

Summary of Practical Disinfectants

Disinfectants	Practical Requirements						Inactivates			
Type	Category	Use Dilution	Contact Time		Temp (C)	Relative Humidity	Vegetative Bacteria	Lipovirus	Nonlipid Viruses	Bacterial Spores
			Lipovirus	Broad Spectrum						
LIQUID	Quat. Ammonium Cpd	0.1%-2.0%	10	Not Effective			+	+		
	Phenolics	1.0%-5.0%	10	Not Effective			+	+	Variable results dependent on virus	
	Chlorine Cpds.	500 ppm	10	30			+	+	+	+
	Iodophor	25-1600 ppm (Available halogen)	10	30			+	+	+	+
	Alcohol, Ethyl	70%-85%	10	Not Effective			+	+	Variable results dependent on virus	
	Alcohol, Isopropyl	70%-85%	10	Not Effective			+	+	Variable results dependent on virus	
	Formaldehyde	0.2%-8.0%	10	30			+	+	+	+
	Glutaraldehyde	2.0%	10	30			+	+	+	+
GAS	Ethylene Oxide	8-23 g/cubic foot	60	60	37	30	+	+	+	+
	Paraformaldehyde	0.3 g/cubic foot	60	60	>23	>60	+	+	+	+

Disinfectants		Important Characteristics											
Type	Category	Effective Shelf Life >1 week Protected from light and air	Corrosive	Flammable	Explosion Potential	Residue	Inactivated by Organic Matter	Compatible for Optics Usually compatible, but consider interferences from residues & effects on associated materials such as mounting.	Compatible for Electronics	Skin Irritant	Eye Irritant	Respiratory Irritant	Toxic By skin or mouth, or both. Refer to manufacturer's literature and/or The Merck Index
LIQUID	Quat. Ammonium Cpds	+					+	+		+	+		+
	Phenolic Cpds	+	+			+				+	+		+
	Chlorine		+			+	+			+	+	+	+
	Iodophor	+	+			+	+			+	+		+
	Alcohol, Ethyl	+		+							+		+
	Alcohol Isoprophyl	+		+							+		+
	Formaldehyde	+				+				+	+		+
	Glutaraldehyde	+				+		+		+	+		+
GAS	Ethylene Oxide	N/A	+ Neither flammable nor explosive in 90% CO2, or fluorinated hydrocarbon, the usual form.	+ Neither flammable nor explosive in 90% CO2, or fluorinated hydrocarbon, the usual form.			+	+	+	+	+	+	+
	Paraformaldehyde	N/A	+ At concentrations of 7%-73% by volume in air, solid-exposure to open flame.	+ At concentrations of 7%-73% by volume in air, solid-exposure to open flame.			+	+	+	+	+	+	+

Disinfectants		Potential Application											
Type	Category	Work Surfaces	Dirty Glassware	Large Area Decon	Air Handling Systems	Port. Equip. Surface	Port. Equip. Penetrating Decon	Fixed Equip. Surface	Fixed Equip. Penetrating Decon	Optical Instruments	Electronic Instruments	Liquids for Discard	Books Papers
LIQUID	Quat. Ammonium Cpds	+	+			+		+					
	Phenolic Cpds	+	+			+		+					
	Chlorine	+	+			+		+				+	
	Iodophor	+	+			+		+					
	Alcohol, Ethyl	+	+			+		+					
	Alcohol Isoprophyl	+	+			+		+					
	Formaldehyde	+	+			+		+					
	Glutaraldehyde	+	+			+		+					
GAS	Ethylene Oxide						+			+	+		+
	Paraformaldehyde			+	+		+		+	+	+		

Disinfectants		Examples of Proprietary Disinfectants
Type	Category	
LIQUID	Quat. Ammonium Cpds	A-33, CDQ, End-Bac, Hi-Tor, Mikro-Quat
	Phenolic Cpds	Hil-Phene, Matar, Midro-Bac, O-Syl
	Chlorine Compounds	Chloramine T, Chlorox, Purex
	Iodophor	Hy-sine, Ioprep, Mikroklene, Wescodyne
	Alcohol, Ethyl	N/A
	Alcohol, Isoprophyl	N/A
	Formaldehyde	Sterac
	Glutaraldehyde	Cidex
GAS	Ethylene Oxide	Carboxide, Cryoxidice, Steroxidice
	Paraformaldehyde	N/A