



**ENVIRONMENTAL HEALTH & SAFETY FACT SHEET:  
CHEMICAL DISINFECTANTS**



## Chemical Disinfectants and Their Use in Laboratories

Disinfectant	Concentration (active ingredients)	Contact Time (min)	Effective Against*					
			B	F	LV	TB	HV	S
Quaternary Ammonium	0.1 - 0.2%	10 - 30	++	++	++	-	-	-
Phenolic compounds	0.2 - 3.0%	10 - 30	++	++	++	++	+	-
Chlorine Compounds ** (available chlorine)	0.01 - 5.0%	10 - 30	++	++	++	++	++	+
Iodophor Compounds)	0.5%	10 - 30	++	++	++	++	+	-
Alcohol (ethyl or isopropyl)	70 - 85%	10 - 30	++	++	++	-	+	-
Formaldehyde	4 - 8%	10 - 30	++	++	++	++	++	+
Glutaraldehyde	2%	10 - 600	++	++	++	++	++	++

\* B = Vegetable bacteria; F = fungi and asexual spores but not necessarily chlamydospores or sexual spores; LV = lipophilic viruses; TB = tubercle bacillus; HV = hydrophilic viruses; S = spores. + = positive response; ++ = very positive response; - = negative response.

\*\* Household bleach contains 5% available chlorine.

\*\*\* References: "Decontamination, Sterilization, Disinfection, and Antisepsis in the Microbiology Laboratory," in Laboratory Safety: Principles and Practices and "Sterilization, Disinfection, and Antisepsis in the Hospital," in Manual of Clinical Microbiology.

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