



Department of biology

((Mycology))

Stage 3

One lecture

Introduction to Mycology

By

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- ❑ Mycology is the science that focuses on the study of fungi.
- ❑ Fungi are Eukaryotic organisms .
- ❑ Fungi are heterotrophic **saprophytism** **parasitism** **Symbiosis**
- ❑ Surrounded by a chitinous cell wall.
- ❑ They reproduce both sexually and asexually or by both methods.

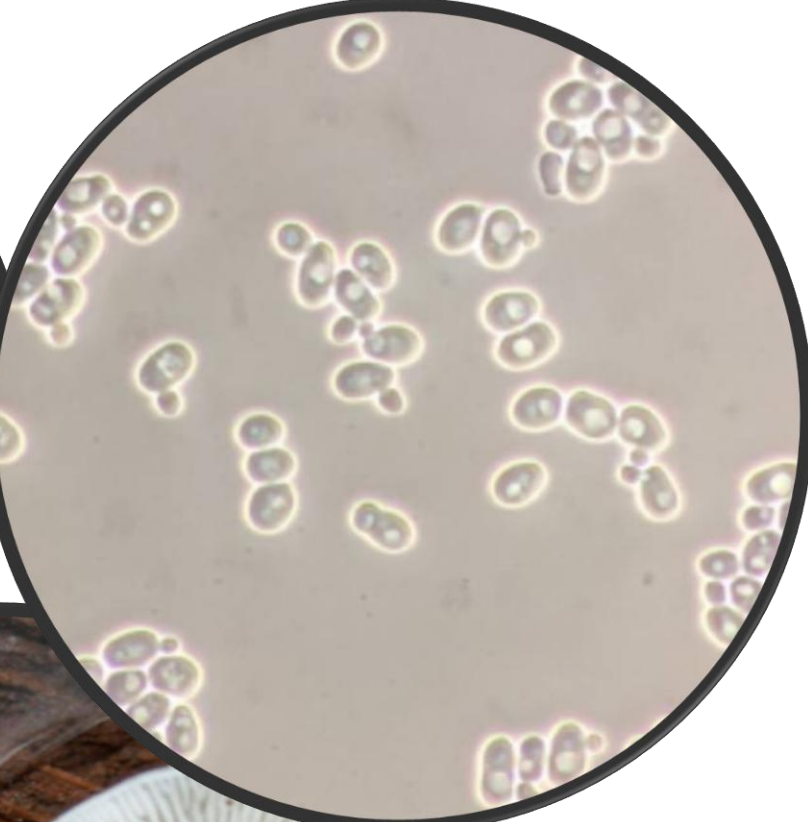
❑ forms Fungi

1-yeast-like form

2-Gelatinous

3-filamentous

4-fleshy



Sterilization

The process of eliminating or destroying all microorganisms, whether in their vegetative form or as spores, present in the medium to be sterilized—whether it is a solution, medium, or pure culture. This is done to allow for the accurate study of the organism's morphological and physiological characteristics, and to avoid incorrect or misleading results.

Physical methods

1-Dry heat Sterilization

A- Incineration heat ; **Bunsen burner** The Bunsen burner flame is used to sterilize loops, scissors, forceps, flask openings, and glass slides



B- Hot air oven ; It is used to sterilize glassware, Petri dishes, and pipettes at a temperature of 180°C for 30 minutes or at 160°C for one hour.



2-Moist heat : to the use of steam for sterilization instead of dry hot air.

The autoclave is a strong metal cylinder designed to withstand high pressure. Water is placed inside it, followed by the materials and instruments to be sterilized. Sterilization in the autoclave is carried out at 121°C under a pressure of 1.5 atm for 15 to 20 minutes.



- 3- Radiations: The harmful effects of certain types of radiation on bacteria are practically utilized for sterilization in areas such as operating rooms, large bacteriological laboratories, and certain food industries.
- Ultraviolet radiation: The wavelength of this radiation falls between 260–270 nanometers



4- Chemical methods: methods are often considered inefficient for sterilization, as they do not kill germs but merely inhibit their activity.

For example:

1-Chloroform: is used to disinfect blood serum.

2-Phenol and cresol :are used to sterilize surgical instruments.

3-Zinc chloride: is used to disinfect countertops and floors.

4-Ethyl alcohol: is used to disinfect hands and various body areas.

Mechanical methods: These methods rely on mechanically removing the living cells from the surrounding medium, where the pores of the filters used trap living cells that are larger than the diameter of the pores.

*Thank
you*