

BME 395 Bioprocess Technology 2002
Microbial Kinetics Package

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Assignment: preliminary report

This report (3 pages maximum, double spaced, one report per group) should be an informal description of microbial penicillin production and processing. Since this report will form the first step toward model building, it should identify the variables that might affect penicillin production and their relative importance. Toward that end, include any assumptions, simplifications, constraints, modes of operations, etc., which you find necessary to build up the mathematical model. Include all supporting references.

The preliminary report will also be the basis for an informal group presentation (3-5 minutes). As a class, from these reports, we will formalize our assumptions, simplifications, and/or constraints, talk about your observations on penicillin production based on PenSim, and try to write down the functional forms of variables and anticipated capabilities of the mathematical model.

Criteria for grading

Your final group report will demonstrate the extent to which you understand the microbial kinetics challenge. It should be clear, complete, correct, well organized, and professional. Your preliminary report will become the beginning of your final report. Consequently, it should be as well written as possible.

Criteria for the Preliminary Report

Instructor Comments

Content	
<p>An "A" paper:</p> <ul style="list-style-type: none"> - Provides important background in the opening and explains the purpose of the report - Shows an understanding of the literature <ul style="list-style-type: none"> • covers all key points • has depth • includes references for all ideas taken from others (and to all articles cited in the bibliography) - Is concise <ul style="list-style-type: none"> • uses space efficiently to emphasize important points • skips unimportant points (narrative explanations, discussion of mistakes) - Explains ideas clearly, using figures / equations where appropriate 	
<p>Organization</p> <p>An "A" paper:</p> <ul style="list-style-type: none"> - Is coherent; has one voice (that is, sounds as if it was written by <i>one team</i> rather than by 3 or 4 individuals) - Uses transitions and/or headings to help readers identify main chunks of the paper - Uses sub-headings and/or strong topic sentences in long sub-sections 	
<p>Writing quality (grammar, spelling, style)</p> <p>An "A" paper:</p> <ul style="list-style-type: none"> - Uses words carefully and precisely - Avoids errors in spelling and punctuation - Avoids usage errors (note: <i>data</i> is plural!) - Is consistent regarding numerical significance 	