

Ready-to-Use BBP Disinfectant Product Guide for Research Labs

This document provides information regarding disinfectants that are EPA-registered for the destruction of HIV and Hepatitis B virus and satisfy the requirements of the OSHA Bloodborne Pathogen (BBP) Standard. Disinfectants meeting these criteria must be used for terminal disinfection of surfaces following the use of human-derived materials (including cell culture). The products listed below are examples of ready-to-use products with no need to mix or measure. They all have a short contact time and are formulated for extended shelf life. Before selecting one of these or any other disinfectant product, you should confirm with the manufacturer that the product has a current EPA-registration for the destruction of HIV and HBV.

| Product Name | Manufacturer | Active Ingredients | Shelf Life (from manufacture date) | Contact Time* | Available Through |
|------------------------|--------------------|---|------------------------------------|---------------|-----------------------|
| Super Sani-Cloth | PDI Healthcare | Quaternary ammonium chlorides + alcohol | 24 months | 2 minutes | Fisher Scientific VWR |
| CaviCide | Metrex | Quaternary ammonium chlorides + alcohol | 24 months | 2 minutes | Fisher Scientific VWR |
| Conflikt | Decon Laboratories | Quaternary ammonium chlorides | 12 months | 5 minutes | Fisher Scientific VWR |
| Coverage Spray TB Plus | Steris | Quaternary ammonium chlorides + alcohol | Contact manufacturer | 2 minutes | Fisher Scientific |
| Virex TB | Diversey | Quaternary ammonium chlorides | 36 months | 1 minute | Fisher Scientific |

**The contact time listed in the table is for destruction of HIV/HBV/HCV; other organisms may require more or less contact time. Check the product label for organisms the product was tested against, and what contact time is needed. For SARS-CoV-2, the product should be EPA-rated and have a disinfection claim against human coronavirus.*

What about bleach?

Bleach is a common, effective, and low cost disinfectant. However, there are a number of disadvantages to its use in a research lab setting.

- Bleach is a sodium hypochlorite solution with most commercial bottles containing around 5-6% active ingredient. For disinfection purposes bleach is most effective at a 0.5-0.6% solution so it needs to be diluted 1 part bleach to 9 parts water. Since it degrades rapidly, bleach solution should be mixed fresh daily for use.
- Surface disinfection contact time is at least 10 minutes.
- Household bleach generally has a pH of 11 to 13, so it is corrosive to certain surfaces (metals, fabrics) and will cause injury when it comes in contact with skin or eyes.
 - Whenever possible, pour bleach behind a sash or shield to provide enhanced splash protection.
 - Splash goggles, chemical-resistant gloves, and lab coat are required for all bleach pouring activities including discharge of bleach-containing waste down the sink.
- Bleach should never be mixed with ammonia-based products as this can generate deadly chlorine gas.
- **DO NOT** autoclave liquid wastes containing bleach. This can lead to potentially explosive conditions and to corrosion of the internal parts of the autoclave.

Important General Disinfection Tips:

- Note the expiration date of your ready-to-use disinfectant. Although the product will be more stable than a mix-to-use disinfectant, it will still expire.
- Organic materials reduce the efficacy of most disinfectants. Remove any visible contamination before applying the disinfectant for the appropriate contact time (amount of time the surface needs to remain wet) to get the best disinfection result.
- Spraying disinfectant directly onto a contaminated surface (including gloves) may actually spread contamination through the force of the spray striking the contaminated surface. Consider saturating an absorbent cloth and applying the disinfectant through wiping when possible.

Need more assistance regarding disinfectants?

Please contact VEHS Biosafety at 322-2057 or biosafety@vumc.org