

OX-VIRIN - VIRKON S COMPARATIVE STUDY

	OX-VIRIN	VIRKON S
Composition	-25% Hydrogen Peroxide -5% Peracetic Acid -OX-VI Core	-21% Potassium Peroxymonosulfate -1.5% Sodium Chloride
Packaging	Liquid disinfectant. A liquid product is easier to mix ensuring the dilution of the product is perfect. New formulations: OX-VIRIN PRESTO AL USO (ready to use product) and OX-VIRIN F (includes in its formulation surfactants to generate a thin layer of foam to penetrate into the surfaces perfectly, as well as many specific anticorrosive agents).	Solid powder disinfectant. A powder disinfectant is not easy to mix, and the dilution might not be complete. It is necessary to prepare the disinfectant solution in order to work. Difficulty of management and risk of human mistake.
Efficacy and action spectrum	High level biocide efficacy tested against bacteria, fungus, viruses, algae, spores, protozoa, coccidia oocysts and other parasites. Demonstrated efficacy under a wide range of factors (pH, temperature, etc.), even under hard conditions. Effective at low temperature. <i>See reference below ¹.</i>	Efficacy against bacteria, fungus and viruses depending on the work conditions.
Dosage	Usual recommended dosage: 0.25-1% Long shelf-life of the dilution mixture thanks to the action of the specific OX-VI Core.	Usual recommended dosage: 0.5-1%
Mechanism of action	Complete destruction of microbial cell envelopes. Alteration of microbial metabolism, enzymatic equipment and nucleic acids. Its continuous use does not create microbial resistance.	Oxidation of sulfur bonds in proteins and enzymes disrupting the function of the cell membrane causing rupturing of the cell wall.
Environment	100% Biodegradable.	75% Of ingredients are inorganic and decompose naturally in the environment. The remaining ingredients are classified as readily biodegradable.
Use	-Easy and convenient to use for handlers. -Rinse is not needed. -Easy control of residual by using colorimetric reactive test strips. -Non-corrosive at recommended dosage.	-Difficulty of management for handlers. Risk of mistake when disinfectant solution is prepared.



Other features	<div>-It eliminates the biofilm covering the surfaces.</div> <div>-Suitable for use in disinfection processes throughout the food chain ("from farm to fork").</div>	<div>-Exclusive use for livestock farms.</div>
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¹ Reference: Taylor et al., (1999) *J Appl Microbiol* 87, 718-725

Table 3 Results at 10 °C

Product type	Product code	Clean/ dirty	<i>Pseudomonas aeruginosa</i>			<i>Escherichia coli</i>		
			Disinfectant in-use concentration			Disinfectant in-use concentration		
			× 0.5	× 1.0	× 2.0	× 0.5	× 1.0	× 2.0
Quat	1	Clean	F	F	P	P	P	P
		Clean	F	F	P	P	P	P
		Dirty	F	F	P	F	P	P
Quat/ glutaraldehyde	6	Dirty	F	F	P	F	P	P
		Clean	F	P	P	P	P	P
		Clean	F	P	P	P	P	P
Chlorine dioxide	10	Dirty	F	P	P	P	P	P
		Clean	F	F	P	F	F	P
		Clean	F	F	P	F	F	F
Peracetic acid/hydrogen peroxide	13	Dirty	F	F	F	F	F	F
		Clean	P	P	P	P	P	P
		Clean	P	P	P	P	P	P
Acid detergent/ sanitizer	18	Dirty	P	P	P	P	P	P
		Clean	F	F	F	F	F	F
		Clean	F	F	F	F	F	F
		Dirty	F	F	F	F	F	F
		Clean	F	F	F	F	F	F
		Dirty	F	F	F	F	F	F

P (pass), 5-log reduction or greater in viable counts; F (fail), less than 5-log reduction in viable counts; Quat, quaternary ammonium compound.