

The background of the entire image is a microscopic view of numerous spherical particles. Each particle is covered in a dense layer of thin, needle-like spines that radiate outwards. The particles are arranged in a somewhat circular pattern, with some appearing in the foreground and others receding into the background. The lighting is dramatic, highlighting the texture of the spines and the overall structure of the particles.

Virox[®]

PROVEN EFFICACY IN COMPLIANCE
WITH EU OFFICIAL EN REGULATIONS



Biocidas Biodegradables ZIX



Virox®

OFFICIAL EFFICACY REGULATIONS:

AmPLY ExCEEdS ThE REqUIREmENTS OF EN REGULATIONS
ON ANTISEpTICS ANd ChEmICAL dISINFECTANTS AS REqUIREd
bY ThE EUROPEAN UNION.

EN 1276: Chemical disinfectants and antiseptics. quantitative suspension test for the evaluation of bactericide activity of antiseptics and chemical disinfectants used in food, industrial, domestic and institutional areas (*Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus*, *Enterococcus hirae*).

EN 1656: Chemical disinfectants and antiseptics. quantitative suspension test for the evaluation of bactericide activity antiseptics and chemical disinfectants used in the veterinary area (*pseudomonas aeruginosa*, *Proteus vulgaris*, *Staphylococcus aureus*, *Enterococcus hirae*).

EN 1650: Chemical disinfectants and antiseptics. quantitative suspension test for the evaluation of fungicide or levuricide activity of antiseptics and chemical disinfectants used in the food, industrial, domestic and institutional areas (*Candida albicans* and *Aspergillus niger*).

EN 1657: Chemical disinfectants and antiseptics. quantitative suspension test for the evaluation of fungicide or levuricide activity of antiseptics and chemical disinfectants used in the veterinary area (*Candida albicans* and *Aspergillus niger*).

EN 13697: Chemical disinfectants and antiseptics. quantitative suspension test for the evaluation of bactericide and/or fungicide activity of chemical disinfectants used in food, industrial, domestic and institutional areas (*Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus*, *Enterococcus hirae*).

EN 14675: Chemical disinfectants and antiseptics. quantitative suspension test for the evaluation of virucide activity of antiseptics and chemical disinfectants used in the veterinary area (bovine enterovirus Type 1).

EN 13697: Chemical disinfectants and antiseptics. quantitative suspension test for the evaluation of bactericide and/or fungicide activity of chemical disinfectants used in food, industrial, domestic and institutional areas (*Salmonella tiphymurium* and *Salmonella enterica*).

EN 14204: Chemical disinfectants and antiseptics. quantitative suspension test for the evaluation of micro-bactericide activity of antiseptics and chemical disinfectants used in the veterinary area (*Mycobacterium avium*).

	Activity	UNE regulation	Reference strain
FOOD	BACTERICIDE ACTIVITY SUSPENSION	EN 1276	<i>Pseudomonas aeruginosa, Escherichia coli, Staphylococcus aureus, Enterococcus hirae</i>
	BACTERICIDE ACTIVITY SURFACE	EN 13697	<i>Pseudomonas aeruginosa, Escherichia coli, Staphylococcus aureus, Enterococcus hirae</i>
	FUNGICIDE ACTIVITY SUSPENSION	EN 1650	<i>Candida albicans, Aspergillus niger</i>
	FUNGICIDE ACTIVITY SURFACE	EN 13697	<i>Candida albicans, Aspergillus niger</i>
VETERINARY	VETERINARY BACTERICIDE	EN 1656	<i>Pseudomonas aeruginosa, Proteus vulgaris, Staphylococcus aureus, Enterococcus hirae</i>
	VETERINARY FUNGICIDE	EN 1657	<i>Candida albicans, Aspergillus niger</i>
	VETERINARY VIRUCIDE	EN 14675	Bovine enterovirus Type 1
	MICOBACTERICIDE VETERINARY	EN 14204	<i>Mycobacterium avium</i>
	SALMONELLA	EN 13697	<i>Salmonella tiphymurium, Salmonella enterica</i>

COMPARATIVE EFFICACY TABLES FOR VARIOUS DISINFECTANTS

	Bacteria GRAM +	Bacteria GRAM -	Sporulated bacteria	Virus	Protozoa	Fungi
VIROX	+++	+++	+++	+++	+++	+++
Chlorinated agents	++	+++	+	++	-	+
Quaternary ammonia	+	+	-	+	-	+
Iodophors	++	++	+	+	++	+++
Phenols	++	++	++	++	-	++
Formaldehyde	++	+++	++	++	-	++
Glutaraldehyde	++	+++	++	++	-	++

COMPARATIVE PHYSICAL AND CHEMICAL PROPERTY TABLES FOR VARIOUS DISINFECTANTS

	Compatibility with hard water	Disinfection at low temperatures	Danger to water and the environment	Biodegradability	Possibility of measuring	Activity in presence of organic matter	Carcinogenic	Allergenic
VIROX	Very good	Very good	0	100 %	Average	Very good	No	No
Chlorinated agents	Good	Good	2-3	90 %	Very good	Good	Yes	Yes
Quaternary ammonia	Poor	Average	3	70 %	Not possible	Poor	No	No
Iodophors	Acceptable	Acceptable	Good	90 %	Not possible	Average	No	No
Phenols	Very good	Good	1-2	90 %	Not possible	Average	Yes	No
Formaldehyde	Good	Acceptable	1-2	<90 %	Not possible	Very good	Yes	Yes
Glutaraldehyde	Good	Poor	1-2	<90 %	Not possible	Very good	Yes	Yes

COMPARATIVE MICROBICIDE PROPERTY TABLES FOR VARIOUS DISINFECTANTS

	Virox	Chlorinated agents	Ammonias	Iodophors	Phenols	Formaldehyde	Glutaraldehyde
Action spectrum	●●●●	●●●	●●	●●	●●●	●●●	●●●●
Toxicity at recommended doses	●●●●	●●	●●●●	●●●	●●	●●	●●●
Corrosion of materials	●●●	●●●	●●●●	●●●	●●	●●●	●●●
Rapid biodegradability	●●●●	●●	●	●●	●●	●●●	●●●

●Average ●●Acceptable ●●●Good ●●●●Optimum

ACTION SPECTRUM / DOSAGE OF VIROX

VIRUCIDE ACTIVITY

FAMILY	MICROORGANISM (DISEASE)	DOSAGE
<i>Adenoviridae</i>	Adenovirus EDS-76 (Egg drop syndrome 76)	1 %
<i>Arteriviridae</i>	PRRS (Porcine respiratory reproductive syndrome)	0.5 %
<i>Asfarviridae</i>	ASF (African swine fever)	0.5 %
<i>Birnaviridae</i>	IBD virus (Gumboro disease)	0.6 %
<i>Calciviridae</i>	Lagovirus (Viral haemorrhagic disease)	1 %
<i>Circoviridae</i>	CAV (Chicken infectious anaemia virus) PCV (Porcine circovirus)	0.4 % 1 %
<i>Coronaviridae</i>	Coronavirus IBV (Avian infectious bronchitis virus)	1 %
<i>Flaviviridae</i>	Pestivirus (Classic swine fever)	0.5 %
<i>Herpesviridae</i>	Porcine Herpesvirus (Aujeszky disease) Gallid Herpesvirus 1 (Avian Laryngotracheitis) Gallid Herpesvirus 2 (Marek disease)	1 % 1 % 0.5 %
<i>Orthomyxoviridae</i>	Isavirus (Infectious salmon anaemia) Influenza Virus A (Avian influenza) Influenza Virus C-A (Swine influenza)	1 % 0.4 % 0.4 %
<i>Papillomaviridae</i>	BPV/ (Bovine papillomatosis)	1 %
<i>Paramyxoviridae</i>	Avulavirus NDV (Newcastle disease)	0.5 %
<i>Parvoviridae</i>	Parvovirus (Porcine parvovirus)	1 %
<i>Picornaviridae</i>	Porcine Enterovirus (Swine vesicular disease) Avian Enterovirus (Avian encephalomyelitis) Aphthovirus (Foot-and-mouth disease) Poliovirus (Poliomyelitis)	0.4 % 0.7 % 0.6 % 0.7 %
<i>Poxviridae</i>	Variola Avium (Fowl pox) Leporipoxvirus (Myxomatosis)	0.5 % 0.5 %
<i>Reoviridae</i>	Rotavirus (Diarrhoea in piglets) Reovirus (Avian arthritis and tenosynovitis)	1 % 1 %

BACTERICIDE ACTIVITY

MICROORGANISM	DISEASE	DOSAGE
<i>Brachyspira hyodysenteriae</i>	Swine dysentery	0.2 %
<i>Campylobacter jejuni</i>	Campylobacteriosis (diarrhoea)	0.5 %
<i>Erysipelothrix rhusiopathiae</i>	Swine erysipelas (Diamond-skin disease)	1 %
<i>Escherichia coli</i>	Colibacillosis (colisepticaemia, post-weaning diarrhoea, mastitis, oedema disease...)	0.4 %
<i>Haemophilus pleuropneumonia</i>	Swine pleuropneumonia	0.2 %
<i>Lawsonia intracellularis</i>	Proliferative enteropathy or ileitis	1 %
<i>Mycobacterium</i> spp.	Tuberculosis	1 %
<i>Pasteurella multocida</i>	Pasteurellosis (enzootic pneumonia, rhinitis)	0.6 %
<i>Pseudomonas aeruginosa</i>	Pseudomoniasis	0.3 %
<i>Salmonella</i> spp.	Salmonellosis	0.6 %
<i>Staphylococcus aureus</i>	Staphylococci (septicaemia, dermatitis)	0.6 %
<i>Streptococcus suis</i>	Meningitis, arthritis in piglets	0.4 %

MYCOPLASMICIDE ACTIVITY

MICROORGANISM	DISEASE	DOSAGE
<i>Mycoplasma gallisepticum</i>	Chronic respiratory disease in poultry	0.5 %
<i>Mycoplasma hyorhinis</i>	Swine mycoplasmosis (septicaemia in piglets)	0.2 %
<i>Mycoplasma mycoides</i>	Ruminant lung disease	0.5 %

ANTIFUNGAL ACTIVITY

MICROORGANISM	DISEASE	DOSAGE
<i>Aspergillus</i> spp.	Mycosis	0.2 %
<i>Candida</i> spp.	Candidiasis	0.6 %
<i>Trichopyhton</i> spp.	Ringworm	0.2 %
<i>Cladosporium</i> spp.	Ringworm	1 %

PROTOZOAL ACTIVITY

MICROORGANISM	DISEASE	DOSAGE
<i>Isospora suis</i>	Enteritis in piglets	3 %
<i>Eimeria</i> spp.	Enteropathy (rabbits, poultry, small ruminants)	3 %
Amoeba, Giardia	Diarrhoea	1 %

BACTERICIDE EFFICACY OF VIROX AT DOSES OF 5 g / L ON THE PLATE

Micro-organism	Initial concentration	1 minute	2 minutes	3 minutes	4 minutes	5 minutes
<i>Salmonella</i>	1.3 x 10 ⁸ Ufc / ml	-	-	-	-	-
<i>Listeria</i>	3.5 x 10 ⁸ Ufc / ml	-	-	-	-	-
<i>E. coli</i>	1.2 x 10 ⁸ Ufc / ml	-	-	-	-	-
<i>Staphylococcus aureus</i>	1.0 x 10 ⁸ Ufc / ml	+	S	-	-	-
<i>Enterococos</i>	1.4 x 10 ⁸ Ufc / ml	VS	-	-	-	-
<i>Clostridium</i>	1.2 x 10 ⁸ Ufc / ml	VS	-	-	-	-

Reduction in bacterial concentration

Growth	+
Small (5 - 10 colonies)	S
Very small (2 - 3 colonies)	VS
Total inhibition:	-



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