

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

## 140 Micro

**Lab 4:** Isolation of microbes from different environments



# The Aim

**Isolation of micro organisms from various environments**



# *The five steps :*

1. **Isolation** –separating one species from another.
2. **Inoculation** – introduction of a sample into a container of media to produce a culture of observable growth.
3. **Incubation** – conditions that allow growth eg., temperature ,humidity etc..
4. **Inspection.**
5. **Identification.**

# Incubator

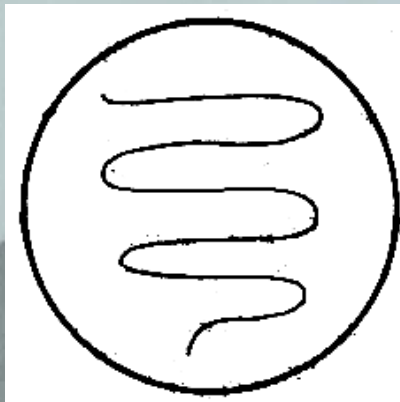
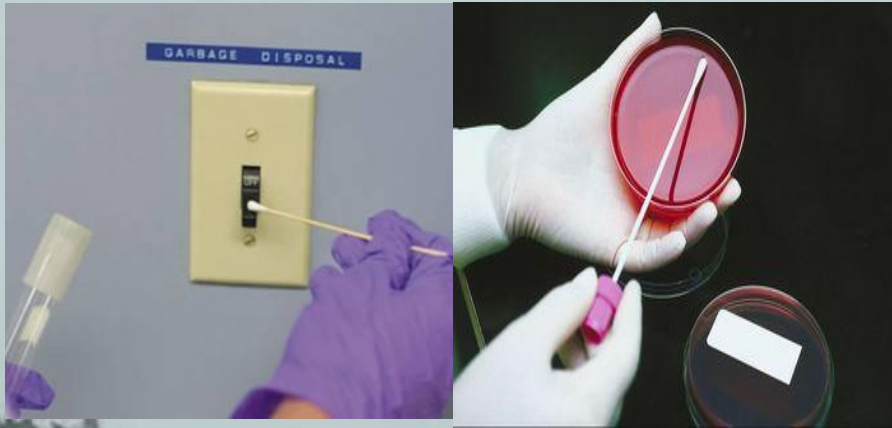
- In biology, an incubator is a device used to grow and maintain microbiological cultures or cell cultures. The incubator maintains optimal temperature, humidity and other conditions such as the carbon dioxide (CO<sub>2</sub>) and oxygen content of the atmosphere inside





# Samples

## Environmental Sample



Surface samples are normally taken using sterile swabs

## Normal Flora Samples



Applying oral sample to surface of agar

# Experiment



# Requirement

- Petri plates with media
- Soil
- Rotten fruit
- Yoghurt
- Mouth swab etc
- Incubator.....

# Various sources of isolation of :

**Bacteria**

**Fungi**





# Isolation of Bacteria

## Yoghurt



- Put a drop of diluted yoghurt on the solid media plate of bacteria .
- Incubate at 37 °C for 1 day.



## Mouth



- Take some saliva with the help of a cotton swab.
- Inoculate it on the media and incubate.



## Hand



- Touch the surface of the solid media plate .
- Incubate 37 °C for 1 day. .



Agar plates are stored upside down to prevent condensation.



**These plates of bacteria** will be incubated at 37° C for 24 hours and then stored at refrigerator until next week when you will observe for results.





# Isolation of Fungi

## Air



- Expose the prepared plate of solid media in air for 5 min
- Close the lid and incubate at 28 °C.
- After 2-5 days fungus observe for grow

## Soil



- Sprinkle a pinch of soil on the solid media plate
- Close the lid and incubate at 28 °C
- After 2-3 days fungus observe for growth.



## fruit

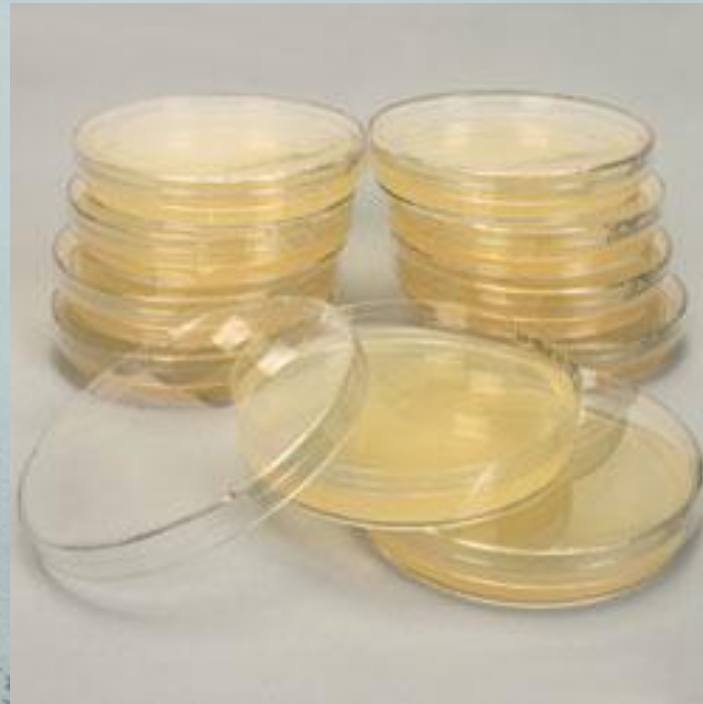


- Clean the rotten part of fruit with alcohol
- Cut a piece and inoculate it on the media plate
- Then incubate ,after 2-5 days fungus will grow

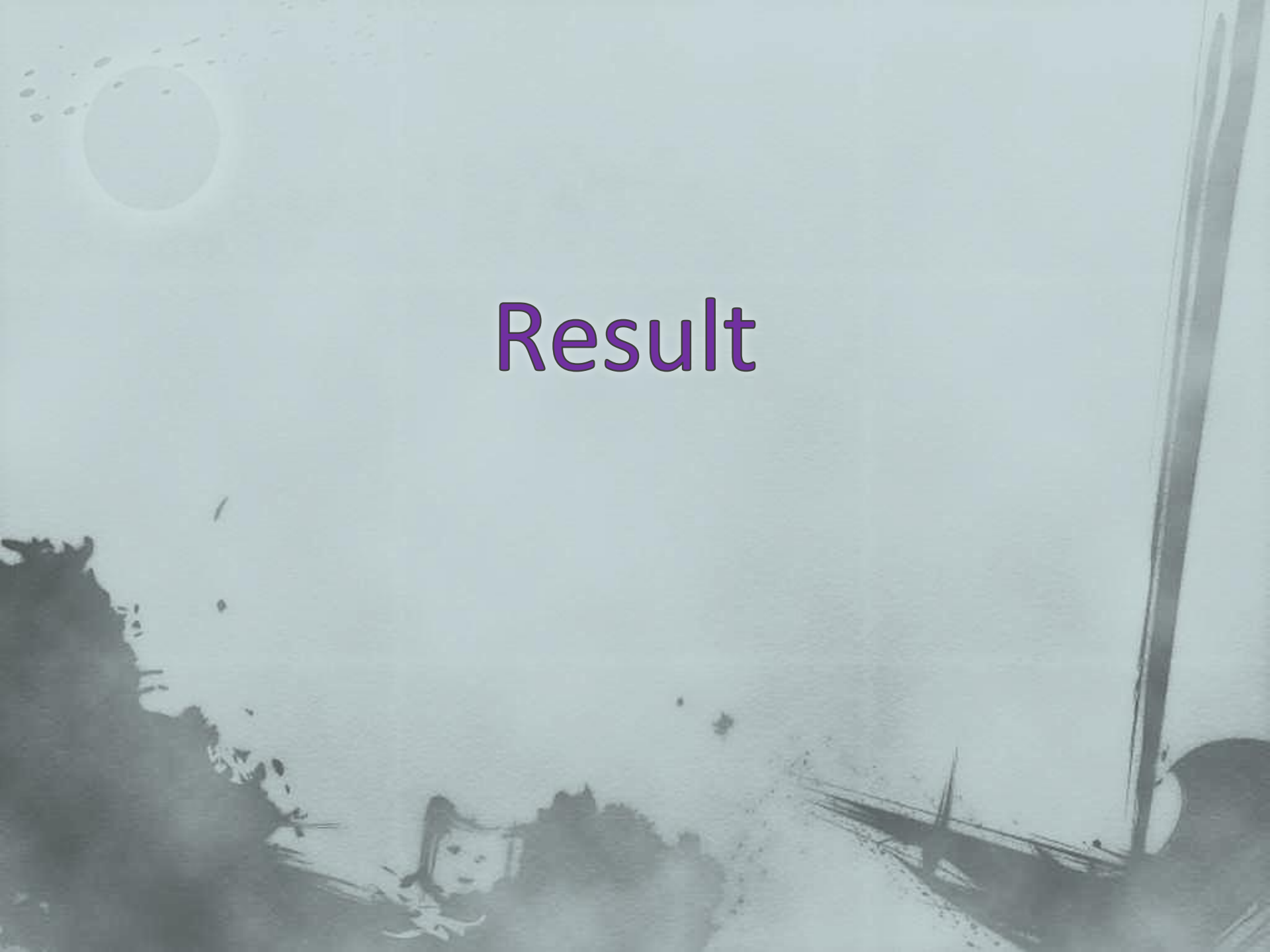




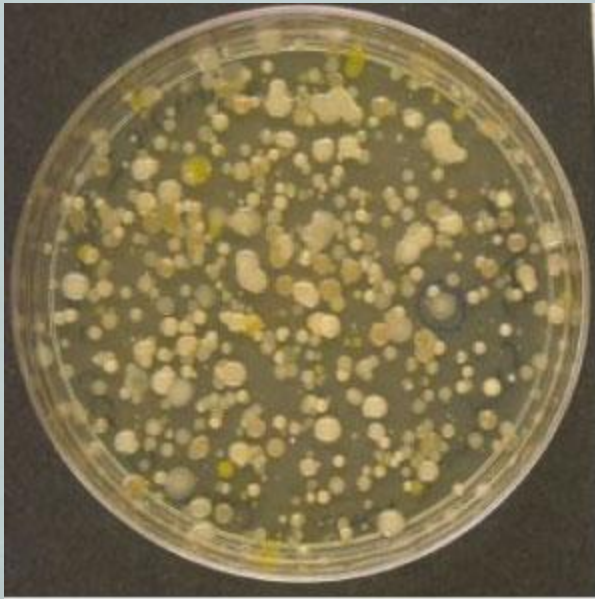
**These plates of fungus** will be incubated straight at 28° C for 2-5 days and then stored at refrigerator until next week when you will observe for results.



# Result



**Bacteria**



**Fungi**



**THANKS...**

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