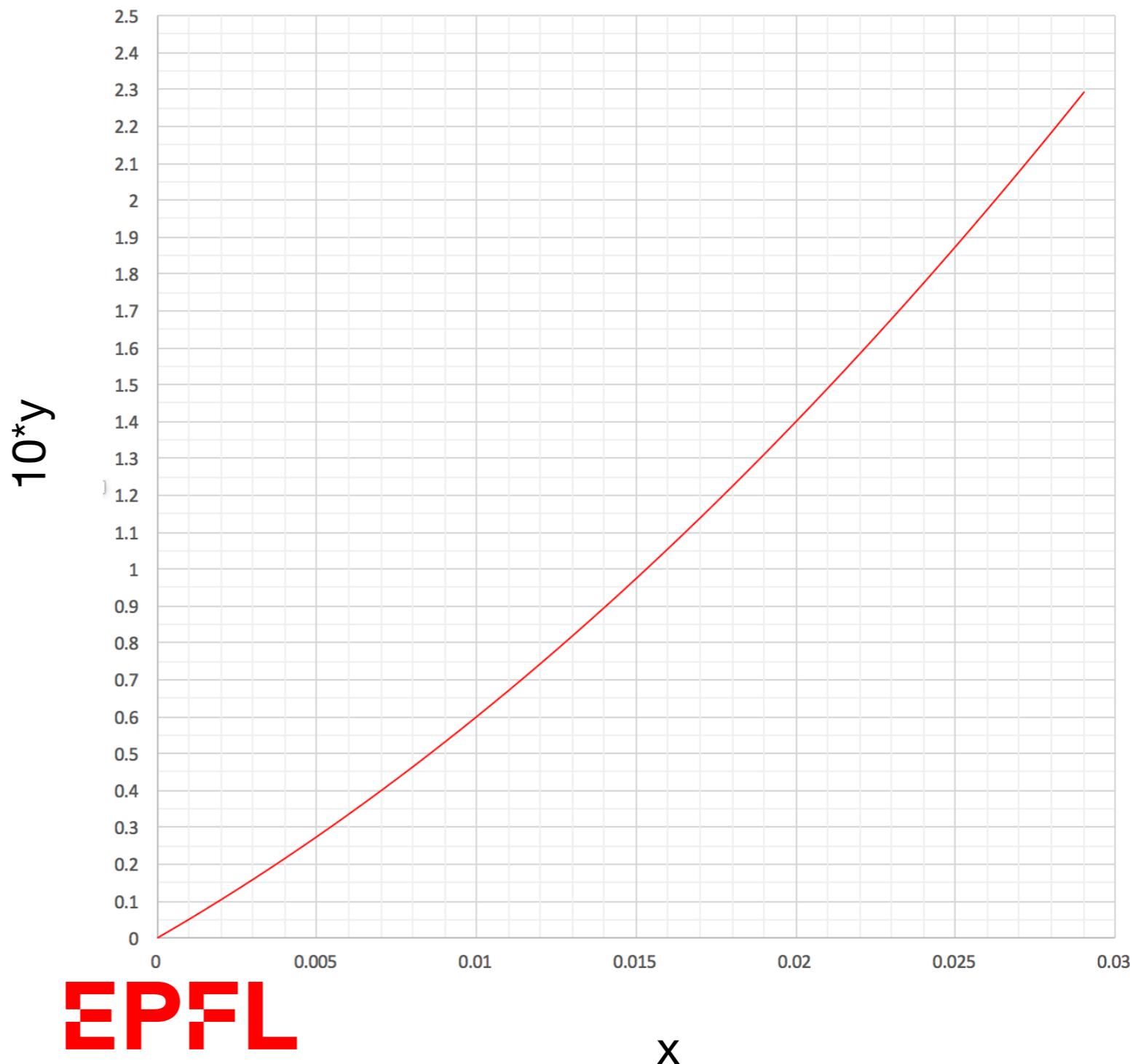
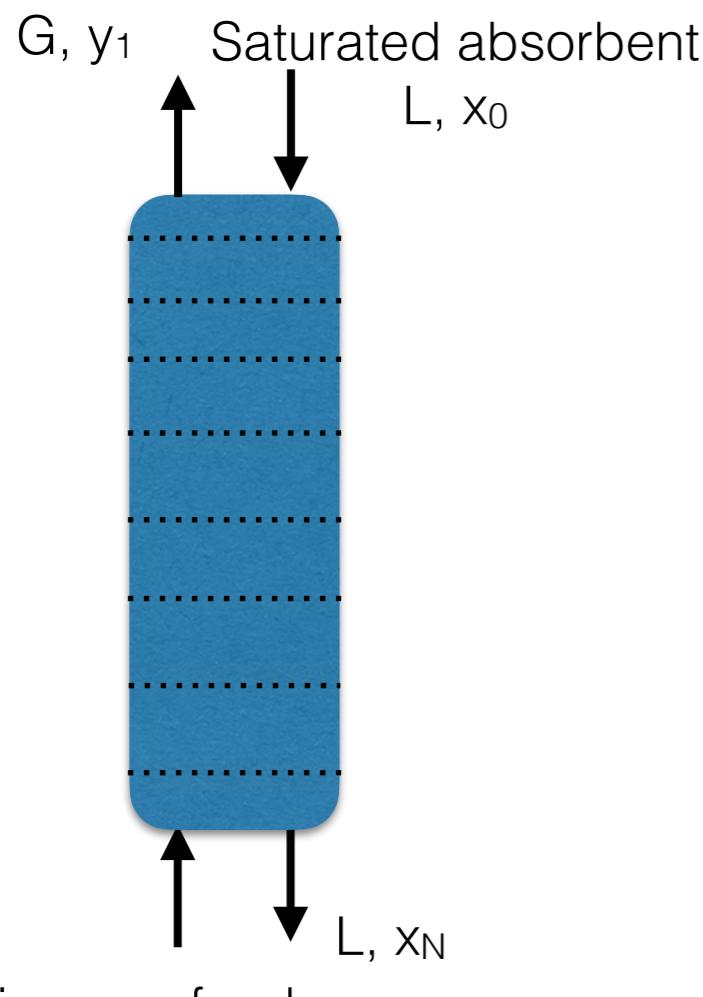


Exercise problem 1: Stripping

100 mol/hr of amine containing 2.9% CO₂ at 1 bar is to be regenerated with steam such that concentration of CO₂ reduces to 1%. Pure steam is being used as the stripping gas. Calculate number of stages if L/G = 0.5 L/G_{min}. Calculate exit concentration of steam.

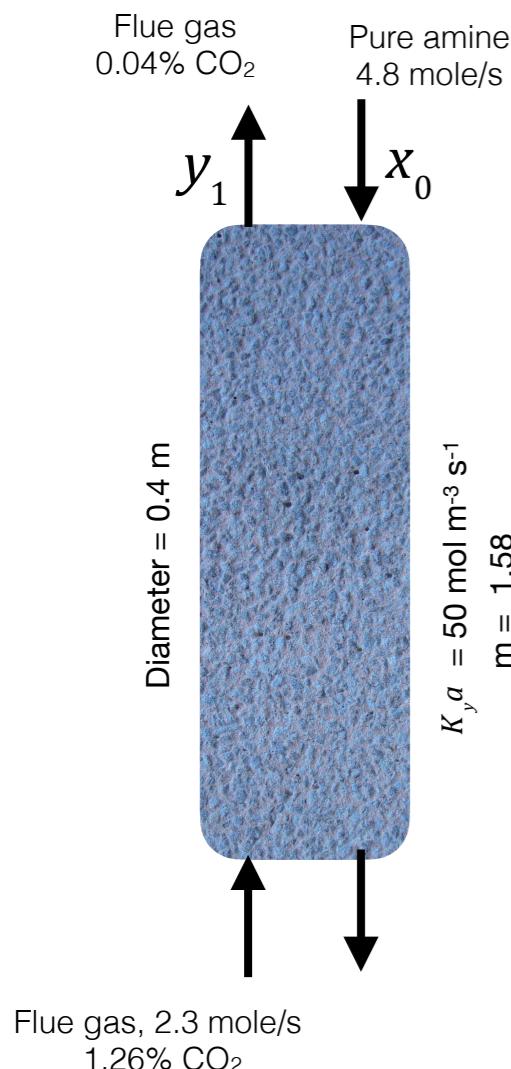
$$y = \frac{L}{G}x + (y_1 - \frac{L}{G}x_0)$$



Exercise problem 2: CO₂ absorption in a packed bed.

Calculate HTU, NTU, and h for the following problem. How would you decrease HTU?

$$h = \frac{G}{K_y a A} \left[\frac{1}{1 - \frac{mG}{L}} \right] \ln \left(\frac{y_{N+1} - mx_N}{y_1 - mx_0} \right)$$



Exercise problem 3: CO₂ stripping in a packed bed.

Calculate HTU, NTU, and K_{ya} for the following problem.

$$h = \frac{G}{K_y a A} \left[\left(\frac{1}{1 - \frac{mG}{L}} \right) \ln \left(\frac{y_{N+1} - mx_N}{y_1 - mx_0} \right) \right]$$

