**BCH 302 practical**

**Lab Sheet #3**

**Proteins-II**

1-Set up 7 tubes as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **Tube** | **Water** | **Bovine serum albumin Standard**  **Concentration**  **[100mg/dl]** | **Milk sample**  **[unknown casein concentration]** |
| **Blank** | 1 ml | - | - |
| **A** | 0.8 ml | 0.2 ml | - |
| **B** | 0.6 ml | 0.4 ml | - |
| **C** | 0.4 ml | 0.6 lm | - |
| **D** | 0.2 ml | 0.8 ml | - |
| **E** | - | 1.0 ml | - |
| **F** | - | - | 1.0 ml |

2-Add 3 ml of Reagent C to all tubes. Mix and let the tubes stand at room temperature for 15 min.

3- Add 0.3 ml of Folin-Ciocalteu reagent.

Note: (Add this reagent to one tube at a time and immediately after adding it mix well).

4- Let the tubes stand at room temperature for 40 min.

5- Read absorbance at 660 nm against the blank.

**-Results:**

|  |  |  |
| --- | --- | --- |
| **Tube** | **Casein std. concentration (mg/dl)**  **[X- axis]** | **Absorbance at 660nm**  **[Y-axis]** |
| **A** |  |  |
| **B** |  |  |
| **C** |  |  |
| **D** |  |  |
| **E** |  |  |
| **F** | ?.................... |  |

6-Plot a standard curve for absorbance at 660 nm against casein std. concentration (mg/dl).

7- From the standard curve find out the unknown concentration of Casein in milk sample.

Exercise:

* **What is standard solutions? Which tubes in your experiment are standard solution?**

…………………………………………………………………………………………………………………………………….

* **Imagine that you have the following results:**

|  |  |  |
| --- | --- | --- |
|  | **Absorbance** | **Concentration** |
| A | 0.608 |  |
| B | 1.083 |  |
| C | 1.431 |  |
| D | 1.725 |  |
| E | 1.944 |  |
| F **(unknown)** | 1.062 |  |

* **What if the absorbance of tube C was 1.006? is it correct? What could be the problem?**

**…………………………………………………………………………………………………………………………………………………….**

* **How you will calculate the concentration of each standard solution?**

**……………………………………………………………………………………………………………………………………………………………….**

* **Draw the curve after calculating the concentration.**