**Decontamination of Lab Area**

**Alcohols:**Contact time: immediate to 10 minutes. A 70% ethanol or isopropyl solution is made by adding three parts water to seven parts 95% ethanol. Methanol should not be substituted for ethanol or isopropyl, because it is not as effective and is a health hazard. Always keep ethanol and isopropyl solutions away from potential sources of ignition. These solutions should be labeled and dated, with an expiration date of 180 days.

**Hypochlorite (Bleach):**Contact time: 10 minutes. A 10:1 bleach solution/Sodium Hypochlorite (also called 10% bleach solution) is made by adding nine parts water to one part laboratory bleach (sodium hypochlorite). Bleach solution is corrosive to stainless steel; therefore, thorough rinsing must follow its use in the biosafety cabinet. Do not autoclave bleach solutions. The present stock bleach solution is 12.5% Sodium Hypochlorite, so a 10:1 solution will result in a final concentration of 1.25%. The diluted solution should be labeled and dated, with an expiration date of 30 days. Note that household bleach is 5.25% Sodium Hypochlorite and can be used in a 10:1 solution, but has an expiration date of one day. To be an effective disinfectant for most non-HIV pathogens (HBV, HCV, etc.), the solution should be at least 0.5% but less than 2%.

Hypochlorite solutions are classified as irritant and corrosive. Appropriate precautions should be taken when using hypochlorite products: read labels carefully, adhering to cautionary warnings and following usage directions. Chlorine solutions should never be mixed or stored with cleaning products containing ammonia, ammonium chloride, or phosphoric acid. Combining these chemicals will result in the release of a chlorine gas, which can cause nausea, eye irritation, tearing, headache, and shortness of breath. These symptoms may last for several hours. If you are exposed to an unpleasantly strong odor following the mixing of a chlorine solution with a cleaning product, leave the room or area immediately until the fumes have cleared completely.

To prepare disinfectant bleach solutions:

* Using **12.5% hypochlorite**(Top-Chlor) **in a 1:10 dilution**(one part Top-Chlor and nine parts water) yields 12,500 ppm or a 1.25% hypochlorite solution, **for use within 30 days.**
* Using **12.5% hypochlorite**(Top-Chlor) in a **1:20 dilution**(one part Top-Chlor and nineteen parts water) yields 6,250 ppm or a 0.625% hypochlorite solution, **for use within 24 hours.**
* Using **5.25% hypochlorite**(Clorox) in a **1:5**dilution (one part Clorox and four parts water) yields 10,500 ppm or a 1.05% hypochlorite solution, **for use within 30 days.**
* Using **5.25% hypochlorite**(Clorox) in a **1:10**dilution (one part Clorox and nine parts water) yields 5,250 ppm or a 0.53% hypochlorite solution, **for use within 24 hours.**