

The Antimicrobial Spectrum of Disinfectants

Chemical Disinfectants

Note: Removal of organic material must always precede the use of any disinfectant.

		Acids (hydrochloric acid, acetic acid, citric acid)	Alcohols (ethyl alcohol, isopropyl alcohol)	Aldehydes (formaldehyde, paraformaldehyde, glutaraldehyde)	Alkalies (sodium or ammonium hydroxide, sodium carbonate)	Biguanides (chlorhexidine [®] , Nolvasan [®] , Chlorhex [®] , Virosan [®] , Hibistat [®])	Halogens hypochlorite iodine	Oxidizing Agents (hydrogen peroxide, peroxyacetic acid, Trifectant [®] , Virkon-S [®] , Oxy-Sept 333 [®])	Phenolic Compounds (Lysol [®] , Osyl [®] , Amphyl [®] , TekTrol [®] , Pheno-Tek II [®])	Quaternary Ammonium Compounds (Roccal [®] , Zephiran [®] , DiQuat [®] , Parvosol [®] , D-256 [®])
susceptibility of microorganisms to chemical disinfectants	most susceptible									
	mycoplasmas	+	++	++	++	++	++	++	++	+
	gram-positive bacteria	+	++	++	+	++	+	+	+	++
	gram-negative bacteria	+	++	++	+	++	+	+	+	++
	pseudomonads	+	++	++	+	+	+	+	++	-
	rickettsiae	+	+	+	+	+	+	+	+	+
	enveloped viruses	+	+	++	+	+	+	+	a	+
	chlamydiae	+	+	+	+	+	+	+	+	-
	non-enveloped viruses	-	-	+	+	-	+	+	-	-
	fungal spores	+	+	+	+	+	+	+	+	+
	picornaviruses (i.e. FMD)	+	N	+	+	N	N	+	N	N
	parvoviruses	N	N	+	N	N	+	N	N	-
	acid-fast bacteria	-	+	+	+	-	+	+	+	-
	bacterial spores	+	-	+	+	-	+	+	b	-
	coccidia	-	-	-	c	-	-	-	d	-
	prions	-	-	-	-	-	-	-	-	-
most resistant										

LEGEND

++ highly effective

+ effective

limited activity

- no activity

N information not available

a-varies with composition

b-peracetic acid is sporicidal

c-ammonium hydroxide

d-some have activity against coccidia

DISCLAIMER: The use of trade names does not in any way signify endorsement of a particular product. For additional product names, please consult the most recent Compendium of Veterinary Products. ADAPTED FROM: Linton AH, Hugo WB, Russel AD. Disinfection in Veterinary and Farm Practice. 1987. Blackwell Scientific Publications; Oxford, England; Quinn PJ, Markey BK. Disinfection and Disease Prevention in Veterinary Medicine, In: Block SS, ed., Disinfection, Sterilization and Preservation. 5th edition. 2001. Lippincott, Williams and Wilkins: Philadelphia.