



Pure & Clean DISINFECTANTS CHART

| | Sodium Hypochlorite 5.25% | Phenols | Quaternary Ammonium Compounds | Hydrogen Peroxide | Ethanol (ethyl alcohol) | Iodophors | Pure & Clean Disinfectant & Wound Care - Hypochlorous Acid |
|---------------------------------------|--|--|---|--|--|--|--|
| Disinfection Level | Low/ Intermediate | Low | Low | High | Low/ Intermediate | Low | High |
| Pre-cleaning required? | Yes | Yes | Yes, | Yes | Yes | Yes | Yes |
| Shelf Life | Unmixed with water: 3months. Mixed: 24hours. Keep in an airtight container away from light. | 1 year in a sealed container if undiluted. | 2 years in an airtight container if undiluted. | 2 years in an airtight container away from light. | 2 years if undiluted. Store in a cool, well-ventilated area. | 2 years if undiluted. Once solutions have lost their brown color to become colorless, they are no longer active. | 18 months |
| Health risks | Irritant to mucous membranes, eyes and skin. If mixed with ammonia or acidic products can create poisonous chlorine gas. | Carcinogenic. Irritant to mucous membranes, eyes and skin. | Can cause dermatitis. Irritant to mucous membranes. Can trigger asthmatic symptoms. | Irritating to eyes, skin at mucous membranes at 6% concentration. | Inhalation or contact with material may irritate or burn skin and eyes. Vapors may cause dizziness or suffocation. | Non-toxic and non-irritating in normal use. Occasional hypersensitivity reactions. | Non-toxic and non-irritating |
| Controls | Personal protective equipment and increased ventilation. | Personal protective equipment and increased ventilation. | Personal protective equipment and increased ventilation. | Personal protective equipment including goggles and increased ventilation. | Ventilation. | Personal protective equipment if sensitive. | None. |
| Environmental Issues/ Disposal | Toxic to aquatic organisms. | Toxic to all animals including aquatic organisms. | Very toxic to aquatic organisms. | Small amounts of dilute hydrogen peroxide can be flushed down a | None. | Iodophors are highly toxic to aquatic life. Waste solutions may | None. |



| | | | | | | | |
|---------------------------------|--|--|---|---|---|--|---------------------|
| | | Remains persistent in the environment. Subject to disposal restrictions. | | sink with a large quantity of water, unless local rules prohibit this. Larger amounts should be treated before disposal. | | be discharged into sewers (subject to approval by the appropriate authority), where they will gradually be inactivated by proteins. | |
| Additional Disadvantages | Can cause damage to floor finishes, metals, carpets, clothing and other fibers at higher concentrations. Must be stored separately from ammonia and flammable products. Rinsing required in applications where direct skin or oral contact occurs (children's toys). Inactivated in the presence of organic matter and by light and some metals. | Not for use on food preparation surfaces or food utensils and in nurseries or crèches. May damage floor finishes and other surfaces. Leaves residue, rinsing required. Not effective against non-enveloped viruses such as norovirus and spores and some gram-negative bacteria. | Can easily become contaminated. Not effective against C.difficile rotavirus and some gram-negative bacteria. Leaves residue, rinsing required. QUATs are generally inactivated by organic matter, detergents, soaps and hard water | Rinsing required in applications where direct skin or oral contact occurs (children's toys). 7.5% hydrogen peroxide can cause discoloration of black anodized metal finishes and bleaching of fabric. Cosmetic and functional material compatibility concerns with brass, zinc, copper, and nickel/silver plating. Inactivated by organic matter. | Ineffective against <i>Helicobacter</i> and <i>C. difficile</i> . Can swell, harden and bleach rubber and certain plastic tubing and tiles after prolonged and repeated use. Activity limited in presence of organic matter. Highly flammable therefore must be stored in a cool ventilated area. Evaporates rapidly, making extended exposure time difficult to achieve unless the items are immersed. | Activity reduced by high levels of organic matter. Can become contaminated therefore solutions need to be changed regularly. Cannot use other products in conjunction with iodophors. Not recommended for concrete surfaces. Expensive. Ineffective against some gram-negative bacteria. | 18 month shelf life |

| | | | | | | | |
|-------------------------------|--|--|--|---|--|--|--|
| Advantages | Can remove biofilms and kill spores at high concentrations. Broad spectrum of antimicrobial activity. Does not leave toxic residues, unaffected by water hardness, inexpensive and fast acting. | Readily available, maintains some activity in hard water and in the presence of organic matter and has some residual activity after drying. | Readily available and does not cause damage to surfaces. | Readily available, non-corrosive when diluted, no disposal issues, odor or irritation issues. Only chemical disinfectant able to inactivate <i>C. parvum</i> (at 6% and 7.5%). | Retains similar bactericidal activity in the presence of organic matter. | Stable over a wide pH range (pH 3–9), does not require exposure monitoring, non-staining and relatively free of toxicity. Retains some biocidal activity in the presence of organic matter. | The solution is nontoxic to biologic tissues and non-corrosive to surfaces. Can remove biofilms at higher concentrations (>5% [v/v]). |
| Antimicrobial Activity | Bactericidal, fungicidal, viricidal, tuberculocidal and sporicidal at high concentrations. Kills: <i>M. tuberculosis</i> , HBV, HAV, HIV at 1000ppm available chlorine, <i>C. difficile</i> at 5000 ppm in under 10 minutes, <i>E. coli</i> in 30seconds, <i>H. pylori</i> at 150 ppm in 30seconds, Norovirus at 1000ppm in 1min, SARS at 1000ppm in 1min, anthrax at 5250ppm in 5 mins, <i>B.</i> | Bactericidal, fungicidal at 2%, viricidal, and tuberculocidal. Not sporicidal. Kills: HIV at 0.5% and Hydrophilic viruses at 5% in under 10 minutes. | Generally fungicidal, bactericidal, and viricidal against lipophilic (enveloped) viruses. Not sporicidal and generally not tuberculocidal or virucidal against hydrophilic (nonenveloped) viruses. Kills: <i>E. coli</i> , <i>H. pylori</i> , <i>S. aureus</i> , vancomycin-resistant <i>Enterococcus</i> | 7% stabilized hydrogen peroxides sporicidal after 6 hours of exposure, mycobactericidal in 20 minutes, fungicidal in 5 minutes, viricidal in 5 minutes and bactericidal in 3 minutes at a 1:16 dilution. Kills: <i>E. coli</i> , <i>Streptococcus</i> and <i>Pseudomonas</i> species: 0.6% in 15 minutes, Norovirus at 5000ppm in 3 minutes, MRSA, VRE as a 3% spray, <i>M.</i> | Bactericidal, tuberculocidal, fungicidal, and viricidal but not sporicidal. The optimum bactericidal concentration is 60%–90%. Kills: <i>E. coli</i> 30secs, <i>H. pylori</i> at 80% in 30secs, Rotavirus at 95%, Norovirus at 75% in 10min, SARS at 70% in 1min, <i>Pseudomonas aeruginosa</i> at 30% in 10sec, <i>Salmonella</i> at 40% in 10sec, MRSA at 60% in | Bactericidal, mycobactericidal, and virucidal but can require prolonged contact times to kill certain fungi and not sporicidal. Kills: <i>E. coli</i> , <i>S. aureus</i> and <i>M. chelonae</i> at a 1:100 dilution in under 1 minute. | Bactericidal, fungicidal, viricidal, tuberculocidal and sporicidal at high concentrations. Kills: <i>C. Diff</i> , <i>Staphylococcus aureus</i> , MRSA, Norovirus, Rhinovirus. <i>M. tuberculosis</i> , <i>M. chelonae</i> , poliovirus, HIV, multidrug-resistant <i>S. aureus</i> , <i>E. coli</i> , <i>Candida</i> |



| | | | | | |
|---|--|--|--|---|---|
| <i>atrophaeus</i> at 100ppm in 5 minutes, <i>Candida</i> and <i>salmonella</i> at 500ppm in 30seconds and <i>P. aeruginosa</i> in under 10 minutes. | | and <i>P. Aeruginosa</i> in 5 seconds. | tuberculosis at 7.5% in 10 minutes, poliovirus and HAV 7.5% in 30 minutes and <i>Cryptosporidium</i> . | 10sec, <i>M. tuberculosis</i> at 95% in 15secs. At 60%: Herpes, vaccinia, influenza, adenovirus, enterovirus, rhinovirus, rotaviruses, HBV, HIV, echovirus, astrovirus. At 70%: <i>Cryptococcus neoformans</i> , <i>Blastomyces dermatitidis</i> , <i>Coccidioides immitis</i> , and <i>Histoplasma capsulatum</i> in 1-20 minutes. | <i>albicans</i> , <i>Enterococcus faecalis</i> , <i>P. Aeruginosa</i> in under 2 minutes in the absence of organic loading. |
|---|--|--|--|---|---|

