Lab sheet #3

-Quantitative Protein Estimation of Urine-

-Objectives:

- Quantitative estimation of protein in urine by turbidimetric methods using sulfosalicylic acid.

-Method:

- Set up a series of test tube as follows, label from 1- 6:

Tube	Protein solution (140 mg/dl) (ml)	0.85% Saline (ml)
1	4.5	1.5
2	3	3
3	2.4	3.6
4	1.5	4.5
5	0.9	5.1
6	0.3	5.7

- Label a new set of test tubes **1 to 6**, **blank**, **urine sample** :

1. Add 8 ml of sulphosalisalic acid to each test tube.
2. Into tube 1 pipette 2 ml of protein solution 1(that you prepared before).
3. Into tube 2 pipette 2 ml of protein solution 2 … etc
4. In the **blank** add 2 ml of 0.85% Saline.
5. To **urine sample** add 2 ml of unknown sample.

- Mix the content of each tube well and allow to stand for **five minutes**.
- Use blank to set transmittance 100% at **500nm**.
- Then use solutions from 1-6, to recorded respective transmittance of each suspension.
- Record your results.

-Results:

Tube	Transmittance at 500nm	Protein concentration (mg/dl)
Blank		
1		
2		
3		
4		
5		
6		
Urine sample		

- Plot transmittance against protein concentration (mg/dl).
- Read the protein concentration of urine sample from the standard curve.
- Compare the result you got with the normal range of protein excretion in 24 h urine specimen if you know that the protein excretion in **healthy sample (0- less than 0.150g/24 h).**

➔**Note:** Assuming that the 24 hour urine sample for the patient = 1000 ml.