The Antimicrobial Spectrum of Disinfectants

Chemical Disinfectants

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

most susceptible

susceptibility of microorganisms to chemical disinfectants

	Acids (hydrochloric acid, acetic acid, citric acid)	**Alcohols** (ethyl alcohol, isopropyl alcohol)	**Aldehydes** (formaldehyde, paraformaldehyde, gluteraldehyde)	**Alkalis** (sodium or ammonium hydroxide, sodium carbonate)	**Biguanides** (chlorhexidine®, Nolvasan®, Chlorhex®, Virosan®, Hibistat®)	**Halogens** hypochlorite	**Halogens** 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®, Zepharin®, DiQuat®, Parvosol®, D-256®)
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	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

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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.