

PRODUCT COMPARISON					
Disinfectant	Recommended Use	Method of Action	Advantages	Disadvantages	Comments
BIOSECUR	Decontamination and sanitation of food products and disinfection of hard surfaces Oral preventive for humans and animals.	Oxidizes and hydrolyzes a broad spectrum of bacteria, viruses, fungi and molds (spores). Disrupts pathogenic cell walls. No toxic by-products created.	Non-toxic, safe to handle, non-corrosive. Stable. Broad-spectrum kill.	Eye, mucous membrane and skin irritant (partial) in concentrated form.	Basic components have proven history of use and effectiveness. Easy to use. Non-flammable High volumes can be generated with small amounts of concentrate.
70% Isopropyl Alcohol solution	Cleaning some instruments. Cleaning skin	Changes protein structure of microorganism. Presence of water assists with killing action.	Fairly inexpensive	<50% solution not very effective. Flammable. Not active when organic matter present. Not active against certain types of viruses. Evaporates quickly, contact time not sufficient for killing.	Flammable. Eye irritant. Toxic
Chlorine Compounds	Spills of human body fluids. Bactericidal – Good Fungicidal – Good Sporicidal – Good at >100ppm Sodium Hypochlorite in acid state with proper pH that must be adjusted.	Free available chlorine combines with contents within microorganism; reaction by-products cause its death. Need 50-500ppm. Produce chemical combination with cell substances. Depends upon the release of hypochlorous acid.	Kills hardy viruses. Kills a wide range of organisms. Inexpensive. Penetrates well. Relatively quick microbial kill. Tuberculocidal with extended contact time	Corrodes metals such as stainless, aluminum. Organics may reduce activity. Increase in alkalinity decreases bactericidal property. Unpleasant taste and odour. Unstable. Will bleach and discolour. Creates organic chlorinated toxic by-products. Degrades rapidly when exposed to UV light.	Eye, skin and respiratory irritant. Use caution when handling. Corrosive. Toxic. Chlorine dioxide gas is highly volatile and will combust with organics at high enough levels.

Glutaraldehyde	<p>Bactericidal – Good</p> <p>Fungicidal – Good</p> <p>Tuberculocidal – Excellent</p> <p>Virucidal – Good</p> <p>Sporicidal – Good</p>	Coagulates cellular proteins	Non-staining, relatively non-corrosive. Usable as a sterilant on plastics, rubber. Lenses, stainless steel and other items that can't be autoclaved.	Not stable in solution. Not effective against gram-positive bacteria. Has to be in alkaline solution. Inactivated by organic matter. Needs high ppm for effect; sanitizing >1,000ppm, Disinfection >1%	<p>Eye, skin and respiratory irritant.</p> <p>Sensitizer.</p> <p>Toxic.</p>
Iodophors	<p>Disinfecting some semi-critical medical equipment.</p> <p>Bactericidal – Very good</p> <p>Fungicidal – Excellent</p> <p>Virucidal – Excellent</p>	Free iodine enters micro-organism and binds with cellular components. Surfactant (carrier) helps penetrate soil-fat. Need 30 to 50 ppm. Probably kills by disorder of protein synthesis due to hindrance and/or blocking of hydrogen bonding.	Kills broad range of organisms. Highly reactive. Low issue toxicity. Kills immediately rather than by prolonged period of stasis. Not affected by hard water. May be used on food preparation surfaces. Tuberculocidal, with extended contact time.	<p>May stain plastics or corrode metal. May stain skin or laundry. Stains most materials.</p> <p>Odour.</p> <p>Some organic and inorganic substances neutralize effect.</p> <p>Effective only in acid solutions.</p> <p>Costly.</p>	<p>Dilution is critical.</p> <p>Don't confuse skin antiseptic iodophors for disinfectants.</p> <p>Skin and eye irritant.</p> <p>Corrosive.</p> <p>Toxic.</p>
Phenolic Compounds	<p>Bactericidal – Excellent</p> <p>Fungicidal – Excellent</p> <p>Tuberculocidal – Excellent</p> <p>Virucidal – Excellent</p>	<p>Gross protoplasmic poison.</p> <p>Disrupts cell walls.</p> <p>Precipitates cell proteins.</p> <p>Low concentrations inactive in essential enzyme systems.</p>	Non-specific concerning bactericidal and fungicidal action. When boiling water could cause rusting, the presence of phenolic substances produces an anti-rusting effect.	Unpleasant odour. Some areas have disposal restrictions. Effectiveness reduced by alkaline pH, natural soap or organic material. Effective over narrow pH range. Easily deactivated by non-ionic surfactants. Photodegradable	<p>Skin and eye irritant.</p> <p>Sensitizer.</p> <p>Corrosive.</p> <p>Very toxic to handle</p>