**Questions on the Batch Distillation Experiment**

1. *Compared to the continuous distillation, which operating line does not appear in the batch distillation analysis: stripping line or enriching line? Why?*

The stripping section line does not appear in batch distillation because there is no feed, causing the slope of the SSOL line (L/V) to equal zero.

1. *Is it possible to reach a steady state for a batch distillation at a certain finite reflux ratio? Briefly justify your answer.*

Yes, it is possible, but it may be difficult to obtain at a set number of stages. This is because as your reflux ratio decreases, the number of theoretical trays will increase, so choosing just an arbitrary R value may not work.

1. *What is the reason to first operate the system at the total reflux before switching to finite reflux in the batch distillation experiment?*

Doing this allows yours system to get to a steady state quicker before running the batch distillation experiment.

1. *Is there a minimum reflux ratio for the batch distillation? If so, how can we determine it experimentally?*

Yes. The minimum reflux ratio can be determined from either the intercept of the slope of the enriching operating line.

1. *What would happen if we run a batch system at a reflux ratio lower than the minimum reflux ratio?*

All that would happen in this case it that the system would never reach steady given, given that you’d need *more* than an infinite amount of stages to reach the desired separation.