

Lab sheet #2

-Detection and Estimation of Some Abnormal Constituents in Urine-

Objectives:

- The semi-quantitative detection of some abnormal normal constituents using test-strips.
- The detection of amino acids in a urine sample using ninhydrin.
- The effect of the type of urine collection in the detection of urine constituents.

Method:

1. Detection of some abnormal constituents of urine using test strip:

- 1- In front of you, urine sample 1.
- 2- You have to fill the table in the results by using the test strips.
- 3- Write the clinical diagnosis for the sample.

2. Detection of amino acid in urine sample using ninhydrin:

- 1- As standard, use proline and glycine solutions by preparing two clean test tubes, in the first one, add 1 ml of glycine and in the second one, add 1 ml of proline solution.
- 2- In a third tube, add 1 ml of urine sample A.
- 3- Add a 1 ml of ninhydrin solution to each test tube [*CARFULLY*].
- 4- Boil the contents of each test tube for 2 minutes.
- 5- Record your observations.

3. The effect of the type of urine collection on the detection of urine constituents:

- 1- You have two samples, one is random urine sample, and the other is 24-hour urine sample from the same patient.
- 2- Compare between the two samples for the protein presence using the test strip (positive or negative).

Results:**1. Detection of some abnormal constituents of urine using test strip:**

Test	Sample 1
Volume	3000 ml
Color	
Odor	
pH	
Specific gravity	
Protein	
Blood	
Bilirubin	
Uroblinogen	
Glucose	
Ketone	
Nitrite	
Leukocyte	
Clinical Diagnosis for sample 1: _____	

2. Detection of amino acid using ninhydrin:

Solution	Observation
Glycine	
Proline	
Urine sample	

3. The effect of the type of the urine collection on the detection of urine constituents:

Test parameter	24-hour urine sample	Random urine Sample
Protein (positive or negative)		