

جامعة الانبار

كلية : الصيدلة

قسم : فرع العلوم المختبرية السريرية

اسم المادة باللغة العربية: الكيمياء الحياتية

اسم المادة باللغة الإنكليزية: Biochemistry I

المرحلة: الثالثة

التدريسي: المدرس المساعد زهير عبدالستار احمد

عنوان المحاضرة باللغة العربية: تفاعل سالكاويسكي , اختبار التزنخ

عنوان المحاضرة باللغة الإنكليزية Salkowski reaction, Rancidity

Test



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third level***



practical lab.(12) (Lipids)



Experiments

2- Salkowski reaction:

This reaction is specific to cholesterol.

Principle:

The Salkowski's test for **cholesterol**, where it interacts with concentrated sulfuric acid (H_2SO_4) that absorbs water and forms two products, one dissolving in **sulfuric acid** and the other in **chloroform**.



Experiments

2- Salkowski's reaction:

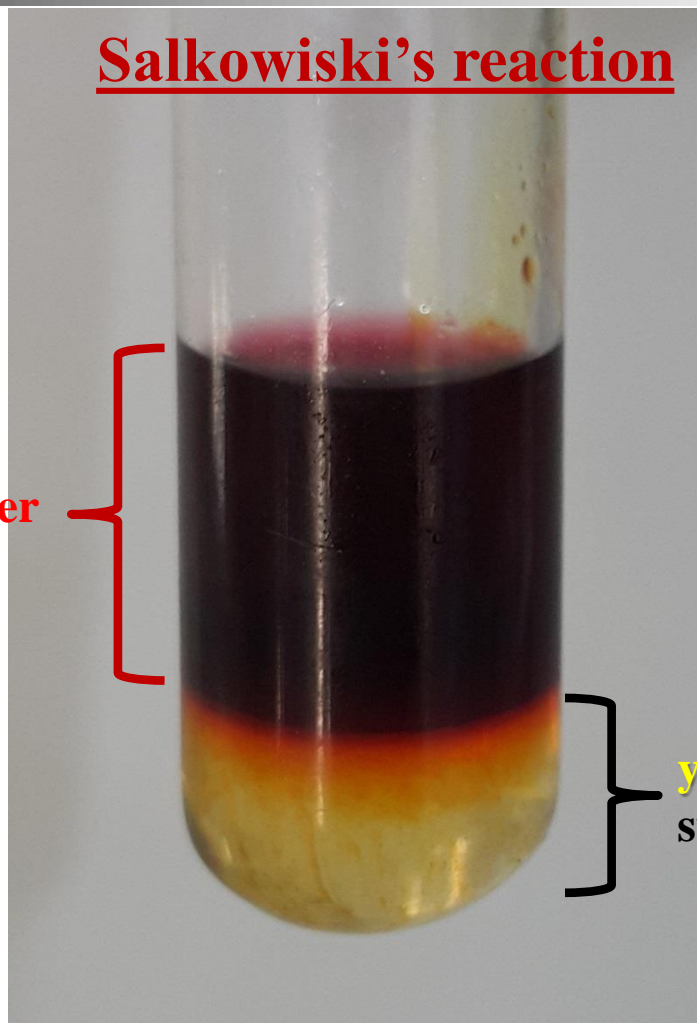
Method:

- put in test tube, 2 ml of a **chloroform cholesterol** solution + 2 ml of slowly **concentrated H₂SO₄** along the side of the test tube.
- Shake the tube well, then leave it until the mixture settles.
- We will notice the formation of two **colored layers**, the **upper layer** which is the **red chloroform layer**, and the **lower** the **acid layer** and it is **yellow**.
- Indicates the presence of **cholesterol**.

Experiments

Salkowski's reaction

red chloroform layer



yellow layer concentrated
sulfuric acid (H_2SO_4)



Experiments

3- Rancidity Test:

It is the detection of unwanted fats and oils left behind for a long time.

It is a chemical change that occurs to fats that are left over for a **long period of time**, to have a distinct taste and smell due to the fatty acids released from them.



Experiments

3- Rancidity Test:

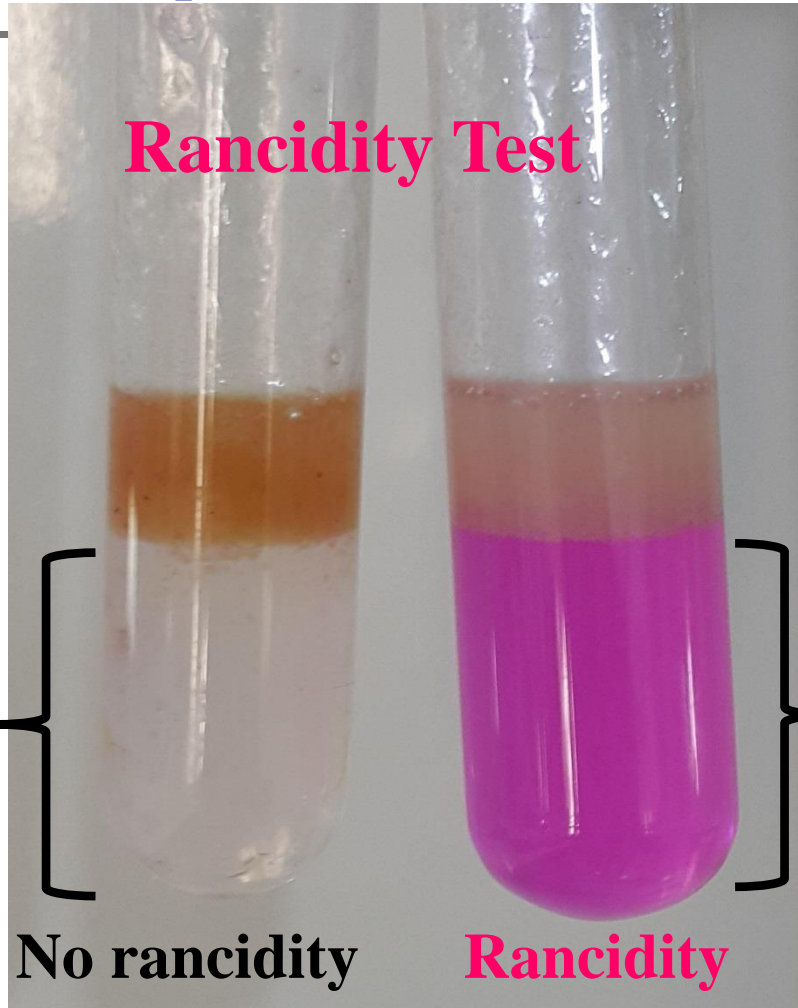
Method:-

- put in test tube, 2ml of NaOH + 3 drops of Ph.Ph
- Add 2 ml of fat or any oil, then shake the mixture well.
- If rancidity is present, it gives a **red** or **pinkish** color.
- If the color appears clear, watery, there is **no rancidity**.

Experiments

Rancidity Test

appears clear, watery



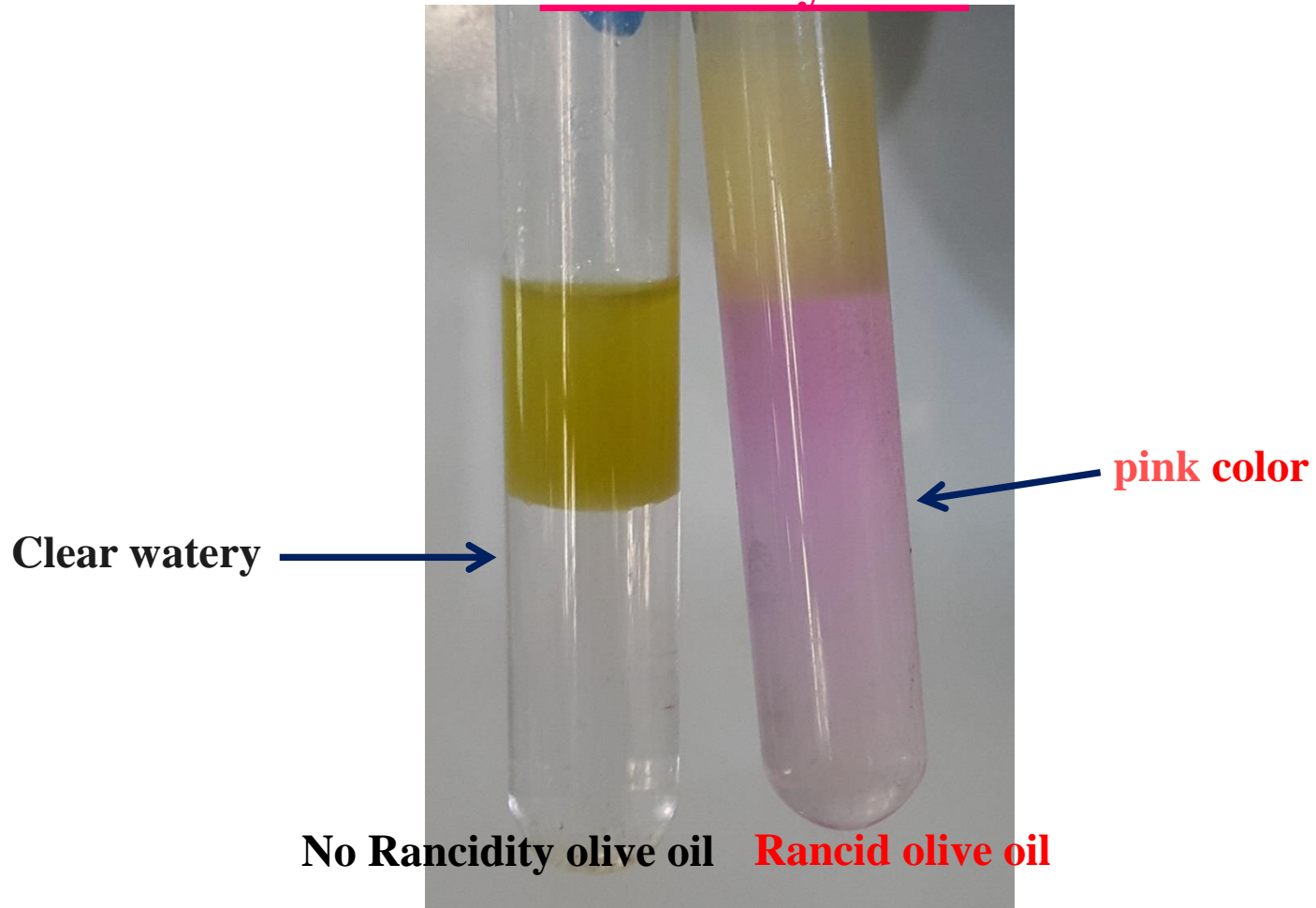
No rancidity

Rancidity

red or pinkish color

Experiments

Rancidity Test





**thank you for
listening**