

- Add wavelength to datasheet before saving to drive.
- Calculate the protein concentration in your samples using a standard curve and determine x μ L needed provide 40 μ g per well

$$\text{Dilution factor} = \frac{\text{Vol}_i}{\text{Vol}_i + \text{Vol of stock} + \text{dilution}} = \frac{\text{Vol}_i}{100 \mu\text{L stock} + \text{H}_2\text{O}} \quad \left| \quad \frac{\text{Vol of stock}}{\text{X } \mu\text{L stock}} \right|$$

- (Dilution factor) * (Concentration) = μ g of stock
- Things to remember:

- $\mu\text{g}/\mu\text{L} = \text{mg}/\text{mL}$
- plot OD on y-axis, concentration on x-axis
- make scatter plot

- Dilute x μ L sample in an equal amount of 2X Laemmli buffer (with β -mercaptoethanol)
 - Must be less than 15 μ L as the well can hold a maximum of 30 μ L.
- Heat at 95°C for 5 min
- Store at -80°C if needed
- if storing for more than 30 days inhibitors need to have been added to PBS

SDS-PAGE (Sodium Dodecyl Sulfate - PolyAcrylamide Gel Electrophoresis)

- Turn on heating block to 95°C
- Defrost samples
- Re-boil samples at 95°C for 2 min
- Setup precast gel in system
- Fill tank with 1X Tris/Glycine/SDS running buffer
- 100mL 10X buffer + 900mL dH₂O
- $C_1V_1 = C_2V_2$
- Load appropriate amount of sample and 10 μ L of protein weight marker into gel
- Place the lid on the tank and connect the leads to the power pack. Run the gel at 75V for 5 min
- Increase the voltage to 150V and run the gel until the front has run off the bottom (~1h)
- Add water, seal in plastic, and store in a refrigerator.

$$\begin{aligned} \frac{3.308 \text{ mg}}{1 \text{ mL}} &= \frac{3308 \mu\text{g}}{1000 \mu\text{L}} \\ \frac{40 \mu\text{g}}{x} &= \frac{3308 \mu\text{g}}{1000 \mu\text{L}} \\ x &= 12.09 \mu\text{L} \end{aligned}$$

$$\frac{40 \mu\text{g}}{0.29 \mu\text{L}} = \frac{3.03 \mu\text{g}}{40 \mu\text{g}} \Rightarrow (40 \mu\text{g})(0.29) = 40 \mu\text{g}(5 \mu\text{L})$$