



# DISINFECTANTS

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## INTRODUCTION

**Disinfection** is the process of destruction or removal of microorganisms and reducing them to the level not harmful to health.

Disinfection generally kills the sensitive vegetative cells but not heat resistant endospores.

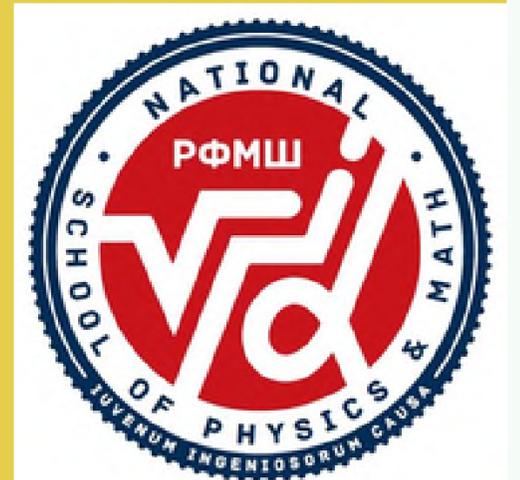
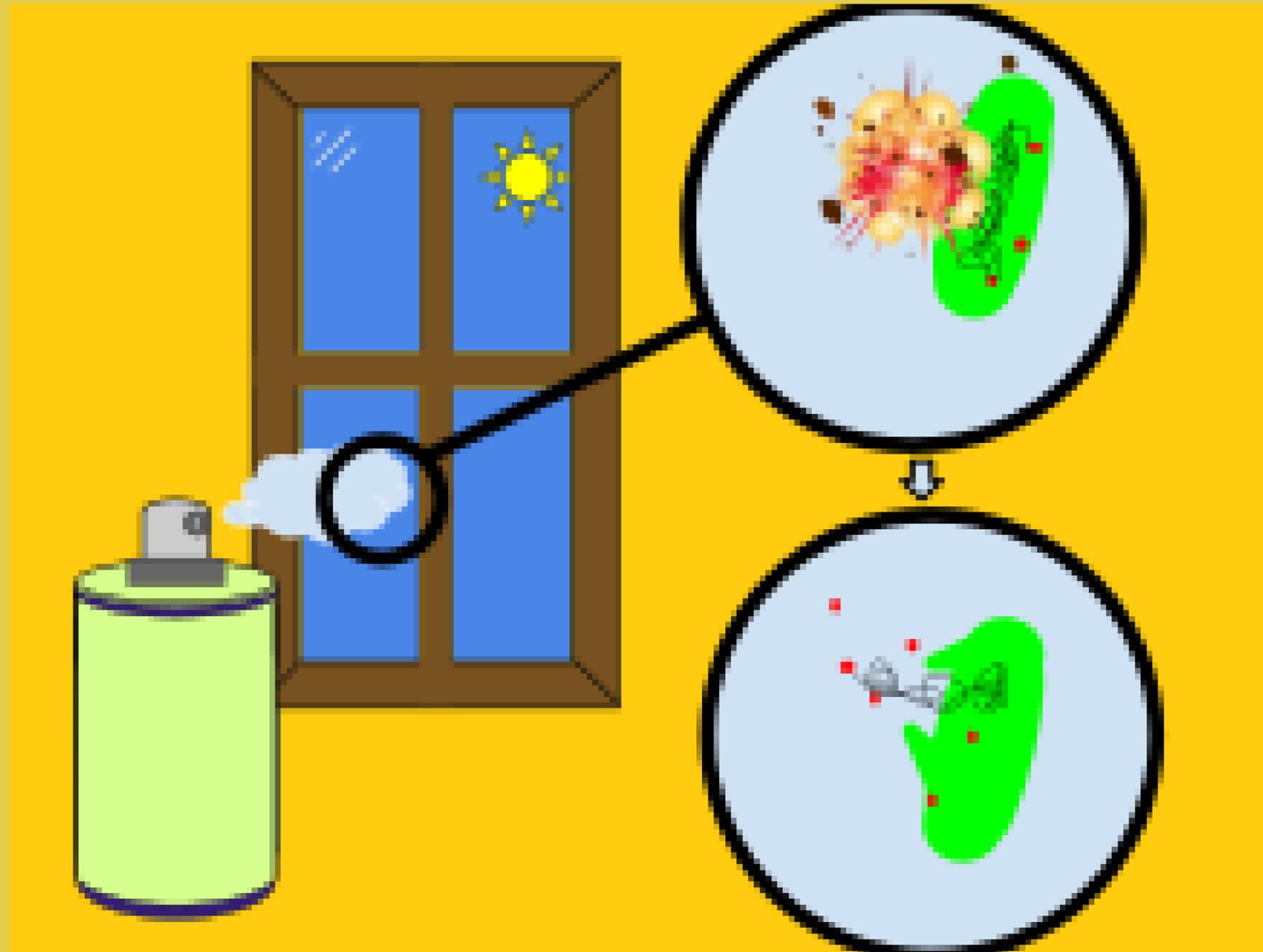
Disinfectants are usually bactericidal but occasionally they may be bacteriostatic

If the object is lifeless, such as working area, dishes, benches, etc. the chemical agent is known as **Disinfectants**.

However if the object is living such as human body tissue, the chemical is known as **antiseptic**.



# PROPERTIES



# PROPERTIES



## BROAD SPECTRUM

Should always have the widest possible antimicrobial spectrum



## EASY TO USE



## ODORLESS

An inoffensive odor would facilitate its routine use



## ECONOMICAL



## NON-TOXIC

Active in the presence of organic matter such as blood, sputum, and feces



## NON-ALLERGENIC



## FAST-ACTING

Should always have rapid lethal action on all vegetative forms of bacteria, fungi, viruses



## NOT AFFECTED BY PHYSICAL FACTORS



## SURFACE COMPATIBILITY

- Should not compromise integrity of dental equipment and metallic surfaces
- Should not cause the disintegration of cloth, rubber, plastics, or other materials



## RESIDUAL EFFECT ON TREATED SURFACES





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# DISINFECTANTS

## CLASSIFICATION

classification:

1. Mechanical
2. Physical
3. Chemical

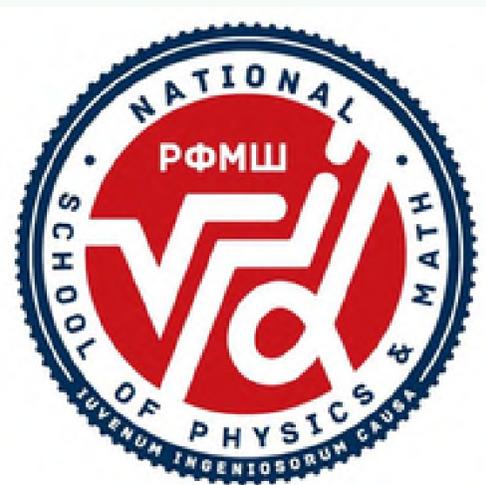




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# MECHANICAL

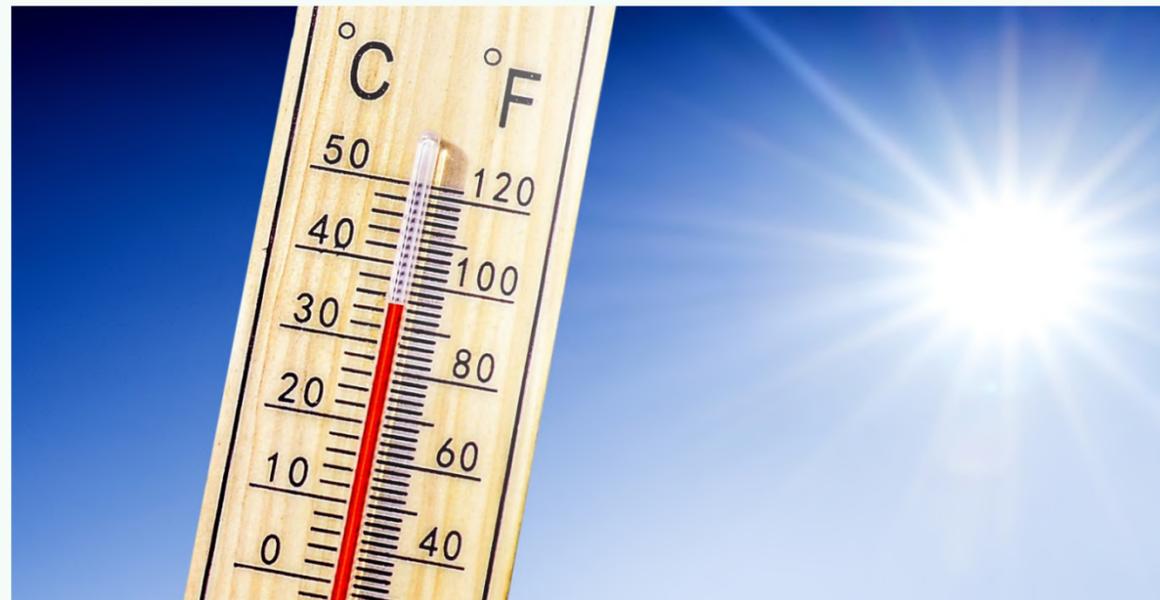
- Filtration
- Ventilation
- Washing





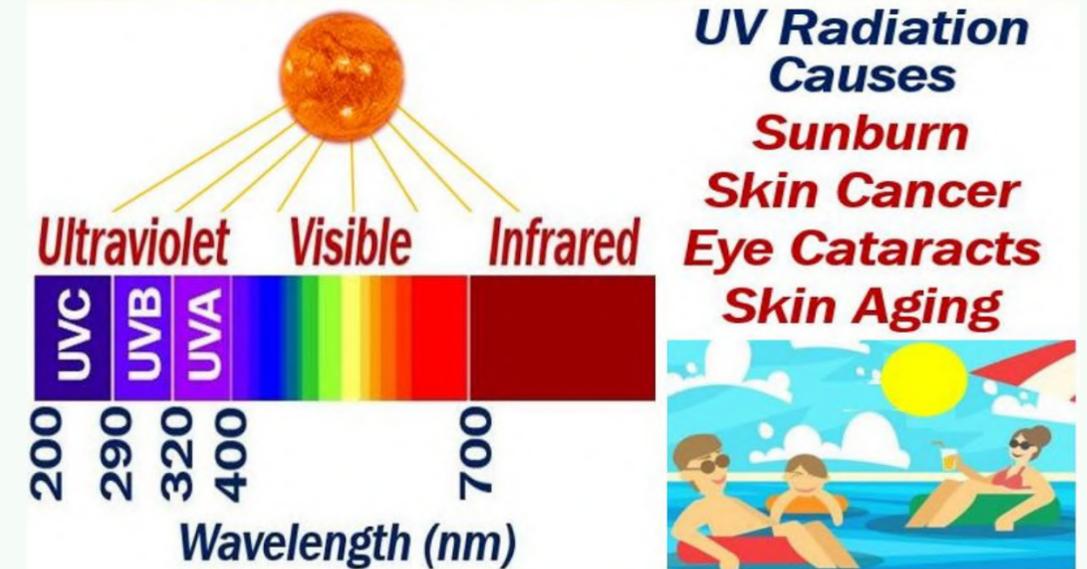
# PHYSICAL

Boiling  
High temperature  
Ultraviolet rays



## Ultraviolet Radiation

*Invisible rays that form part of the energy that comes from the sun.*





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# CHEMICAL

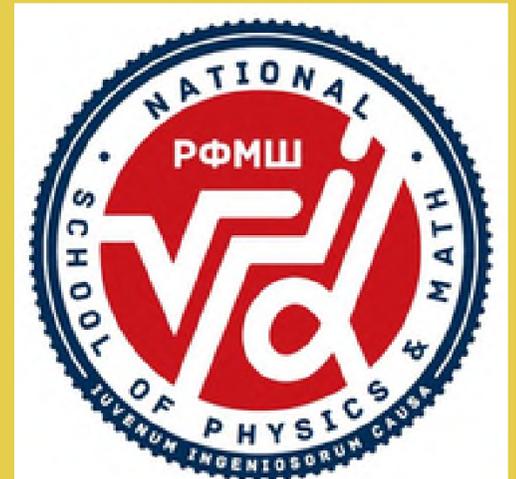
- Active substances approved for disinfecting and sterilizing agents.
- Disinfectant



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# TYPES

Air disinfectants  
Alcohols  
Aldehydes  
Oxidizing agents  
Peroxy and peroxy acids  
Phenolics  
Quaternary ammonium compounds  
Terpenes  
Other  
Non-chemical



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# FACTORS AFFECTING DISINFECTION

1. Concentration of Disinfectants
2. temperature
3. Time of contact
4. pH of environment
5. Surface
6. Formulation of disinfectant
7. Chemical structure of disinfectant
8. Types and number of micro=organisms present
9. Interfering substances in the environment
10. Potentiation, synergism, and antagonism of disinfectants



# EXPERIMENT

What do you need for an experiment?

Cotton swabs

Gloves

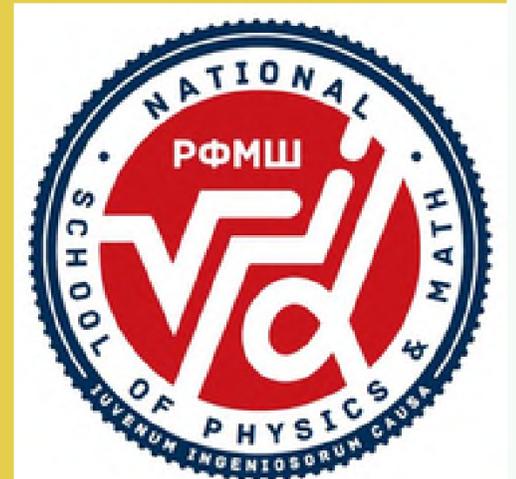
Mask

3 Petri dishes

Agar

Doorhandle

Camera



3 Petri dishes  
with three agar colors:

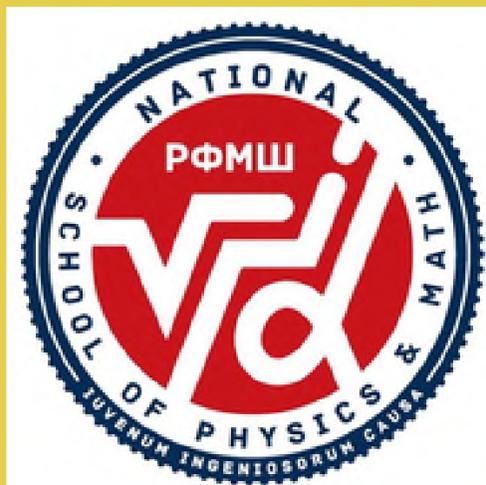
Red

Pink

Transparent

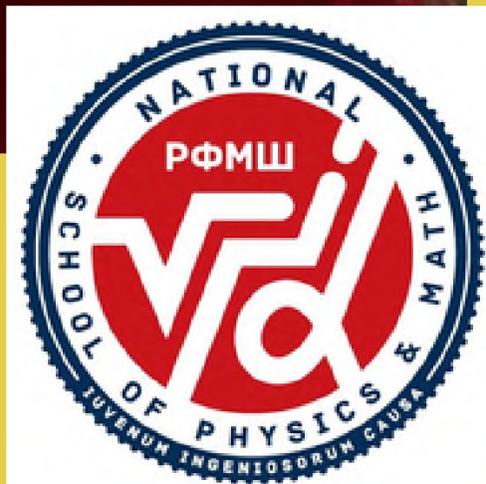








# the result of growing bacteria



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# CONCLUSION



**THANKS  
FOR  
WATCHING!!!**



# References



## Disinfectant

Disinfectants are chemical agents designed to inactivate or destroy microorganisms on inert surfaces. Disinfection does not necessarily kill all microorganisms, especially resistant...

[w wikipedia.org](https://www.wikipedia.org)

Дезинфицирующие средства  
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**Презентация на тему: "Дезинфицирующие средства  
Соколова Н. Ф. ФГУН «НИИ дезинфектологии»...**

Дезинфицирующие средства Классификация: 1. Механические  
2. Физические - высокая температура; - излучения 3.  
Химические

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