

	Test norm	Test type	Organism	Log reduction required	Log reduction achieved	Laboratory	Clean or dirty	Contact time		
Sporicidal	EN 13704	Suspension	<i>Bacillus subtilis</i>	> 3 log	> 3.40 log	MGS	Clean 1	30 sec.		
			<i>Bacillus cereus</i>	> 3 log	> 3 log	MGS	Clean 1			
			<i>Clostridium difficile</i>	> 3 log	> 5.19 log	HIRL	Clean 1			
			<i>Clostridium difficile</i>	> 3 log	> 5.19 log	HIRL	Dirty 1			
	Babb JR, Bradely CR & Ayliffe GAJ (J. of Hosp. Inf. 1980 1:63-75)	Suspension	<i>Bacillus subtilis var niger</i>	> 3 log	> 6.72 log	HIRL	Clean 1			
			<i>Bacillus subtilis var niger</i>	> 3 log	> 6.66 log	HIRL	Dirty 1			
	EN 14347	Suspension	<i>Bacillus subtilis</i>	> 4 log	> 4.58 log	IRM	N/A			
			<i>Bacillus cereus</i>	> 4 log	> 4.65 log	IRM	N/A			
			<i>Bacillus subtilis</i>	> 4 log	> 4.18 log	MGS	N/A			
			<i>Bacillus cereus</i>	> 4 log	> 4.68 log	MGS	N/A			
	Mycobactericidal	EN 14563	Carrier	<i>Mycobacterium avium</i>	> 4 log	> 5.2 log	Biotech Germande		Clean 1	30 sec.
				<i>Mycobacterium terrae</i> (Surrogate for <i>Mycobacterium tuberculosis</i> )	> 4 log	> 4.9 log	Biotech Germande		Clean 1	
<i>Mycobacterium avium</i>				> 4 log	> 6.65 log	MGS	Dirty 3			
<i>Mycobacterium terrae</i> (Surrogate for <i>Mycobacterium tuberculosis</i> )				> 4 log	> 6.57 log	MGS	Dirty 3			
EN 14348		Suspension	<i>Mycobacterium terrae</i>	> 4 log	> 6.04 log	Hygiene Nord GMBH	Clean 1			
			<i>Mycobacterium avium</i>	> 4 log	> 6.63 log	MGS	Clean 1			
DGHM Methodology		Carrier	<i>Mycobacterium avium</i>	> 4 log	> 7.76 log	Hygiene Nord GMBH	Dirty 1			
			<i>Mycobacterium terrae</i> (Surrogate for <i>Mycobacterium tuberculosis</i> )	> 4 log	> 7.23 log	Hygiene Nord GMBH	Dirty 1			
Griffiths et al. Journal of Hospital Infection (1998)		Suspension	<i>Mycobacterium terrae</i> (Surrogate for <i>Mycobacterium tuberculosis</i> )	> 5 log	> 5.82 log	HIRL	Clean 1			
				> 5 log	> 5.69 log	HIRL	Dirty 1			
Virucidal		EN 14476	Suspension	Poliovirus T1	> 4 log	> 5.38 log	Dr Brill & Dr Steinmann	Clean 1	30 sec.	
				Adenovirus T5	> 4 log	> 5.25 log	Dr Brill & Dr Steinmann	Clean 1		
	Murine Norovirus			> 4 log	> 5.25 log	Dr Brill & Dr Steinmann	Clean 1			
	Influenza (H1N1)			> 4 log	4.50 log	Eurofins	Dirty 1			
	ASTM E-1053	Surface	Poliovirus T1	> 4 log	> 5.75 log	Accuratus Laboratories	Dirty 3			
			Adenovirus T5	> 4 log	> 7.25 log	Accuratus Laboratories	Dirty 3			
			Feline calicivirus	> 4 log	> 5.00 log	Accuratus Laboratories	Dirty 3			
			Hepatitis B Virus (HBV)	> 4 log	> 4.76 log	Accuratus Laboratories	Dirty 3			
			Herpes Simplex Virus T1	> 4 log	> 4.25 log	Accuratus Laboratories	Dirty 3			
			Human Immunodeficiency Virus (HIV)	> 4 log	> 4.00 log	Accuratus Laboratories	Dirty 3			
			Influenza A Virus (H1N1)	> 4 log	> 5.00 log	Accuratus Laboratories	Dirty 3			
	DWW and RKI	Suspension	Poliovirus T1	> 4 log	> 4.75 log	Mikrolab GMBH	Clean 3			
				> 4 log	> 4.75 log	Mikrolab GMBH	Dirty 2			
			Adenovirus T5	> 4 log	> 6.25 log	Mikrolab GMBH	Clean 3			
				> 4 log	> 6.19 log	Mikrolab GMBH	Dirty 2			
			Polyoma Virus SV40 (HPV Surrogate)	> 4 log	> 5.50 log	Mikrolab GMBH	Clean 3			
				> 4 log	> 5.32 log	Mikrolab GMBH	Dirty 2			
			Vaccinia Virus	> 4 log	> 5.00 log	Mikrolab GMBH	Clean 3			
> 4 log				> 5.38 log	Mikrolab GMBH	Dirty 2				

	Test norm	Test type	Organism	Log reduction required	Log reduction achieved	Laboratory	Clean or dirty	Contact time
<b>Fungicidal/Yeasticial</b>	EN 13697	Surface	<i>Candida albicans</i>	> 4 log	> 4.22 log	MGS	Clean 1	30 sec.
	EN 14562	Carrier	<i>Candida albicans</i>	> 4 log	> 4.4 log	Biotech Germande	Clean 1	30 sec.
			<i>Aspergillus brasiliensis</i> (formerly <i>niger</i> )	> 4 log	> 4.36 log	Hygiene Nord GMBH	Clean 1	
			<i>Candida albicans</i>	> 4 log	> 4.08 log	Hygiene Nord GMBH	Clean 1	
	EN 13624	Suspension	<i>Candida albicans</i>	> 4 log	> 4.45 log	MGS	Clean 1	30 sec.
				> 4 log	> 4.51 log	Hygiene Nord GMBH	Clean 1	
			<i>Aspergillus brasiliensis</i> (formerly <i>niger</i> )	> 4 log	> 4.23 log	Hygiene Nord GMBH	Clean 1	
				> 4 log	> 4.33 log	MGS	Clean 1	
			<i>Fusarium solani</i>	> 4 log	> 4.0 log	Huddersfield	Clean 1	
			<i>Aspergillus flavus</i>	> 4 log	> 4.0 log	Huddersfield	Clean 1	
DGHM Methodology	Carrier	<i>Candida albicans</i>	> 4 log	> 6.47 log	Hygiene Nord GMBH	Dirty 1		
<b>Bactericidal</b>	EN 14561	Carrier	<i>Staphylococcus aureus</i>	> 5 log	> 5.8 log	Biotech Germande	Clean 1	30 sec.
			<i>Pseudomonas aeruginosa</i>	> 5 log	> 5.5 log	Biotech Germande	Clean 1	
			<i>Enterococcus hirae</i>	> 5 log	> 5.6 log	Biotech Germande	Clean 1	
			<i>Klebsiella pneumoniae</i> Carbapenemase (KPC) Enterobacteriaceae	> 5 log	> 5.57 log	MGS	Clean 1	
			<i>Vancomycin-resistant</i> <i>Enterococcus faecium</i>	> 5 log	> 5.65 log	MGS	Clean 1	
	EN 13697	Surface	<i>Escherichia coli</i>	> 4 log	> 5.36 log	MGS	Clean 1	30 sec.
			<i>Staphylococcus aureus</i>	> 4 log	> 5.90 log	MGS	Clean 1	
			<i>Pseudomonas aeruginosa</i>	> 4 log	> 5.52 log	MGS	Clean 1	
			<i>Enterococcus hirae</i>	> 4 log	> 5.62 log	MGS	Clean 1	
	EN 13727	Suspension	<i>Staphylococcus aureus</i>	> 5 log	> 6.49 log	HIRL	Clean 1	30 sec.
				> 5 log	> 6.49 log	HIRL	Dirty 1	
			<i>Pseudomonas aeruginosa</i>	> 5 log	> 6.65 log	HIRL	Clean 1	
				> 5 log	> 6.65 log	HIRL	Dirty 1	
			<i>Enterococcus hirae</i>	> 5 log	> 6.59 log	HIRL	Clean 1	
				> 5 log	> 6.59 log	HIRL	Dirty 1	
			<i>Staphylococcus aureus</i>	> 5 log	> 5.36 log	MGS	Clean 1	
			<i>Pseudomonas aeruginosa</i>	> 5 log	> 5.33 log	MGS	Clean 1	
			<i>Enterococcus hirae</i>	> 5 log	> 5.36 log	MGS	Clean 1	
			<i>Staphylococcus aureus</i>	> 5 log	> 5.34 log	MGS	Clean 1	
				> 5 log	> 5.34 log	MGS	Dirty 1	
			<i>Pseudomonas aeruginosa</i>	> 5 log	> 5.47 log	MGS	Clean 1	
				> 5 log	> 5.47 log	MGS	Dirty 1	
			<i>Enterococcus hirae</i>	> 5 log	> 5.43 log	MGS	Clean 1	
				> 5 log	> 5.43 log	MGS	Dirty 1	
			<i>Staphylococcus aureus</i>	> 5 log	> 5.18 log	Hygiene Nord GMBH	Clean 1	
<i>Pseudomonas aeruginosa</i>			> 5 log	> 5.54 log	Hygiene Nord GMBH	Clean 1		
<i>Enterococcus hirae</i>			> 5 log	> 5.27 log	Hygiene Nord GMBH	Clean 1		
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)			> 5 log	> 5.34 log	MGS	Clean 1		
			> 5 log	> 5.34 log	MGS	Dirty 1		
<i>Neisseria gonorrhoeae</i>	> 5 log	> 5.37 log	Huddersfield	Clean 1				
<i>Gardnerella vaginalis</i>	> 5 log	> 5.39 log	Huddersfield	Clean 1				
<i>Streptococcus agalactiae</i>	> 5 log	> 5.43 log	Huddersfield	Clean 1				
DGHM Methodology	Carrier	<i>Pseudomonas aeruginosa</i>	> 5 log	> 7.23 log	Hygiene Nord GMBH	Dirty 1		
		<i>Staphylococcus aureus</i>	> 5 log	> 7.30 log	Hygiene Nord GMBH	Dirty 1		
		<i>Enterococcus hirae</i>	> 5 log	> 7.52 log	Hygiene Nord GMBH	Dirty 1		

## Bespoke Testing

Test type	Organism	Log reduction required	Log reduction achieved	Laboratory	Clean or dirty	Contact time
Suspension	<i>Acanthamoeba castellanii</i> cysts (one of the causative organisms of <i>Acanthamoeba</i> keratitis)	N/A	> 3.0 log	BluTest	Clean 1	30 sec.

### Clean/Dirty Conditions Key

**Clean 1:** 0.3 g/L bovine albumin

**Clean 2:** 0.6 g/L foetal bovine serum + 0.03% bovine serum albumin

**Clean 3:** Aqua bidest

**Dirty 1:** 3.0 g/L bovine albumin + 3 ml/l sheep erythrocytes

**Dirty 2:** 10% Fetal Calf Serum

**Dirty 3:** 5% Blood Serum