**Lab (2) Examination of Urine:**

**Detection and Estimation of Some Abnormal Constituents**

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

**-In front of you, you have (sample 1, sample 2)**

**Use the test strip to detect the abnormal constituents, and fill the table below:**

|  |  |  |
| --- | --- | --- |
| Test | Sample 1 | Sample 2 |
| **Volume**  | **1000 ml** | **3000 ml** |
| **Color** |  |  |
| **pH** |  |  |
| **Blood** |  |  |
| **Bilirubin** |  |  |
| **Uroblinogen** |  |  |
| **Glucose** |  |  |
| **Ketone** |  |  |
| **Clinical Diagnosis:** |  |

1. **Detection of amino acid using ninhydrine**

**-As standard, use proline and glycine**

* **Label three test tubes, A, B, C then add the following:**
* **Method:**
1. **1 ml of glycine solution in tube A**
2. **1 ml of proline solution in tube B**
3. **1 ml of Sample 3 in tube C**
4. **Add a few drops of ninhydrin solution to each tube.**
5. **Boil the contents of each test tube for 2 minutes.**
6. **Record your observations.**

|  |  |
| --- | --- |
| Solution | Observation |
| **Glycine** |  |
| **Proline** |  |
| **Urine Sample 3** |  |

1. **The effect of the type of urine collection on the detection of Urine constituents**

**You have two urine samples , random sample and 24-hour sample from the same patient.**

**Using test strip, compare between the two samples,**

|  |  |  |
| --- | --- | --- |
|  | 24 hour Urine sample | Random urine Sample |
| **Protein**  |  |  |