
TYLER MEADOWS, Queen's University

Microbial Competition in a Serial Transfer Culture

Serial transfer culture is a common method used in microbiology to cultivate microorganisms. In this technique, a growth medium is inoculated with a small amount of microbes. After a fixed amount of time, a sample is taken from this medium and used to inoculate fresh growth medium. We expand on an existing impulsive differential equation model for microbial competition in this scenario. We establish conditions for when multiple species will coexist and conditions for when competitive exclusion holds.