جامعة الانبار

كلية : الصيدلة

قسم : فرع العلوم المختبرية السريرية

اسم المادة باللغة العربية: الكيمياء الحياتية

اسم المدة باللغة الإنكليزية: Biochemistry I

المرحلة: الثالثة

التدريسي: المدرس المساعد زهيرعبدالستار احمد

عنوان المحاضرة باللغة العربية: اختبار سلوانوف , اختبار بيال,اختباراليود

عنوان المحاضرة باللغة الإنكليزية: Seliwanoff’s Test, Bial's Test, Iodine Test

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*College of Pharmacy*
*third level*

# practical lab.(10) (Carbohydrates)

# Experiments

## 4- Seliwanoff's Test:

This test is used to distinguish between the aldoses and ketoses due to the presence of the **ketone group**

**Principle:-**

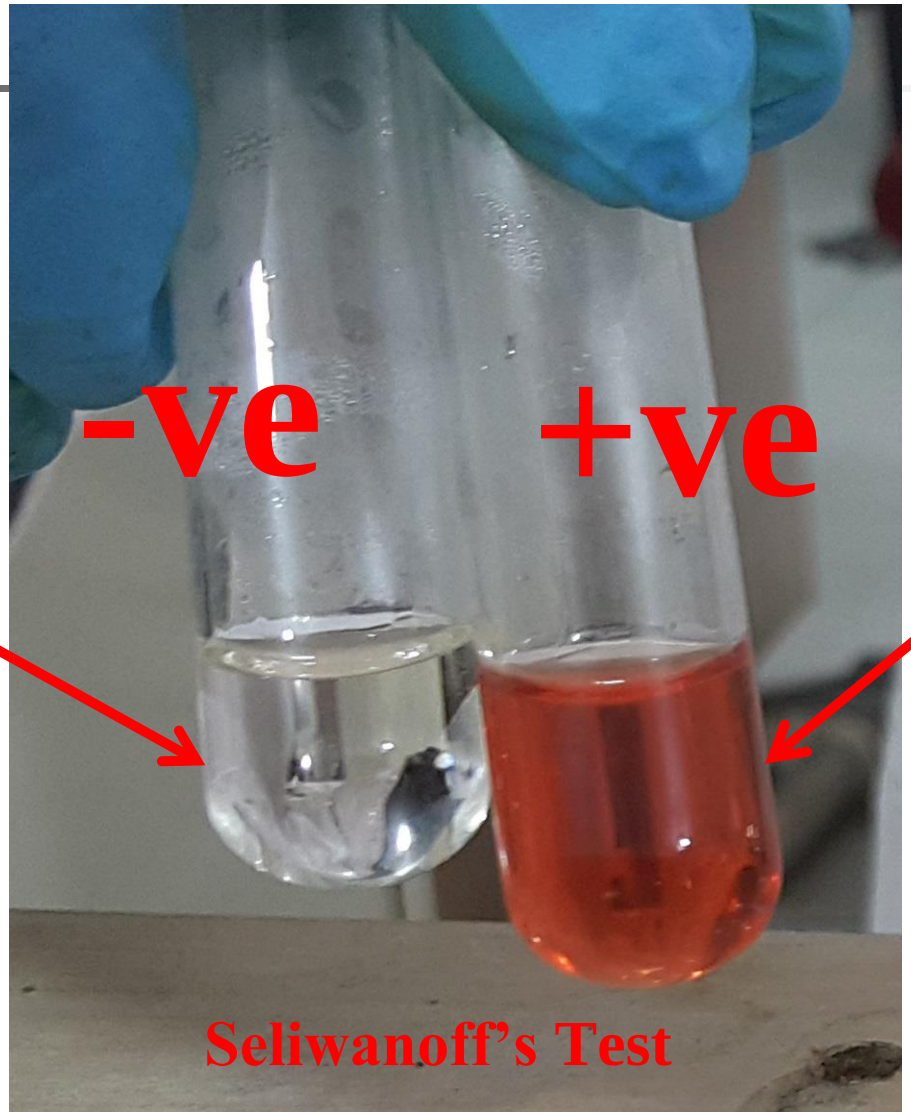
Ketone sugars differ from aldehyde sugars in that they lose water and form furfural more easily. When **fructose sugar** is heated with **HCl**, furfural is formed and condensed with **resorcinol** to form a **red complex.**

# Experiments

## Seliwanoff's Test:

**Method:**

- 1ml of a suger solution+ 2ml of Seliwanoff's reagent
- heat the mixture in Boiling Water Bath for (2min)
- A positive test is indicated by the formulation of a **red product**


-ve
+ve
Glucose
Fructose
Seliwanoff's Test

## 5- Bial's Test:

This test is used to distinguish pentose sugars.

**Principle:**

**Arabinose(pentoses) +HCl _____ Furfural**

**Furfural+ orcinol __ Fe+3 _____ Deep green complex**

## Method:

- 0.5 ml of suger solution+ 1ml of Bial's reagent
- heat the mixture in Boiling  Water Bath for (2min)
- cooled the solution become for green, deep green than blue green.

Deep green complex

# Bial's Test

## 6-Iodine Test:

This test is used to distinguish for polysaccharides.

**Principle:-**

The principle of this test is based on the interaction of iodine ions with chains of the **starch molecule** (**amylose**) and the formation of **blue complexes**.

# Iodine Test:

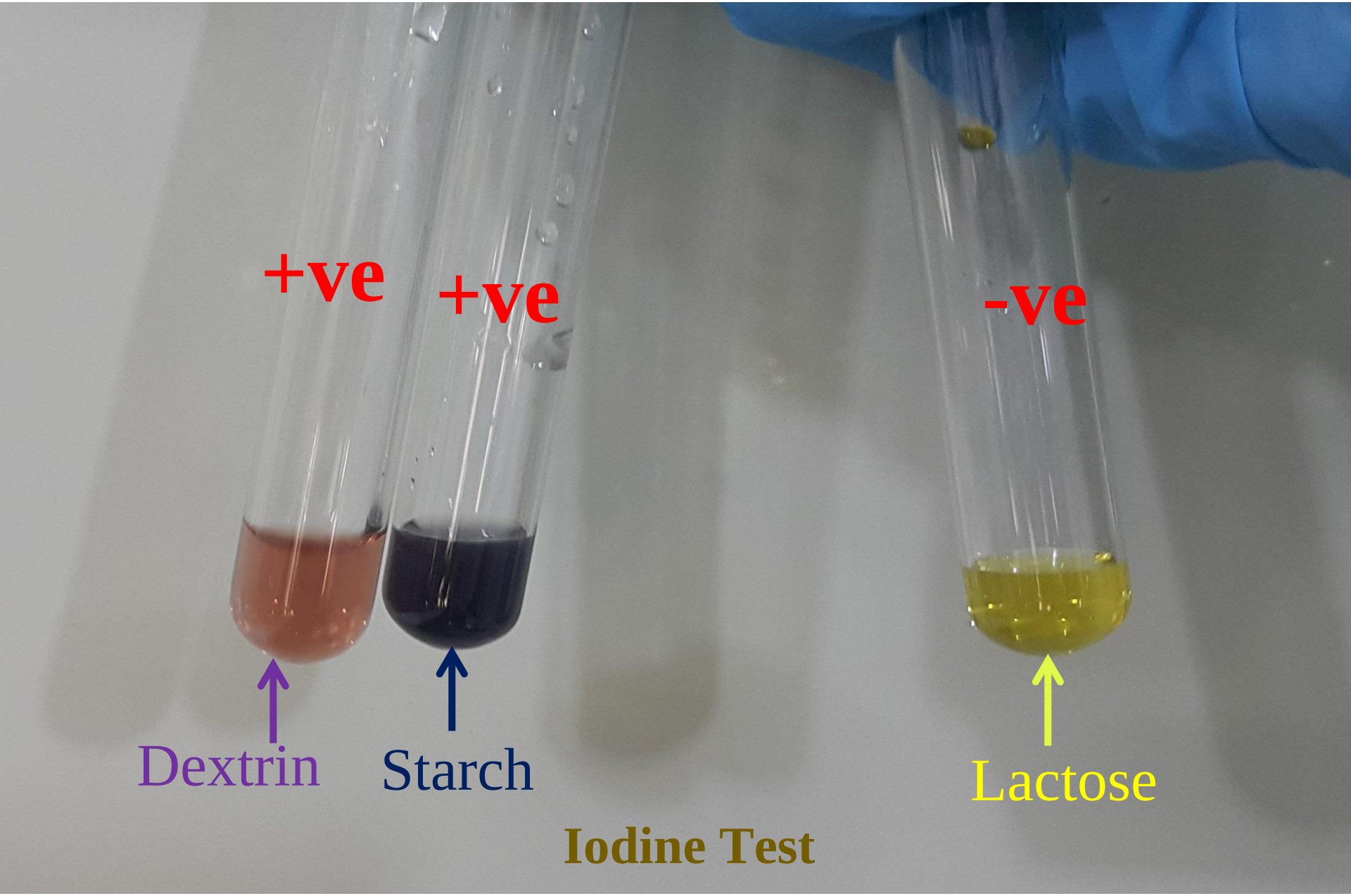
## Method:

- 1ml of starch solution + 1 drop of the iodine solution
- A deep blue colour is produced.

Starch ---------- deep blue colour

Dextrin ---------- purparal colour

Glycogen ---------- Reddish brown colour.


+ve
+ve
-ve
Dextrin
Starch
Lactose
Iodine Test


thank you for
listening