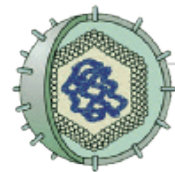


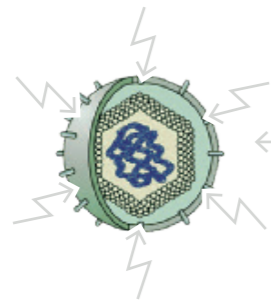
Efficacies of disinfectants: Viruses

Enveloped viruses



Lipid membrane

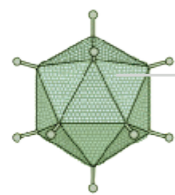
Fragile outer envelope, easy for the disinfectant to destroy



After disinfection

Lipid envelope is no longer functional

Non-enveloped viruses



Capsid

Robust capsule containing genetic information. More difficult for disinfectants to destroy



After disinfection

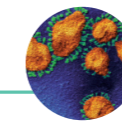
Capsid is no longer functional

Level 1

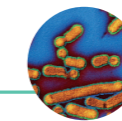
easy to inactivate

All enveloped viruses

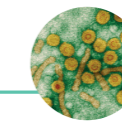
Examples of enveloped viruses



SARS
CoV-2



Influenza
viruses



Hepatitis B
viruses

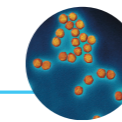
spectrum of efficacy

virucidal activity
against
enveloped viruses

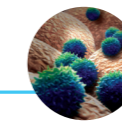
Level 2

a little more difficult to inactivate

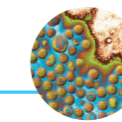
All enveloped viruses
+ these 3 non-enveloped viruses



Adenoviruses



Noroviruses



Rotaviruses

spectrum of efficacy

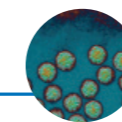
limited spectrum
virucidal activity

Level 3

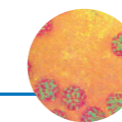
most difficult to inactivate

All enveloped viruses
+ all non-enveloped viruses

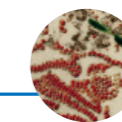
Examples of non-enveloped viruses



Polioviruses



human
Papillomaviruses



Polyomaviruses

spectrum of efficacy

virucidal

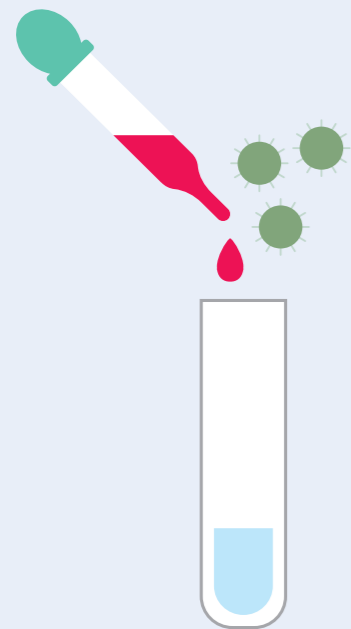


Learn more here

Test methods of disinfectants: Viruses

Testing of efficacy against viruses according to European standard EN 14476

The practical test (*in-vitro* test). This examines how the disinfectant acts on the test pathogens with the addition of an organic load (e.g. protein, blood).

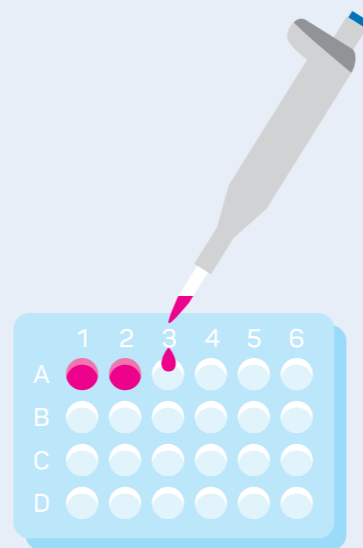


There are specific test pathogens for each spectrum of activity.

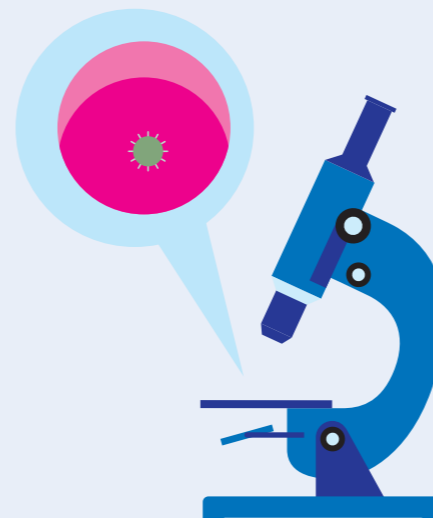
They are mixed together with an organic load (e.g. blood) and the disinfectant used for testing.



After a defined time ...

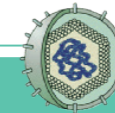


... 1 ml of the mixture is used for further analysis.



In order to be effective within a certain spectrum of activity, the disinfectant must inactivate a certain number of test viruses.

Level 1



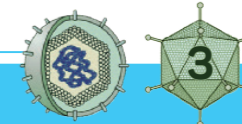
spectrum of efficacy

All enveloped viruses

Test pathogens:
• Vacciniavirus

virucidal activity
against
enveloped viruses

Level 2



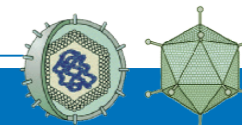
spectrum of efficacy

All enveloped + 3 non-enveloped viruses (Adeno-, Rota- and Noroviruses)

Test pathogens:
• murine Norovirus
• Adenovirus

limited spectrum
virucidal activity

Level 3



spectrum of efficacy

All enveloped + all non-enveloped viruses

Test pathogens:
• Poliovirus
• murine Norovirus
• Adenovirus
• murine Parvovirus
(only for application >40 °C)

virucidal