**Lab sheet (3)**

**Qualitative analysis of carbohydrates II**

 **1-Sucrose hydrolysis Test:**

-2 tubes add to each one 4ml of a sucrose solution

-Label the tube, 1st tube (Sucrose with HCl), 2nd tube (Sucrose without HCl)

-In 1st tube add 1ml of conc. HCl

-Heat both tubes for 15min

-After 15 minutes of heating, cool then add 1.5ml of concentrated NaOH to each tube.

-Take 2ml from 1st tube + 2ml benedict’s reagent 🡪 heat in water bath

-Take 2ml from 1st tube + 2.5ml seliwanoff’s reagent 🡪 heat in water bath

-Take 2ml from 2nd tube + 2ml Bendict’s reagent 🡪 heat in water bath

**Results:**

|  |  |
| --- | --- |
| Sucrose without HCL | Sucrose with HCL |
| Benedict's test | Seliwanoff's test | Benedict's test |
|  |  |  |

**2- The Iodine/Potassium Iodide Test:**

1-Two ml of a sample solution is placed in a test tube.

2- Add 2drops of iodine solution and one ml of water. Shake it well

3- A positive test is indicated by the formation of a blue-black complex

**Results:**

|  |  |
| --- | --- |
| Observation | Tube |
|  | (Starch + Iodine) without heating |
|  | (Starch + Iodine) after heating |
|  | (Glucose+ Iodine) |

**3- Hydrolysis of Starch:**

1-Two ml of starch in large tube

2- Add 1ml of Hydrochloric acid, heated in boiling water bath for 15 mints. Then cool down the solution.

3-cool then add 1.5ml of sodium hydroxide to become the base.

4-Divided in two tube (a,b).

5- In tube (a): add 2 drops of iodine solution and note the result.

6- In tube (b): add 1 ml of Benedict reagent, mix and heated for 3 mint and record result.

**Results:**

|  |
| --- |
| Starch with HCL |
| Iodine test | Benedict's test |
|  |  |