematical model with the experimental data that describes the entire curves in the three fermentations. The cell growth rate was inverse correlated with the biomass concentration.
Keywords: glycerol fermentation, inhibitory effect, cell growth, dihydroxyacetone, *Gluconobacteroxydans*.

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