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*Self-cycling fermentation with a produced compound*

Self-cycling fermentation is a bioengineering process that is used in biofuel production and wastewater treatment. Due to some large differences in time-scales, the process can be modeled using a system of impulsive differential equations. Recently, engineers have been exploring different methods to trigger the discontinuous portion of the dynamics, called the decanting process. We examine a model of the self-cycling fermentation process in which the concentration of a produced compound is used to trigger the decanting process.