Lab Plan for 26/12/23:

* Lab work details:
  + Filling in the gaps in the preliminary data.
  + Determining the best solvent to use for the EE.
  + Determining the best extraction method to use for the EE.

**Plan for closing the gaps in preliminary data:**

[mass of PPP (pomegranate peel powder)] | [Solvent] | [Extraction Method]

1. 0.025g | 50% Ethanol | HM (heating mantle)
2. 0.05g | Ethanol | HM
3. 0.05g | Methanol | HM
4. 0.05g | Methanol | MS (Heated magnetic stirrer)

* Take the required mass of PPP in four beakers.
* Add 50mL of the solvents into the beakers.
* Put the beakers in the HM/MS for exactly 2 minutes at 100oC.
* Afterwards filter the solutions.
* Transfer 20mL of each solvent into four flasks.
* Add 10mL of CuSO4 standard into each flask.
* Put the flasks in the shaker for 1 hour.
* Then note down the absorbance values.

**Solvent Determination Plan:**

This plan can be followed if the data collected from the above and previous experiments are not sufficient enough to determine the best solvent for the EE.

* Take 0.05g of PPP in four beakers.
* Add 50mL of each solvent into each beaker.
  + Water
  + Methanol
  + 50% Ethanol
  + Ethanol
* Put the beakers in the heating mantle for exactly 2 minutes at 100oC.
* Afterwards filter the solutions.
* Transfer 20mL of each solvent into four flasks.
* Add 10mL of CuSO4 standard into each flask.
* Put the flasks in the shaker for 1 hour.
* Then record the absorbance values.
* The solvent with the lowest absorbance (and thus the highest complexing efficiency) will be used as the main solvent for the EE.

**Extraction Method Determination Plan:**

* Take 0.05g of PPP in three beakers.
* Add 50mL of water into each beaker.
* Put one beaker in the heating mantle for exactly 2 minutes at 100oC.
* Put the other beaker in the magnetic stirrer for exactly 2 minutes at 100oC.
* Afterwards filter the solutions.
* Transfer 20mL of the solutions into two flasks.
* Add 10mL of CuSO4 standard into each flask.
* Put the flasks in the shaker for 1 hour.
* Then record the absorbance values.
* The solution with the lowest absorbance (and thus the highest complexing efficiency) will correspond to the best extraction method which will be used as the main extraction method for the EE.