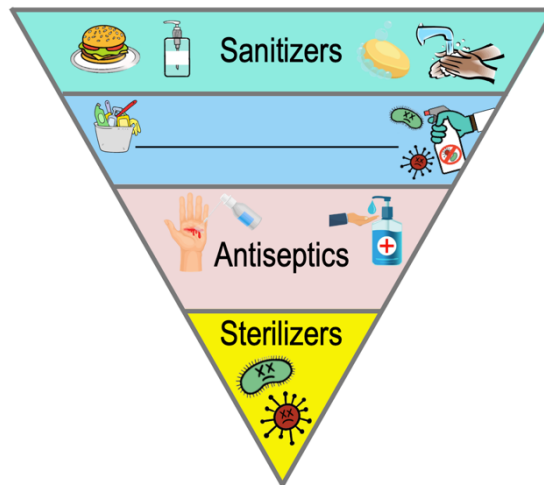


## CONCEPT: CHEMICAL METHODS TO CONTROL MICROBIAL GROWTH

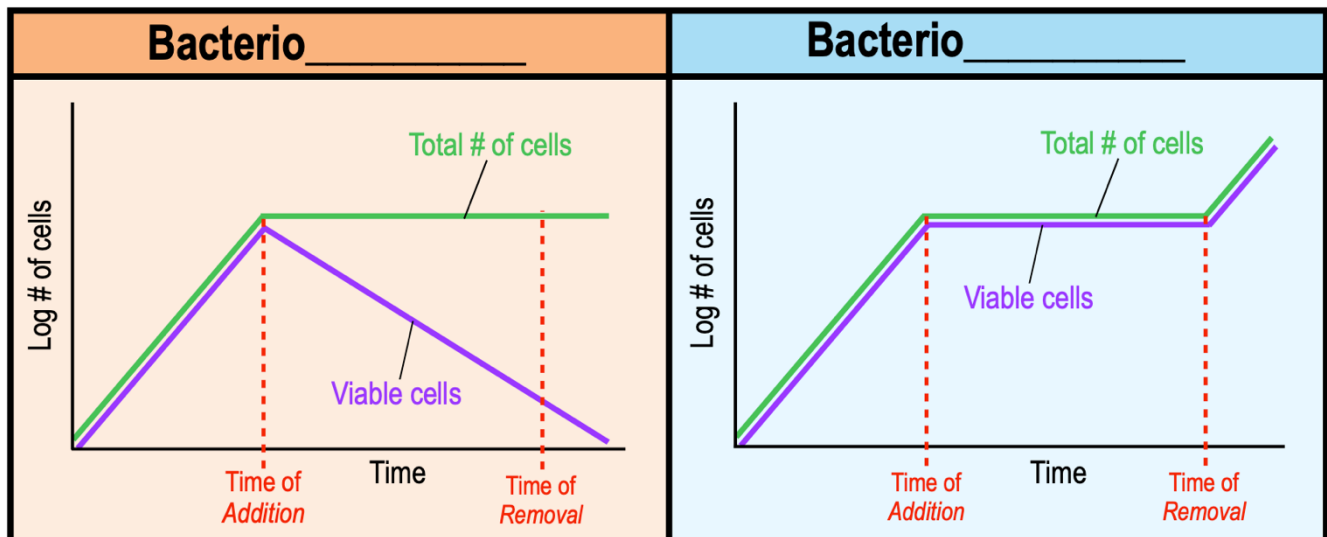
- In addition to physical methods, there are also \_\_\_\_\_ methods to control microbial growth.
- There are several types of *chemical agents* used for controlling microbial growth including:
  - 1 **Sanitizer**: chemical used to *sanitize* by killing mainly bacteria to meet public \_\_\_\_\_ standards by *cleaning*.
  - 2 **Disinfectant (\_\_\_\_\_ or Microbicide)**: chemical used to *disinfect* inanimate (*non-living*) objects.
  - 3 **Antiseptic**: type of *disinfectant* that can be safely used on \_\_\_\_\_ tissue.
  - 4 **Sterilizer**: chemical that *sterilizes* by destroying ALL microbes (except prions), including \_\_\_\_\_.



### Types of Disinfectants

- **Recall: Disinfectant (Microbicide or Germicide)**: chemical used to disinfect *inanimate* (\_\_\_\_-living) objects.
  - Can be grouped based on if they “kill” or “inhibit” & based on the type of microbes they are most effective against.
    - Suffix “-\_\_\_\_\_” = to permanently *kill*.
    - Suffix “-\_\_\_\_\_” = to reversibly *inhibit*.
    - **Bacterio**\_\_\_\_\_ *kill* bacteria.
    - **Bacterio**\_\_\_\_\_ *inhibit* bacterial growth.
    - **Fungi***cides* *kill* fungi.
    - **Fungi***static* *inhibit* fungal growth.

**EXAMPLE:** Effects of bacteriostatic & bactericidal treatments on cell growth.








## CONCEPT: CHEMICAL METHODS TO CONTROL MICROBIAL GROWTH

**PRACTICE:** \_\_\_\_\_ inhibit the growth of bacteria & \_\_\_\_\_ kill bacteria.

- a) Fungistatics; Fungicides.
- b) Bacteriocides; Bacteriostatics.
- c) Bacteriostatics, Fungicides.
- d) Bacteriostatics, Bacteriocides.
- e) Bacteriocides; Fungistatics.

## Selecting the Right Chemical Agent

- Selecting a specific chemical for controlling growth is complex since there are many things to consider.
  - The chemical should \_\_\_\_\_ target microbes *without* causing unintended damage.
- Here are a few other considerations when selecting chemical agents for microbial growth control:

Considerations for Selecting Chemical Agents	
① Activity around _____ matter	
② Chemical _____	
③ _____ capabilities	
④ _____ of the Chemical	
⑤ Environmental _____	

**PRACTICE:** Which of the following is(are) considered when selecting a germicidal chemical?

- a) Toxicity.
- b) Cost.
- c) Compatibility with the material being treated.
- d) Environmental impact.
- e) All the choices are correct.