

## PRODUCT SPECIFICATION EndoSan007



EndoSan is a solution of hydrogen peroxide which is stabilised using a specially formulated silver based chemistry. The stabilisation process is unique and makes EndoSan a powerful water disinfectant that provides a very wide spectrum of biocidal activity.

Independent testing has shown that EndoSan is a highly effective bactericide, virucide, sporicide, fungicide, algacide and amoebicide.



The EndoSan range of products is used for disinfection purposes in a wide variety of application and is proving to be extremely popular across many market sectors including Food and Beverage, Sports & Leisure, Cosmetics & Pharmaceutical, Water Treatment, Agriculture, Medical & Nursing, Cooling Towers, Fish, Meat, Poultry, Food Processing, Drinking Water, Swimming Pools, Sewage Treatment, etc.

Independent testing of EndoSan shows that it is a fast legionella bactericide, a very effective amoebicide (it kills the Trojan horses) and it removes and treats biofilm, making it an ideal biocide for legionella control. This triple action makes EndoSan absolutely unique and positions the chemical as a real contender to replace chlorine and chlorine dioxide as a continuous dose biocide.



Description/Definition	Target Values
<b>Appearance</b>	Clear liquid (colourless, odourless)
<b>Chemical composition</b>	
<u>Active ingredient</u> Hydrogen peroxide	700ppm
<u>Other ingredients</u> Silver as stabiliser Demineralised water	< 1ppm > 99.9% w/w
<b>Physical-chemical parameters</b>	
Density (kg/l at 15°C)	1.000
pH	<= 7

- Active:** 0.07% Stabilised Hydrogen Peroxide
- Uses:** Water disinfection and DUWL cleaner
- Tests:** EN13623:2010, EN13727:2012, EN1276:2009
- Container sizes:** 5 LTR
- Pallet Designs:** 5L            160 per pallet



## SUMMARY OF ANTI-MICROBIAL ACTIVITY AGAINST TEST MICRO-ORGANISMS

### BACTERIA - NON-SPORE FORMING

TEST ORGANISM	STRAIN	CONCN.	TEST HOUSE	METHOD
Enterococcus faecium	ATCC 8043	0.5-1%	LOVAP	NF T 72-190
Enterococcus faecium	ATCC 8043	1%	LOVAP	NF T 72-150
Enterococcus hirae	ATCC 10541	1.50%	University of Antwerp	EN 13727
Enterococcus hirae	ATCC 10541	7%	University of Antwerp	EN 1276
Escherichia coli	ATCC 25922	0.10%	LOVAP	NF T 72-150
Escherichia coli	ATCC 25922	0.15%	LOVAP	NF T 72-190
Escherichia coli	ATCC 11229	0.50%	SGS Institut Fresenius	DGHM 1981
Escherichia coli	ATCC 10536	0.50%	University of Antwerp	EN 13727
Escherichia coli	ATCC 10536	3%	University of Antwerp	EN 1276
Klebsiella pneumoniae	ATCC 4352	0.50%	SGS Institut Fresenius	DGHM 1981
Lactobacillus brevis	LABORATORY	0.10%	Technical University München	IN-HOUSE
Legionella pneumophila group 1	ATCC 33152	0.20%	TNO Nutrition and Food Research	EN 13623
Legionella pneumophila group 1	ENVIRONMENTAL	0.40%	Université de Nancy	NF T 72-150
Legionella pneumophila group 3	ENVIRONMENTAL	0.40%	Université de Nancy	NF T 72-150
Mycobacterium avium	ATCC 15769	5%	University of Antwerp	EN 14348
Mycobacterium smegmatis	ATCC 15755	1%	LOVAP	NF T 72-190
Mycobacterium terrae (M. tuberculosis surrogate)	NCTC 10856	2.50%	Hospital Infection Research Lab (NHS)	IN-HOUSE
Mycobacterium terrae	NCTC 10856	7.50%	University of Antwerp	EN 14348
Mycobacterium tuberculosis	ATCC 25618	0.50%	SGS Institut Fresenius	DGHM 2.1
Pediococcus damnosus	LABORATORY	0.10%	Technical University München	IN-HOUSE
Proteus mirabilis	NCTC 10975	0.10%	LOVAP	NF T 72-150
Proteus mirabilis	ATCC 14153	1%	SGS Institut Fresenius	DGHM 1981
Pseudomonas aeruginosa	ATCC 27853	0.10%	LOVAP	NF T 72-150
Pseudomonas aeruginosa	ATCC 27853	0.20%	LOVAP	NF T 72-190
Pseudomonas aeruginosa	ATCC 15442	0.50%	University of Antwerp	EN 13727
Pseudomonas aeruginosa	ATCC 15442	1%	SGS Institut Fresenius	DGHM 1981
Pseudomonas aeruginosa	ATCC 15442	3%	University of Antwerp	EN 1276
Staphylococcus aureus	ATCC 25923	0.10%	LOVAP	NT T 72-150
Staphylococcus aureus	ATCC 25923	0.15%	LOVAP	LOVAP NF T 72-190
Staphylococcus aureus	ATCC 6538	0.50%	SGS Institut Fresenius	DGHM 2.1
Staphylococcus aureus	ATCC 6538	2%	University of Antwerp	EN 13727
Staphylococcus aureus	ATCC 6538	3%	University of Antwerp	EN 1276
Streptococcus faecalis	ATCC 6057	0.25%	SGS Institut Fresenius	DGHM 1981



## SUMMARY OF ANTI-MICROBIAL ACTIVITY AGAINST TEST MICRO-ORGANISMS

### BACTERIA - SPORE FORMING

TEST ORGANISM	STRAIN	CONCN.	TEST HOUSE	METHOD
Bacillus cereus	ATCC 9139	0.5-1%	LOVAP	NF T 72-190
Bacillus cereus	NCTC 7464	1%	LOVAP	NF T 72-150
Bacillus subtilis	ATCC 6633	0.2-1%	LOVAP	NF T 72-190
Bacillus subtilis	NCTC 10073	2.50%	Hospital Infection Research Lab (NHS)	IN-HOUSE
Clostridium sporogenes	ATCC 3584	0.50%	SGS Institut Fresenius	DGHM 1981
Clostridium sporogenes	ATCC 11437	1%	LOVAP	NF T 72-190

### YEASTS / MOULDS / FUNGI

TEST ORGANISM	STRAIN	CONCN.	TEST HOUSE	METHOD
Absidia corymbifera	ATCC 38957	0.2-1%	LOVAP	NF T 72-190
Aspergillus niger	ATCC 16404	2%	University of Antwerp	EN 13624
Aspergillus niger	ATCC 16404	5%	University of Antwerp	EN 1650
Candida albicans	ATCC 38906	0.20%	LOVAP	NF T 72-190
Candida albicans	ATCC 10231	1%	SGS Institut Fresenius	DGHM 1981
Candida albicans	ATCC 10231	1.50%	University of Antwerp	EN 13624
Candida albicans	ATCC 10231	2%	University of Antwerp	EN 1650
Cladosporium cladosporioides	ATCC 38906	0.20%	LOVAP	NF T 72-190
Penicillium notatum	ATCC 9179	1%	LOVAP	NF T 72-150
Penicillium verrucosum	ATCC 38905	0.5-1%	LOVAP	NF T 72-190
Saccharomyces cerevisiae	LABORATORY	0.10%	Technical University München	IN-HOUSE
Saccharomyces cerevisiae	ATCC 9763	1%	University of Antwerp	EN 13624
Saccharomyces cerevisiae	ATCC 9763	2%	University of Antwerp	EN 1650

### VIRUSES - ENCAPSULATED

TEST ORGANISM	STRAIN	CONCN.	TEST HOUSE	METHOD
Newcastle disease virus	MONTANA	0.50%	Institute for Applied Animal Hygiene	DVG 1988
Vaccinia virus	ELSTREE	0.50%	Institute for Applied Animal Hygiene	DVG 1988



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### VIRUSES - NON-ENCAPSULATED

TEST ORGANISM	STRAIN	CONCN.	TEST HOUSE	METHOD
Adenovirus	TYPE 5	1%	University of Antwerp	EN 14476
Echovirus	LCR 4	0.50%	Institute for Applied Animal Hygiene	DVG 1988
Feline calicivirus (surrogate for human Norovirus)	62804 (PRIMARY)	0.50%	Glasgow Caledonian University	IN-HOUSE / EPA SOP
Poliovirus	TYPE 1	1%	University of Antwerp	EN 14476
Reovirus	TYPE 1	0.50%	Institute for Applied Animal Hygiene	DVG 1988

### PROTOZOA - AMOEBAE & AMOEBIC CYSTS

TEST ORGANISM	STRAIN	CONCN.	TEST HOUSE	METHOD
Acanthamoeba culbertsoni	LABORATORY	1%	Jeune Equipe Universitaire - Rennes	IN-HOUSE
Acanthamoeba MR4	LABORATORY	1%	Jeune Equipe Universitaire - Rennes	IN-HOUSE
Hartmannella vermiformis	LABORATORY	1%	Jeune Equipe Universitaire - Rennes	IN-HOUSE
Naegleria fowleri	0359	1%	Jeune Equipe Universitaire - Rennes	IN-HOUSE
Naegleria gruberi	1518	1%	Jeune Equipe Universitaire - Rennes	IN-HOUSE
Naegleria gruberi	PARIS	1%	Jeune Equipe Universitaire - Rennes	IN-HOUSE
Naegleria gruberi	M05	1%	Jeune Equipe Universitaire - Rennes	IN-HOUSE

### PROTOZOA - SPOROZOA

TEST ORGANISM	STRAIN	CONCN.	TEST HOUSE	METHOD
Cryptosporidium parvum oocysts	LABORATORY	1%	Jeune Equipe Universitaire - Rennes	IN-HOUSE