$$feedTime[h] = \frac{\text{feedVolume}[mL]}{\text{flowRate}[mL/h]}$$

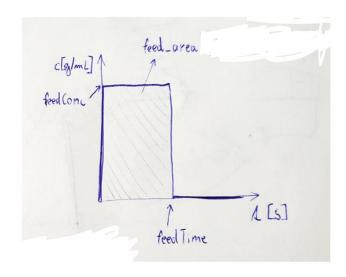
 $feedTime[s] = 3600 \cdot feedTime[h]$

$$\mathsf{feedConc}[g/mL] = \frac{\mathsf{comp_feed_mass}[g]}{\mathsf{feedVolume}[mL]}$$

$$\mathsf{comp_feed_mass}[g] = \ \mathsf{feed_area}\left[\frac{g \cdot s}{mL}\right] \cdot \mathsf{flowRate}[m/s]$$

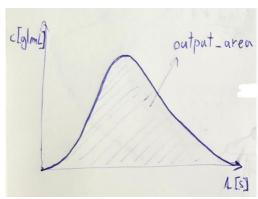
$$\text{flowRate}\left[\frac{mL}{s}\right] = \frac{\text{flowRate}[mL/h]}{3600}$$

 $\mathsf{feed_area}\left[\frac{g \cdot s}{mL}\right] = \ \mathsf{feedConc} \cdot \mathsf{feedTime}$



output_area
$$\left[\frac{q \cdot s}{mL}\right] = \text{ np.trapz } (y = c, x = t)$$

 $\mathsf{comp_output_mass}\;[g] = \; \mathsf{flowRate}\left[\frac{mL}{s}\right] \cdot \mathsf{output_area}\; \left[\frac{g \cdot s}{mL}\right]$



 $\label{eq:loss_func} \begin{aligned} \text{min} & \quad \text{Loss_func(feedTime)} = \sum_{\text{comp}} \mid \text{comp_feed_mass} \, - \, \text{comp_output_mass} | \end{aligned}$