Example 6.1

A fermentation broth contains 400 mg/L of actinomycin which is to be extracted with butyl acetate. At the pH of the broth, the partition coefficient is 25. For 550 L/h of broth fed you will use 35 L/h of solvent. You want to recover 99% of the actinomycin.

1) Draw the Equilibrium Line and the Operating Line.
2) How many theoretical stages are required to accomplish this separation?