



SODIUM HYPOCHLORITE SOLUTION



INTRODUCTION

Sodium hypochlorite, commonly known as bleach, is most frequently used as a disinfecting agent. It is a broad-spectrum disinfectant that is effective for the disinfection of viruses, bacteria, fungi, and mycobacterium. However, sodium hypochlorite is NOT effective in the disinfection of bacterial spores and prions.

CONCENTRATION & DOSE

Recommended dilution 1:100 of 5% sodium hypochlorite is the usual recommendation. Use 1 part of bleach to 99 parts cold tap water (1:100 dilution) for disinfection of surface.

The appropriate concentration of sodium hypochlorite for disinfecting general liquid biological waste is 5000 ppm, approximately 0.5%. Household bleach is 5-6% sodium hypochlorite; therefore a 1:10 (v/v) dilution of bleach to liquid biological waste is appropriate.

For biological waste containing a high organic load (e.g. blood, proteins or lipids) the appropriate concentration of sodium hypochlorite is 10000 ppm. approximately 1% therefore a 1:5(v/v) dilution of bleach to liquid biological waste is appropriate.

Minimum Contact Time :

Surface disinfection - 1 min

Liquid waste disinfection - 20min

Sodium hypochlorite is known to be corrosive to metals, therefore, it important to wipe down metal surface with water or ethanol after treating them with a bleach solution.

STABILITY & STORAGE

Bleach should be stored between 2-8° C. An undiluted house hold bleach has a shelf life of six months to one year from the date of manufacture, after which bleach degrades at a rate of 20% each year until totally degraded to salt and water and a 1 :10 bleach solution has a shelf life of 24 hours.

Bleach must be stored separately from corosives, soaps, detergents or other cleaning products.

HEALTH & SAFETY

Minimum personal protective equipment (PPE) that must be worn when preparing or handling a sodium hypochlorite solution:

- Nitrile Rubber Gloves.
- Approved Safety Gloves
- Respiratory protection (NIOSH Approved) should be used any time
- Lab coat

If sodium hypochlorite comes in contact with other cleaners containing ammonia or chlorine compounds, fatal levels for ammonia gas can be produced. never mix bleach with other chemicals

In the case of an exposure to eyes or skin, flush the area of 15 to 20 minutes witg running water.