General Aim
To measure the concentration of proteins in a solution by colorimetric analysis using Bradford assay.

Method
Protein concentration measurement according to Bradford assay method

Learning Objectives (ILOs)
- Identify the amino acids that the Bradford Protein Assay measures.
- Describe the color change that occurs when proteins combine with Coomassie dye under acidic conditions.
- Illustrate the correct standard curve equation for an example BSA standard.
- Interpret the standard curve equation when given example data.
- Calculate the protein concentration of an example.
- Recall the substance commonly used as standards in the assay and the device used to measure the color of the samples.

Theoretical Background / Context
- Bradford's assay is Colorimetric. It's based on color changes that occur when the protein in the sample interacts with a specific reagent causing color changes that can be measured using a spectrophotometer.

Principle of Work
- The Bradford assay is based on the binding of the basic amino acids of a protein to a dye present in Bradford reagent (e.g. Coomassie brilliant blue). This leads to a shift in the absorbance maximum of the dye from 465 to 595.
- After creating a standard curve of protein solutions with known concentrations, the protein concentration of unknown samples can be plotted on the standard dilution curve and calculated.