

Thesis Title Dynamic Behavior of a Model of the
 Chemostat Subject to Product Inhibition
 with Parabolic Specific Growth Rate

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ABSTRACT

The dynamic behavior of the continuous biological reactor subject to product inhibition is analysed and classified in terms of multiplicity and stability of steady states and existence and stability character of limit cycles. Various boundary conditions are derived which delineate the parameter space into regions of dynamically different behavior. The predicted types of behavior are then illustrated by numerical computation of cells and product concentration trajectories.