

	Test norm	Test type	Organism	Log reduction required	Log reduction achieved	Laboratory	Clean or dirty	Contact time	LC Std 400-200 PPM	LC Pluss 650-400 PPM
Sporcidial	EN 13697:2001 (Phase 2, Step 2)	Quantitative surface test	<i>Bacillus subtilis</i> ATCC 6633	4 log ₁₀	>4 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	2 min		✓
	EN 13697:2001 (Phase 2, Step 2)	Quantitative surface test	<i>Clostridium difficile</i> ¹ UK027	>3 log ₁₀	>3 log ₁₀		Clean	2 min		✓
	EN 13704:2002 (Phase 2, Step 1)	Quantitative suspension test	<i>Clostridium difficile</i> ¹ UK027	3 log ₁₀	>3 log ₁₀		Clean	5 min	✓	✓
			<i>Clostridium difficile</i> ² UK027		>3.3 log ₁₀		Dirty		✓	✓
			<i>Clostridium difficile</i> ³⁻⁴ UK023		>6.1-7.5 log ₁₀		Clean	5-10 min	✓	✓
	EN 17126:2018 (Phase 2, Step 1)	Quantitative suspension test	<i>Bacillus subtilis</i> <i>Bacillus cereus</i> <i>Clostridium difficile</i>	>4 log ₁₀	>5.02 log ₁₀ >5.21 log ₁₀ >5.21 log ₁₀	MSL Solution UK	Clean	2-5 min ⁶	✓	✓
	EN 17126:2018 (Phase 2, Step 1)	Quantitative suspension test	<i>Bacillus subtilis</i> <i>Bacillus cereus</i> <i>Clostridium difficile</i>	>4 log ₁₀	>4.08 log ₁₀ >5.36 log ₁₀ >5.43 log ₁₀		Dirty	2 min	✓ ₆	✓
								2 min	✓ ₆	✓
Mycobactericidal	EN 14348:2005 (Phase 2, Step 1)	Quantitative suspension test	<i>Mycobacterium terrae</i> ATCC 15755 <i>Mycobacterium avium</i> ATCC 15769	4 log ₁₀	>4 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
	EN 14563:2009 (Phase 2, Step 2)	Quantitative Carrier test	<i>Mycobacterium terrae</i> ATCC 15755 <i>Mycobacterium avium</i> ATCC 15769	4 log ₁₀	>4 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
									✓	✓
									✓	✓
Virucidal	EN 14476: 2019 (Phase 2, Step 1)	Quantitative suspension test	<i>Poliiovirus</i> Type 1, LSc -2aba <i>Adenovirus</i> Type 5, strain Adenoid 75, ATCC VR -5 <i>Murine Norovirus</i> Strain S99 <i>Polyomavirus</i> SV40	4 log ₁₀	>5.56 log ₁₀ >5.63 log ₁₀ >5.69 log ₁₀ >4.44 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	50 ppm	
					50 ppm					
					50 ppm					
					50 ppm					
	EN 16777:2018	Carrier Test	<i>Adenovirus</i> Type 5	4 log ₁₀	>5.19 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	2 min	✓	✓
	EN 14675:2015 (Phase 2, Step 1)	Quantitative suspension test	<i>IPN 107TCID50</i> Salmonid fish viral infection	4 log ₁₀	>4 log ₁₀	Norwegian Veterinary Institute, Norway	Clean	5 min	✓	✓
				4 log ₁₀	>4 log ₁₀		Dirty	5 min	✓	✓
	EN 14675:2015 (Phase 2, Step 1)	Quantitative Carrier test	<i>Avian influenza virus</i> , (H10N7)	4 log ₁₀	>4.2 log ₁₀	SVA	Clean	1 min		✓
Fungicidal	EN 14349:2007 (Phase 2, Step 2)	Quantitative Carrier test	<i>PPV</i> , strain 893/76	4 log ₁₀	>5.3 log ₁₀	SVA	Clean	5 min	✓	✓
	EN 14476:2015	Suspension test	<i>Bovine coronavirus</i> (B-CoV)	4 log ₁₀	>5.5 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	30 sec	50 ppm	
	EN 14476:2013+A2:2019	Suspension test	<i>SARS-CoV-2-Covid-19</i>	4 log ₁₀	>5.6 log ₁₀	SVA	Clean	30 sec	✓	
	EN 13624:2013 (Phase 2, Step 1)	Quantitative suspension test	<i>Candida albicans</i> ATCC 10231 <i>Aspergillus brasiliensis</i> ATCC 16404	4 log ₁₀	>4 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
									✓	✓
Gram Negative Bacteria	EN 14562:2006 (Phase 2, Step 2)	Quantitative Carrier test	<i>Aspergillus brasiliensis</i> (niger) / black mold ATCC 16404	4 log ₁₀	>4 log ₁₀	Mikrolab Stockholm AB	Clean/Dirty	5 min	✓	✓
	EN 14562:2006 (Phase 2, Step 2)	Quantitative Carrier test	<i>Candida albicans</i> ATCC 10231	4 log ₁₀	>4 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
	EN 14562:2006 (Phase 2, Step 2)	Quantitative Carrier test	<i>Aspergillus brasiliensis</i> (niger) / black mold ATCC 16404	4 log ₁₀	>4 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	2 min		✓
				4 log ₁₀	>4 log ₁₀		Dirty	2 min		✓
	EN 16615:2015 (Phase 2, step 2)	4-Field test	<i>Candida albicans</i> ATCC 10231	>4 log ₁₀	>5 log ₁₀	RISE Research Institutes of Sweden	Clean	2 min	✓	✓
Gram Negative Bacteria	EN 13727:2014 (Phase 2, Step 1)	Quantitative suspension test	<i>Pseudomonas aeruginosa</i> ATCC 15442	5 log ₁₀	>5.11 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
	EN 14561:2006 (Phase 2, Step 2)	Carrier test	<i>Pseudomonas aeruginosa</i> ATCC 15442	5 log ₁₀	>5.11 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
	EN 13727:2015 (Phase 2, Step 2)	Quantitative suspension test	<i>Pseudomonas aeruginosa</i> ATCC 15442	5 log ₁₀	>5 log ₁₀	Food Safety Laboratory, Chung -Ang University, Seoul, South Korea	Dirty	2 min	✓	✓
	EN 13727:2015 (Phase 2, Step 2)	Quantitative suspension test ⁵	<i>Escherichia coli</i> ATCC 25922	5 log ₁₀	>5.76 log ₁₀	Internal test at Örebro University Hospital, Sweden	Clean /Dirty	2 min	✓	✓
	EN 13727:2015 (Phase 2, Step 2)	Quantitative suspension test	<i>Campylobacter jejuni</i> ATCC 33560	5 log ₁₀	>5.76 log ₁₀	Internal test at Örebro University Hospital, Sweden	Clean /Dirty	2 min	✓	✓

	Test norm	Test type	Organism	Log reduction required	Log reduction achieved	Laboratory	Clean or dirty	Contact time	LC Std 400-200 PPM	LC Plus 650-400 PPM
Gram Negative Bacteria	EN 13727:2015 (Phase 2, Step 2)	Quantitative suspension test	Salmonella typhimurium ATCC 14028	5 log ₁₀	>5.76 log ₁₀	Internal test at Örebro University Hospital, Sweden	Clean	2 min	✓	✓
			Legionella pneumophila ATCC 33152	5 log ₁₀	>5.76 log ₁₀		Dirty	2 min	✓	✓
			Aeromonas salmonicida ATCC 14174	5 log ₁₀	>5.76 log ₁₀		Clean	2 min	✓	✓
			Yersinia ruckeri ATCC 29473	5 log ₁₀	>5 log ₁₀		Dirty	2 min	✓	✓
	EN 13727:2015 (Phase 2, Step 2)	Quantitative suspension test	Klebsiella pneumoniae (ESBL) CCUG 54718	5 log ₁₀	>5.76 log ₁₀	Internal test at Örebro University Hospital	Clean	2 min	✓	✓
			Acinetobacter baumannii (Clinical strain)	5 log ₁₀	>5 log ₁₀		Clean /Dirty	2 min	✓	✓
	EN 16615:2015 (Phase 2, step 2)	4-Field test	Pseudomonas aeruginosa ATCC 15442	>5 log ₁₀	>5 log ₁₀	RISE Research Institutes of Sweden	Clean	2 min	✓	✓
	EN 13727:2014 (Phase 2, Step 1)	Suspension test	Staphylococcus aureus ATCC 6538	5 log ₁₀	>5 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
	EN 13727:2015 (Phase 2, Step 2)	Suspension test	Staphylococcus aureus ATCC 6538	5 log ₁₀	>5 log ₁₀	Food Safety Laboratory, Chung Ang University, Seoul, South Korea	Dirty	2 min	✓	✓
	EN 14561:2006 (Phase 2, Step 2)	Carrier t test	Staphylococcus aureus ATCC 6538	5 log ₁₀	>5 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
Gram Positive Bacteria	EN 13727:2014 (Phase 2, Step 1)	Quantitative suspension test	Enterococcus hirae ATCC 10541	5 log ₁₀	>5.11 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
	EN 14561:2006 (Phase 2, Step 2)	Quantitative Carrier test	Enterococcus hirae ATCC 10541	5 log ₁₀	>5.11 log ₁₀	Dr. Brill + Partner GMBH Laboratory, Germany	Clean	1 min	✓	✓
	EN 13727: 2015 (Phase 2, Step 2)	Quantitative suspension test	Enterococcus hirae ATCC 10541	5 log ₁₀	>5 log ₁₀	Food Safety Laboratory, Chung Ang University, Seoul, South Korea	Dirty	2 min	✓	✓
	EN 13727: 2015 (Phase 2, Step 2)	Quantitative suspension test	Listeria monocytogenes CCUG 51681	5 log ₁₀	>5.76 log ₁₀	Internal test at Örebro University Hospital	Clean /dirty	2 min	✓	✓
	EN 13727:2015 (Phase 2, Step 2)	Quantitative suspension test	Streptococcus equi CCUG 37782	5 log ₁₀	>5 log ₁₀	Internal test at Örebro University Hospital	Clean	2 min	✓	✓
				5 log ₁₀	>5 log ₁₀		Dirty	2 min	✓	✓
	EN 14349:2012 (Phase 2, Step 2)	Quantitative suspension test	Carnobacterium piscicola ATCC 3586	4 log ₁₀	>5 log ₁₀	Internal test at Örebro University Hospital	Clean	2 min	✓	✓
				4 log ₁₀	>5 log ₁₀		Dirty	2 min	✓	✓
	EN 16615:2015 (Phase 2, step 2)	4-Field test	Staphylococcus aureus ATCC 6538	>5 log ₁₀	>5 log ₁₀	RISE Research Institutes of Sweden	Clean	2 min	✓	✓
	EN 13727:2015 (Phase 2, Step 2)	Quantitative suspension test	Enterococcus faecium (VRE) CCUG 56431	5 log ₁₀	>5.76 log ₁₀	Internal test at Örebro University Hospital	Clean /Dirty	2 min	✓	✓
Parasites	N/A	In vitro sporulation method for Coccidia	Coccidia spp		N/A	VidiLab, Sweden	Dirty	N/A		✓
	Salmon lice	In vitro	Lepeophtheirus salmonis	N/A	N/A	ILAB, Norway	N/A	1 min	100 ppm	✓
	N/A	In Vitro	Gyrodactylus salaris	N/A	N/A	Norwegian Veterinary Institute, Norway	N/A	10 sec / 1 min	200 / 100 ppm	✓
	N/A	In Vitro	Pinworms	N/A	N/A	VidiLab, Sweden	N/A	N/A		1000 ppm
	DNA Analysis	In Vitro	Plasmid DNA	N/A	N/A	SLU	Clean	10 / 2 min	✓	✓

¹Initial bacterial spores 10⁶

²Initial bacterial spores 10⁸

³Initial bacterial spores 10⁸ and different bacteria strain

⁴Initial bacterial spores 10⁸ and 200 PPM

⁵Bactericidal effect (Clean condition for 2 minutes and Dirty condition for 5 minutes).

⁶These bacteria: *Bacillus subtilis*, *Bacillus cereus* and *Clostridium difficile* were tested for 400 PPM for 2 minutes.

Third party test partners



Veterinærinstituttet
Norwegian Veterinary Institute

optipre.™
sporicidal disinfectant

Distributed by:
optimummedical®



Optimum Medical Solutions
Tennant Hall, Blenheim Grove,
Leeds, LS2 9ET, United Kingdom
www.optimummedical.co.uk

LIFE CLEAN
International AB

LifeClean International AB
Kärrastrandvägen 124B
451 76 Uddevalla, SWEDEN
www.lifeclean.se