

Disinfection Protocol for Cryostats

Universal Precautions:

Treat ALL human blood, tissue, body fluids, and matter as if you know for certain that they are infectious.

Definition of Disinfection:

Disinfection is the destruction of pathogens by physical or chemical means. It is less lethal than sterilization. It destroys most recognized pathogens, but not necessarily all microbial forms, such as bacterial spores.

- ❖ **Low-level** disinfection kills most bacteria, some viruses, and some fungi. It cannot be relied upon to kill resistant microorganisms such as Mycobacteria or bacterial spores.
- ❖ **Intermediate-level** disinfection inactivates vegetative bacteria including Mycobacterium tuberculosis, most viruses and most fungi. It does not necessarily kill bacterial spores.
- ❖ **High-level** disinfection causes the destruction of all microorganisms, with the exception of high numbers of bacterial spores.

CM1850 UV Procedure:

1. Wear double gloves, gown, mask, and protective eyewear.
2. Be certain to remove any disposable blades/knives before beginning and disinfect them separately.
3. Trimmings and any solid waste material **MUST** be removed from the instrument prior to disinfection.
4. Spray exposed surfaces with 70% alcohol or Cryofect disinfectant (Cryofect cannot be sold in the USA.). Make certain that the sliding window is properly closed and select the appropriate exposure time. The CM1850 UV provides a safe and convenient method for disinfection of surfaces and air within the irradiated working space *at cold temperatures* and significantly reduces the risk of infection.
 - a. Intermediate-level disinfection can be accomplished using short-term irradiation (30 minute cycle).
 - b. High-level disinfection can be accomplished using long-term irradiation (180 minute cycle).
 - c. Please note that ALL visible contamination must be removed from the chamber before using the UV C light and that the germicidal effect of the radiation is *restricted to directly illuminated areas*. Exposure to UV irradiation cannot replace chemical disinfection.
5. For more extensive disinfection, bring the cryostat to room temperature and wipe the exposed surfaces with an EPA approved tuberculocidal disinfectant. The EPA publishes a list of approved disinfectants. Follow the directions written on the containers.
6. Allow at least three hours to take the cryostat down to operating temperatures.

Procedure for any other cryostat:

1. Wear double gloves, gown, mask, and protective eyewear.
2. Be certain to remove any disposable blades/knives before beginning and disinfect them separately.
3. Trimmings and any solid waste material **MUST** be removed from the instrument prior to disinfection.
4. Disinfection must be performed at room temperature using a tuberculocidal disinfectant. The EPA publishes a list of approved disinfectants. Follow the directions written on the containers.
5. If a tuberculocidal disinfectant is not available, disinfect with 5% bleach. Let the solution sit for 10-20 minutes, drain, and then wipe with absorbent towels.
6. Follow with 70% alcohol. Let the solution sit for 10 minutes, drain, then wipe with absorbent towels. Follow with 100% alcohol. Drain, and allow to air dry or wipe with absorbent towels. Lubricate as required.