COMMON DISINFECTANTS USED ON BEEF CATTLE OPERATIONS

Class	Product	Pathogen Efficacy	Characteristics	Toxicity/ Irritation	Organic Debris Tolerance	Precautions
Acid	Household vinegar (5% acetic acid) $ ●	**Effective Against:** Listeria, Campylobacter, E. coli, Salmonella, Foot and Mouth Disease (FMD)	Contact time: **10+ min.** Temperature sensitive*: **No** Corrosivity*: **Low**	Low toxicity, irritating to the skin	Effectiveness is reduced by the presence of organic material.	N/A
Alcohol	Isopropyl $$ ●	**HIGHLY Effective Against:** Mycoplasma, Clostridium, Listeria, Streptococcus, Staphylococcus, Campylobacter, Histophilus, E. coli, Pasteurella, Mannheimia, Salmonella, Fusobacterium, Trueperella **Effective Against:** Infectious Bovine Rhinotracheitis (IBR), Parainfluenza Virus 3 (PI3), Bovine Viral Diarrhea (BVD), Bovine Leukosis, Johne's	Contact time: **1-5 min.** Temperature Sensitive*: **Yes** Corrosivity*: **Low**	Low toxicity, some skin irritation and dehydration	Ineffective in the presence of organic material	Flammable
Aldehyde	Metricide $$ ● Profilm $$ ● Synergize $$ ● Wavicide $$ ●	**HIGHLY Effective Against:** Mycoplasma, Clostridium, Listeria, Streptococcus, Staphylococcus, Campylobacter, Histophilus, E. coli, Pasteurella, Mannheimia, Salmonella, IBR, PI3, BVD, Bovine Leukosis, Fusobacterium, Trueperella **Effective Against:** Cowpox, Papilloma, scours, Johne's, FMD, Bovine Enterovirus, Bacillus, Clostridium spores	Contact time: **10-30 min.** Temperature Sensitive*: **No** Corrosivity*: **Low**	Toxic and irritating to handle	Stable in the presence of organic material	Effective against biofilms. Produces irritating fumes. Respiratory and eye protection is recommended.

Legend

$ Low Cost ● **High Availability**

$$ Moderate Cost ● **Low Availability**

*Refer to product label for specific information.

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Class	Product	Pathogen Efficacy	Characteristics	Toxicity/ Irritation	Organic Debris Tolerance	Precautions
Biguanides	Chlorhexidine $$ ●	**HIGHLY Effective Against:** Mycoplasma, Clostridium, Listeria, Streptococcus, Staphylococcus, Campylobacter, Histophilus, E. coli, Pasteurella, Mannheimia, Salmonella	Contact time: **5-10 min.** Temperature sensitive*: **Yes** Corrosivity*: **Low**	Low irritation and toxicity	Stable in the presence of organic material	N/A
	Hibistat $$ ●					
	Hibitane $$ ●					
	Novalsan $$ ●					
	Virosan $$ ●					
Hypochlorite	Household bleach $ ●	**HIGHLY Effective Against:** Mycoplasma **Effective Against:** Clostridium, Listeria, Streptococcus, Staphylococcus, Campylobacter, Histophilus, E. coli, Pasteurella, Mannheimia, Salmonella, IBR, PI3, BVD, Bovine Leukosis, Cowpox, Papilloma, scours, Johne's, Bacillus, Clostridium spores, Fusobacterium, Trueperella	Contact time: **5-10 min.** Temperature Sensitive*: **Yes** Corrosivity*: **High**	Mid-level toxicity, mostly causes irritation to mucous membranes	Ineffective in the presence of organic material	Can create toxic compounds when used with other cleaners. Recommended to prepare daily as dilutions lose efficacy over time.
Iodophor	Betadine $$ ●	**HIGHLY Effective Against:** Mycoplasma **Effective Against:** Clostridium, Listeria, Streptococcus, Staphylococcus, Campylobacter, Histophilus, E. coli, Pasteurella, Mannheimia, Salmonella, IBR, PI3, BVD, Bovine Leukosis, Bacillus, Clostridium spores, Fusobacterium	Contact time: **5-10 min.** Temperature Sensitive*: **Yes** Corrosivity*: **Moderate**	Low toxicity, some skin irritation	Moderate, can be inactivated by blood	N/A
	Idol 100 $$ ●					
	Providone $$ ●					

Legend

$ Low Cost

$$ Moderate Cost

● **High Availability**

● **Low Availability**

*Refer to product label for specific information.

Class	Product	Efficacy Against Disease	Characteristics	Toxicity/ Irritation	Organic Debris Tolerance	Precautions
Oxidizing Agents	Accel $$ ●	**HIGHLY Effective Against:** Mycoplasma **Effective Against:** Clostridium, Listeria, Streptococcus, Staphylococcus, Campylobacter, Histophilus, E. coli, Pasteurella, Mannheimia, Salmonella, IBR, PI3, BVD, Bovine Leukosis, Johne's, FMD, Bovine Enterovirus, Bacillus, Clostridium spores, Fusobacterium, Trueperella	Contact time: **5-10 min.** Temperature sensitive*: **No** Corrosivity*: **Low** (Accel, Peroxigard, Prevail, Rescue) Corrosivity*: **Moderate** (Bioxy Enviro, hydrogen peroxide, Oxy-Sept, Trifectant, Virkon) Corrosivity*: **High** (peracitic acid)	Moderate toxicity and irritation	Stable in the presence of organic material	N/A
	Peroxigard $$ ●					
	Prevail $$ ●					
	Rescue $$ ●					
	Bioxy Enviro $$ ●					
	Hydrogen peroxide $$ ●					
	Oxy-Sept $$ ●					
	Trifectant $$ ●					
	Virkon $$ ●					
	Peracitic acid $$ ●					
Phenols	One Stroke Environ $ ●	**HIGHLY Effective Against:** Mycoplasma, Clostridium, Listeria, Streptococcus, Staphylococcus, Campylobacter, Histophilus, E. coli, Pasteurella, Mannheimia, Salmonella, Fusobacterium, Trueperella **Effective Against:** Coccidia	Contact time: **10 min.** Temperature Sensitive*: **Yes** Corrosivity*: **Low** (One Stroke Environ) Contact time: **10 min.** Temperature Sensitive*: **No** Corrosivity*: **Moderate** (Amphyl, Dettol, Lysol, Osyl, Pheno-Tek, Trek-Tol)	Toxic and irritating	Stable in the presence of organic material	N/A
	Amphyl $$ ●					
	Dettol $$ ●					
	Lysol $$ ●					
	Osyl $$ ●					
	Pheno-Tek $$ ●					
	Trek-Tol $$ ●					

Legend

$ **Low Cost**

$$ **Moderate Cost**

● **High Availability**

● **Low Availability**

*Refer to product label for specific information.

Class	Product	Pathogen Efficacy	Characteristics	Toxicity/ Irritation	Organic Debris Tolerance	Precautions
Quaternary Ammonium	Ascend $ ●	**HIGHLY Effective Against:** Clostridium, Listeria, Streptococcus, Staphylococcus **Effective Against:** Mycoplasma, Campylobacter, Histophilus, E. coli, Pasteurella, Mannheimia, Salmonella	Contact time: **10 min.** Temperature sensitive*: **Yes** Corrosivity*: **Low** (Ascend, BioSentry 904, Coverage 256, DiQuat, D-256, Parvosol, Proquat, Quatsyl, Roccal, Zepharin) Contact time: **5-10 min.** Temperature sensitive*: **No** Corrosivity*: **Low** (Benefect Decon 30)	Non-irritating, low toxicity	Ineffective in the presence of organic material	Binds to cotton-based products such as gauze
	BioSentry 904 $ ●					
	Coverage 256 $ ●					
	DiQuat $ ●					
	D-256 $ ●					
	Parvosol $ ●					
	Proquat $ ●					
	Quatsyl $ ●					
	Roccal $ ●					
	Zepharin $ ●					
	Benefect Decon 30 $$ ●					

Legend

$ Low Cost ● **High Availability**

$$ Moderate Cost ● **Low Availability**

*Refer to product label for specific information.

Sources

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- Government of Ontario, Biosecurity: Health Protection and Santitation Strategies for Cattle.
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