

1. Continuous Culture with Recycle for Industrial Wastewater Treatment.

Problem 9.11 of the text.

2. Secondary Metabolite (for example penicillin) Production in a 2-Stage Chemostat

Problem 9.2 of the text.

3. Fed-Batch Bioreactor for Production of Penicillin

Problem 9.4 of the text. Note that “quasi-steady state” means $dX/dt = 0$ in the cell mass balance, which is the assumption we used to derive the equations in lecture.

Due Fri. 19 Oct., '07