**Lab Sheet 3**

**Factors effecting protein solubility and structure**

**Objectives:**

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**Experiment (1). Effect of salt concentration:**

**Protocol:**

1. In a tube add 2 ml of albumin.
2. Add drops of 0.1M NaCl solution, concentrate your vision on the tube while adding.
3. Record your results.
4. In the same tube add few amounts of 100% solid (NH4)2SO4, shake it well.
5. Record your results.
6. Compare between the two results.

**Results:**

|  |  |
| --- | --- |
| **Tube** | **Observation** |
| Albumin + o.1 M NaCl |  |
| Albumin+100% solid (NH4)2SO4 |  |

**Experiment (2). Effect of strong acids:**

**Protocol:**

1. Label two tubes **A** and **B**.
2. **In tube A:** add 3 ml of conc. nitric acid (HNO3) CAREFULLY.
3. Then, using a dropper add drops of albumin on the inner wall of tube A to form a layer up the acid.
4. **In tube B:** Add 3 ml of the albumin solution.
5. Then add 5-7 drops of TCA solution CAREFULLY.
6. Record your results.

**Results:**

|  |  |
| --- | --- |
| **Tube** | **Observation** |
| Albumin + conc. nitric acid |  |
| Albumin+ TCA |  |

**Experiment (3). Effect of salts of heavy metals:**

**Protocol:**

1. Label two tubes **A**.
2. In tube A and B add 1 ml of Albumin sample.
3. **In tube A:** using a dropper add few drops of AgNO3.
4. Record your results.

**Results:**

|  |  |
| --- | --- |
| **Tube** | **Observation** |
| Albumin + AgNO3 |  |

**Experiment (4). Effect of high temperature:**

**Protocol:**

1. Take 3 ml of protein Albumin.
2. Place it in a boiling water bath for 5-10 minutes
3. Remove aside to cool to room temperature.
4. Note the change.

**Results:**

|  |  |
| --- | --- |
| **Tube** | **Observation** |
| Albumin + heating |  |

**Discussion:**

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