

Chapter 1 → In this chapter learned about Introduction of Analytical Instrumentation subject. There 2 type of analysis which is qualitative and quantitative analysis. Learned about the 5 steps to do experiment or analysis. To choose which method need to used such as gravimetric, chromatograph or spectrophotometry. Also learned about hazard and do and don't in lab. The unit of measurement.

Chapter 2 → Learned about data handling, error in a chem. When do experiment there must have error in data. This error divide to 3 type. Systematic error is when cause by mean of set differ accepted value. There are 3 also which is instrument, personal and methods. Then there is gross error which the data can't be used. Lastly, random error, which it can't be controllable. The systematic error can be normalized using some formula like mean, standard deviation and so on.

Chapter 3 → This chapter about one of analytical method which is gravimetric. There are 7 steps to do which is preparation, precipitation, digestion, filtration, washing, drying and weighing. Also learned how to measured or get the data using formula.

Chapter 4 → Learned about the 2nd method which is spectrophotometry. There are 2 atomic and molecular. Learned about Beer law, how to calculate the concentration, absorption and energy. Spectroscopy is about wavelength.

Chapter 5 → Molecular spectroscopy is about identification of molecular formula. It is about qualitative methods. This methods can know the molecular structure based on wavelength and energy level. There are single beam and double beam instrument.

Chapter 6 → Atomic spectroscopy, there are 3 which is absorption, fluorescence and emission. 2 of them use diff energy source cathode lamp, fluorescence lamp and plasma respectively. AAS is the easiest and low cost compared to other.

Chapter 7 → Learned about 3rd methods which is chromatography. There are mobile and static phase. The mobile phase will be diff for the sample either gas or liquid. 4 ways to classified

Chapter 8 → Gas Chromatography. The mobile phase will be gas phase or liquid need to be volatile. It need oven for high temp. It can be identify by adsorption & partitioning. Used for separation.

Chapter 9 → Liquid Chromatography. The mobile phase is liquid. It need high pressure in column. It has greater sensitivity and accurate determination.