

Prepare PEP aliquot

1. 200 mM Phosphoenylpyruvate acid monopotassium salt (PEP) - Dissolve 200 mM PEP in M2B.

According to the Dogic lab protocol, the concentration of PEP should be 200 mM. Say I'm preparing 50 x 8 ul aliquots, in total it is 400 ul. I will need

$$200 \times 10^{-3} \times 400 \times 10^{-6} = 8 \times 10^{-5} \text{ mol}$$

The molecular weight of PEP is 206.13 g/mol, so the total mass needed is

$$m = 8 \times 10^{-5} \times 206.13 = 0.0165 \text{ g}$$

Adjust pH to 6.8 using KOH.

Assuming that we need equal amount of KOH to neutralize the salt, we need 8×10^{-5} mol KOH. If we prepare 1M KOH stock solution, 10^{-5} L, i.e. 10 μ l should be added to the PEP salt solution.

Note that all the aliquot prep guide can be found in the TextbookNematics from Dogic lab. I put this file in the protocol folder for future reference.