

## F10 Disinfectants/Antiseptics – Reference Test Register

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa001	n/a	South African Inst Medical Research (SAIMR) SABS 636 (1971) (99,9% kill) Mycobacterium terrae	1:25	1:125	30 minutes
THHa002	n/a	Medical and Pharmaceutical Services (MPS) AFNOR NF T 72-170 (1988) (4 log reduction) Spectrum 5 bactericidal activity with interfering substances: P. aeruginosa, E.coli, S. aureus, Enterococcus faecium, Mycobacterium smegmatis	1:40	1:200	5 minutes
THHa003	n/a	MPS AFNOR NF T 72-151 (1987) (4 log reduction) Spectrum 5 bactericidal activity P. aeruginosa, E.coli, S. aureus, Enterococcus faecium, Mycobacterium smegmatis:	1:100	1:500	5 minutes
THHa004	n/a	MPS AFNOR NF T 72-150 (1987) (4 log reduction) Spectrum 5 bactericidal activity P. aeruginosa, E.coli, S. aureus, Enterococcus faecium, Mycobacterium smegmatis	1:100	1:500	5 minutes
THHa005	n/a	MPS AFNOR NF T 72-200 (1987) (4 log reduction) Fungicidal activity: Penicillium verrucosum, Cladosporium cladosporoides, Absidia corymbifera, Candida albicans	1:100	1:500	15 minutes
THHa006	n/a	MPS AFNOR NF T 72-180 (1986) (4 log reduction) Virucidal activity: Enterovirus, Orthopoxvirus, Adenovirus , HIV	1:40	1:200	30 minutes
THHa007	1994/03/01 531/82355/L0376	South African Bureau of Standards (SABS) SABS 636 (1971) (99,9%) E.coli, P. aeruginosa, S. aureus	1:100	1:500	5 minutes
THHa008	1994/04/13	Veterinary Institute, Onderstepoort: Canine parvovirus (>log 3 reduction)	1:25	1:125	30 minutes
THHa009	1994/04/19	MPS Frosner, Jentsch and Ultheman (1982) Biocidal activity: Hepatitis B	1:25	1:125	15 minutes
THHa010	1994/04/19	MPS AFNOR NF T 72-151 (1987) (4 log reduction) Leptospira, Campylobacter, Legionella	1:100	1:500	5 minutes
THHa011	1994/04/20	MPS Summary of results plus toxicity, corrosion and biodegradability tests.			
THHa012	1994/05/06	Veterinary Institute, Onderstepoort Newcastle Disease Virus, Feline Herpes Virus (inactivation = Chlorox)	1:100	1:500	30 minutes

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa13	1994/06/30 531/82533/L1574	SABS SABS 636 (1971) (99,9%) Acinetobacter anitratus	1:100	1:500	5 minutes
THHa14	1994/11/11	Eurostar Technology EU requirements Ecological impact	zero hazard	zero hazard	continuous dosing
THHa15	1994/12/09	Univ of Pretoria, Faculty Vet Science Dept Poultry Diseases IBD virus (complete inactivation)	1:50	1:250	20 minutes
THHa16	1995/02/13	Eurostar Technology Toxicity results: Oral and dermal LD <sub>50</sub> , Ocular irritation, Draize test	1:25 nil 4 & 2	1:125	2700mg/kg 1 & 24 hrs
THHa16.a	1994-12-15	Eurostar Technology Acute Oral Toxicity Tests- SUPERCEDED BY THHa 114	1:25	1:125	LD50 2700- 3500mg/kg
THHa16.b	1994-12-15	Eurostar Technology Acute Dermal Toxicity Tests- SUPERCEDED BY THHa 115	1:50	1:250	LD50>4000mg/ kg
THHa16.c	1995-01-11	Eurostar Technology Ocular Irritation Tests (Draize Test)- SUPERCEDED BY THHa117	1:50	1:250	Score 4 at 1hr; 2 at 24hrs
THHa17	1995/04/10 531/82879/M0620a	SABS SABS 636 (1971) (99,9%) S. aureus (methicillin resistant)	1:100	1:500	5 minutes
THHa18	1995/06/13 531/82946/M1026a	SABS SABS 636 (1971) (99,9%) E.coli (HO157)	1:100	1:500	5 minutes
THHa19	1995/12/13	Univ of Pretoria, Faculty Vet Science Dept Poultry Diseases Ornithobacterium rhinotracheale (av 96,3%)	1: 100	1:500	20 minutes
THHa20	1996/01/08 531/83218/M2778e	SABS Kelsey Sykes Modified (5 clear tubes) Bacillus subtilis spores	1:30	1:150	30 minutes
THHa21	1996/04/15 1995/11/22 531/83218/M2778a	SABS SABS 636 (1971) (99,9%) Aspergillus niger	1:50	1:250	30 minutes
THHa22	1997/07/07	South African Vaccine Producers (SAIMR) SABS 671 (1975) Primary Skin Irritation Test	1: 50 0 score	1:250 0 score	24 & 48 hrs on intact and abraded skin
THHa23	1997/07/11 2388/764861/P1806a	SABS SABS 636 (1971) "speed trials" (99,9%) P. aeruginosa S aureus	1:100	1:500	60 seconds 30 seconds
THHa24	1998/01/03	Eurostar Technology Inhalation toxicity - acute and chronic	nil	nil	
THHa25	1998/01/04	Eurostar Technology Residuals on fruit and vegetables	from <0.1 to	<0.5	ppm / cm <sup>2</sup>
THHa26	1998/04/01 2388/953611/Q907	SABS SABS 636 (1971) (99,9%) Trichophyton mentagrophytes	1:100	1:500	15 minutes
THHa27	1998/10/08	Eurostar Technology Residual properties F10 and Chlorhexidene	=	=	
THHa28	1998/11/19 5447/1066950/Q2542	SABS SABS 509 Kelsey-Sykes (5 clear tubes) P. aeruginosa - dirty conditions (5% yeast)	1:40	1:200	8 + 10 min

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa29	1999/02/04 1066950/S155	SABS Biocidal test (bacteriostatic test) E.coli, P. aeruginosa, Klebsiella sp.	5 ppm	1 ppm	5 minutes
THHa30	1999/02/24 5447/1066950/R3632a	SABS SABS 636 (1971) (99,9%) Proteus vulgaris	1:100	1:500	5 minutes
THHa31	1999/03/02 5538/1192518/S5	SABS SABS1221 (no discolouration, pitting or etching) Aluminium corrosion test	1: 6,6	1:33	24+24 hrs 24+120 hrs
THHa32	1999/03/16 5447/1066950/S846	SABS BS EN standard 1276 (1997) (10 <sup>5</sup> log) P. aeruginosa, E.coli, S. aureus, Enterococcus hirae	1:100	1:500	5 minutes
THHa33	1999/03/20 5447/1066950/S1183a	SABS pr EN standard 1276 (1997) (10 <sup>5</sup> log) Clean and dirty conditions @ 10°C and 20°C P. aeruginosa, E.coli, S. aureus, Enterococcus hirae	Clean 1:100 Dirty 1:100 Clean 1:100 Dirty 1:100	1:500 1:500 1:500 1:500	5 minute @ 20°C  5 minutes @ 10°C <5
THHa34	1999/03/16 5447/1066950/S779	SABS BS EN standard 1040 (1997) (10 <sup>5</sup> log) P. aeruginosa, S. aureus	1:100	1:500	5 minutes
THHa35	1999/03/18 5447/1066950/S779a	SABS: pr EN standard 1657 (1994) (10 <sup>4</sup> log) Candida albicans	1: 100	1:500	30 minutes
THHa36	1999/05/18 EEF000028D	SAIMR SABS 636 (1971) (99,9%) Salmonella typhi, Vancomycin resistant Enterococcus faecalis, Streptococcus pyogenes, Vibrio cholera	1:100 1:200 1:200 1:200	1:500 1:100 1:1000 1:1000	60 seconds 60 seconds 60 seconds 60 seconds
THHa37		See THHf1			
THHa38		See THHf2			
THHa39		See THHf3			
THHa40		See THHf4			
THHa41		See THHf5			
THHa42	1999/07/22 EEF00027X	SAIMR SABS 636 (1971) (99,9%) Listeria monocytogenes	1:100 1:200	1:500 1:1000	30 seconds 60 seconds
THHa43a	1997/12/18	Glaxowellcome SABS S. epidermidis, P. cepacia, Micrococcus luteus, Salmonella abony, Klebsiella pneumoniae, Corynebacterium xerosis, C. albicans, Bacillus subtilis spores	1:25	1:125	Spores 1 hour

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa43b	1999-12	Glaxowellcome SABS S. epidermidis, P. aeruginosa, P. (Burkholderia) cepacia, Micrococcus luteus, Salmonella abony, Citrobacter freundii, enterobacter sakazakii, Klebsiella pneumoniae, E. coli, Corynebacterium xerosis, C. albicans, Bacillus subtilis spores, Enterobacter cloacae, A. niger	1:25	1:125	Spores 60 minutes
THHa44	2000-02-15 5447/1066950/ S4314a	SABS SABS 1593 (1954) Corrosiveness (6.10) Rinsing properties (6.11) Water insoluble matter content (6.12) Storage stability (6.13)	1:20 1:20	1:5 1:5	passes passes 0,3g/l passes passes
THHa45	2000-03-27 5447/1066950/T5323	SABS Minimum Inhibitory Concentration (MIC) S. aureus  P. aeruginosa	between 1:6553/ 13,107 1: 102/ 204	between 1:32768/6 5,536 1:512/ 1024	22° for 48 hrs
THHa46	2000-04-13	Clover SA Inhibitory Substances Screening Test B. stearothermophilus	1:50	1:250	3 hrs @ 63° Dilutions with milk of 1:20 upwards are negative
THHa47	2000-02-01 5447/1066950/T879	SABS Giescke, WH. Van Den Heever, LW. (1971) Udder disinfectant P. aeruginosa, S. aureus	1:50	1:250	0.5, 1, and 2.5 minutes
THHa48	1997-11-27 cross ref THHd2	SAIMR SABS 671 (1975) Primary Skin Irritation Test	1:25 0 score	1:125 0 score	24 & 48 hrs on intact and abraded skin
THHa49	2000-03-06 5447/1066950/T3081-2	SABS SABS 636 (1971) (99,9%) P. aeruginosa	1:100	1:500	1 year stability test
THHa50	2000-03-06 5447/1066950/T3081-2	SABS SABS 636 (1971) (99,9%) P. aeruginosa	1:100	1:500	2 year stability test
THHa51	2000-02-24 DT/fm HH09/00 cross ref THHa16	Eurostar Technology Oral and topical toxicity (LD50)	>5000 mg/kg	>5000 mg/kg	as sold product concentrate
THHa52	1994-11-16	Rainbow Farms, Hammersdale Lab Malthus 2000 Analyser E.coli strain of avian origin	1:300	1:1500	15 minute contact
THHa53	1995-03-23 531/82881/M0634	SABS Effect of irradiation on bactericidal activity P. aeruginosa	1:100	1:500	No diminution of performance at levels from 4kGy to 25kGy
THHa54	2000-05-30 558/2000	Poultry Reference Laboratory Newcastle Disease Virus	1:100	1:500	Complete in- activation in 20 minutes

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa55	2000-06-08 624/2000	Poultry Reference Laboratory Newcastle Disease Virus	1:100	1:500	Complete in-activation in 10 minutes
THHa56	2000-05-04	ARC- Onderstepoort Veterinary Institute Rabies Unit - Rabies Virus	Between 1:150 - 1:300  Between 1:100 - 1:150	Between 1:750 - 1:1500  Between 1:500 - 1:750	Complete in-activation @ 20°C  Complete in-activation @ 10°C
THHa57a	2000-07-18	ARC - Animal Improvement Institute Skin sensitivity trial-Highveld winter conditions, using F10 SC as an udder wash	1: 50	1:250	No sensitivity - zero score
THHa57b	2000-07-18	See THHaa5			
THHa58	2000-10-10	Poultry Reference Laboratory Infectious Bursal Disease Virus (IBD)	1: 50	1:250	Complete in-activation in 20 minutes
THHa58b	2000-11-02	SABS SABS 636(1971) P.aeruginosa	1:100 1:200 1:300	1:20 1:40 1:60	5 min & 10 min Tests done at 22C and 45C
THHa59		See THHf6			
THHa60	2001-01-08	Keymed – Compatibility of F10 Disinfectant Solution with Olympus Flexible Endoscopes	-	-	Use in UK Market
THHa61	2001-01	See THHf7			
THHa62	2001-01-10	See THHg1 – F10 SC FMD Disinfectant			
THHa63	2000-05-08 5447/1066950/926 /T5930	SABS SABS 1593 (1994): Disinfectants based on Glutaraldehyde for use on medical instruments - Kelsey Sykes (modified) test using B. subtilis spores	1:20	1:100	Clean test: 5 clear tubes in 1 hour
THHa64	2001-03-23	See THHf9 - Fitosan			
THHa65		See THHg2 – F10 SC FMD Disinfectant			
THHa66		See THHg3 – F10 SC FMD Corrosion			
THHa67		See THHg4 – F10 SC FMD Corrosion			
THHa68	1733791/00-1316/U8139 2001-06-06	SABS SABS 636(1971) (99.9%) S aureus	1:50	1:250	> 99.9% kill of S. aureus within 15 sec
THHa69		See THHf10 - Fitosan			
THHa70		See THHg5 – F10 SC FMD Corrosion			
THHa71	2001-09-28	Univ. of Pretoria – Faculty of Biological & Agricultural Science. F10 SC as a mist spray at 125ppm Aspergillus fumigatus	1:1600	1:8000	No spore germination on plate, even after 5 days
THHa72	2002-01-28 1733791/02-00211/V1391	SABS SABS 636 (1971) (99,9%) Pasteurella multocida	1:100	1:500	5 min Passed
THHa73	2001-07-01	Dr I.M. Petzer (U.P Faculty of Veterinary Science) Field Trial Pseudo-cowpox (See also THHh3)	1:50	1:250	27 day Supervised trial 1.2% re-infection

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa74	2002-12-17 1733791/02/V16507-12a	SABS Clostridium sporogenes SATCC C1 29	1:50	1:250	% kill: 10 min - 94.4% 20 min – 98%
THHa75	2003-09-03 1733791/03- 04526/W11421-26	SABS SABS 636 (1971) (99.9%) Pseudomonas Aeruginosa	1:50	1:250	Ready to use solution tested over a 6 month period without fall in efficiency performance.
THHa76	2003-09-01	Eurostar Technology Limited  Chemical incompatibility between aldehyde products and F10 solutions.	-	-	F10 Solution is incompatible with any aldehyde based products and will result in reddish brown deposits on instruments / surfaces.
THHa77	2003-03-03 1733791/03-00352/ W1643-45A	SABS SABS 636 (1971) (99.9%) Pseudomonas Aeruginosa	1:100	1:500	Stability tests on batches from 2001, 2002, 2003 – all comply.
THHa78	2003-10-21 7316/1954332/W4204 A	SABS 636 Corrosion test for Mark Scheme	1:100	1:500	F10SC Passes
THHa79	2003-10-21 7316/1954332/W4203 A	SABS 636/639 Efficacy and corrosion test for Mark Scheme	1:100	1:500	F10SCXD Passes
THHa80	2004-02-16 1733791/04-273 /X20316	SABS SANS 636-2001 Salmonella choleraesuis typhimurium ATCC 13311 Sal 12	1:100	1:500	> 99.9 % kill in 2 minutes
THHa81a	2004-03-26 1733791/03-04526 /W11421-26	SABS SANS 1615-1994 Pseudomonas aeruginosa SATCC Psc 16	1:50	1:250	> 99.9 % kill in 2 min and 5 min Tested every month over a 24 month period. Samples stored at 37°C throughout.
THHa81b	1733791/05-0234 /X50945	SABS SANS 1615-1994 Pseudomonas aeruginosa SATCC Psc 16	1:50	1:250	99.9% kill in 2 min and 5 min of 2 year old retention sample.
THHa82	2004-11-02 1212/04	Micro Laboratory, Karachi, Pakistan Cocktail of gram positive and gram negative bacteria.	1:200	1:1000	Log 7 reduction in 5 minutes.

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa83	2004-06-16 Lab Ref. No. 607	K & Ns Poultry Disease Diagnostic & Research Institute FDA/BAM Bactericidal Activity Poultry pathogenic strain of E. Coli Staphylococci Pseudomonas C. albicans	1:100	1:500	Complete inhibition
THHa84	2004-11-05 1733791/04-472 /X21367	SABS SANS 636-2001 Trichophyton mentagrophytes	1:50	1:250	99.9% kill in 10 minutes.
THHa85	2005-02-04 1733791/04-2186 /X31628a	SABS EN 13704-2002 Bacillus subtilis spores	1:20	1:100	99.9% kill in 5 minutes.
THHa86	2005-02-04 1733791/04-2186 /X31628b	SABS EN 1650-1997 Aspergillus niger spores	1:20	1:100	99.9% kill in 5 minutes.
THHa87	2005-02-04 1733791/04-2186 /X31628c	SABS EN 13697-2001 Aspergillus niger spores	1:20	1:100	99.99% kill in 5 minutes.
THHa88	2005-02-04 1733791/04-3294 /X38022-3	SABS EN 13704-2002 Bacillus subtilis spores	1:20	1:100	99.99% kill in 5 minutes.
THHa89a	2005-03-24 1733791/ 04-5 /X18434	SABS Simulating cleaning and disinfection cycles a) Utilising an ultrasonic bath in the cleaning cycle. Bacillus subtilis spores	1:20	1:100	99.999% kill in in total elapse time of 12 minutes (Refer THHa85).
THHa89b	2005-03-24 1733791/ 04-6307 /W 18008 / 9a	SABS Simulating cleaning and disinfection cycles b) Utilising a mechanical agitator in the cleaning cycle. Bacillus subtilis spores	1:20	1:100	99.999% kill in in total elapse time of 12 minutes (Refer THHa85).
THHa90	2004-12-30 1733791/04-2747 /X34736/40	SABS Staphylococcus epidermidis using a commercial pressurised aerosol can (average droplet size, 26 microns)	1:20	1:100	99.999% kill in 10 minutes (no survivors)
THHa91	2005-03-09	University of Pretoria Department of Veterinary Tropical Diseases, Onderstepoort.  Use of F10SC on superficial tissues (fibroblast-like cells) on skin and open wounds. Bovine dermis cells	1:400	1:2000	30 seconds – cells unaffected. 5 minutes – 50% cells remain viable. NB: After 24hrs results unchanged.
THHa92	2005-02-14	Onderstepoort Veterinary Institute Avian Influenza Virus (H5N2 HPAI)	1:100	1:500	10 minutes complete inactivation
THHa93	2006-10-05 2425/06-2312/A117007	SABS Microsporium canis	1:50	1:250	99.9% kill in 10 minutes

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa94	2423/529/A101797 A	SABS AOAC hard surface carrier test – 60 carriers per batch. 3 batches tested. <i>Salmonella choleraesuis</i> ATCC 10708	1:50	1:250	10 minutes contact time, initial load 1 – 5 x 10 <sup>6</sup> cfu/ml. Pass criteria n m th 1 positive in every batch of 60 carriers, i.e. n m th 3 positive in 180 carriers.
THHa95	2423/529/A101797 B	SABS AOAC hard surface carrier test – 60 carriers per batch. 3 batches tested. <i>Staphylococcus aureus</i> ATCC 6538	1:50	1:250	10 minutes contact time, initial load 1 – 5 x 10 <sup>6</sup> cfu/ml. Pass criteria n m th 1 positive in every batch of 60 carriers, i.e. n m th 3 positive in 180 carriers.
THHa96	2423/529/A101797 C	SABS AOAC hard surface carrier test – 60 carriers per batch. 3 batches tested. <i>Pseudomonas aeruginosa</i> ATCC 15442	1:50	1:250	10 minutes contact time, initial load 1 – 5 x 10 <sup>6</sup> cfu/ml. Pass criteria n m th 1 positive in every batch of 60 carriers, i.e. n m th 3 positive in 180 carriers.
THHa97	2005-11-07 2593541/05-2365/Y67793	SABS Bactericidal Efficacy of F10SC Disinfectant in an Ultrasonic Humidifier <i>Pseudomonas aeruginosa</i> SATCC Pse 16	1:100	1:500	100% kill in 5 minutes
THHa98	2005-11-07 2593541/05-2365/Y67793a	SABS Bactericidal Efficacy of F10SC Disinfectant in Ultrasonic Vapour Stream <i>Pseudomonas aeruginosa</i> SATCC Pse 16	1:50	1:250	100% kill in 10 minutes
THHa99	2006-10-12 2525/06-2312/A117007b	SABS SANS 636-2001 <i>Microsporium canis</i>	1:50	1:250	100% kill in 10 minutes
THHa100	2007-06-25 2425/07-0970/B140445	SABS SANS 636-2001 <i>Clostridium difficile</i> ATCC 43593	1:25 1:50	1:125 1:250	99.9% kill in 10 minutes 99.9% kill in 30 minutes



<b>Test ref no.</b>	<b>Test certificate no. /date</b>	<b>Test description - testing body - test standard and (pass criteria) - micro organisms tested</b>	<b>F10 CL</b>	<b>F10 SC (super concentrate)</b>	<b>Contact Time</b>
THHa101	2003-10-06 7212/1954332/03-5034/W10123	SABS 636 (2001) (>99.9% kill) P. aeruginosa, E.coli, S. aureus	1:100	1:500	5 min
THHa102	2006-04-24 2425/06-0674/A98605	SABS 1853 Mark Scheme –F10SCXD 1853 (2001) (>99.9%) P. aeruginosa, E.coli, S. aureus	1:100	1:500	5 min
THHa103	2006-10-10 2425/06-2312/A117007a	SABS Microsporium canis	1:50	1:250	99,9% kill in 10 minutes
THHa104	2007-02-01 2425/07-3308/B127217	SABS SANS 636 (2001) (>99.9%)	1:100	1:500	5 min Mixture of F10SC(1:250) and Mentofin (1:1000)
THHa105	2007-06-18 2425/07-1043-/B141226	SABS SANS 636 (2001) (>99.9%) E.coli (Disease Control Africa local isolate)	1:100	1:500	5 min
THHa106	2007-10-29 2425/07-2313/B155427	SABS SANS 636 (2001) (>99.9%) P. aeruginosa, .coli, S. aureus	1:50	1:250	5 min Testing for SANS 1853
THHa107	2007-10-29 2425/07-2313/B155428	SABS SANS 639 (2001) (>99.9%) P. aeruginosa, .coli, S. aureus	1:50	1:250	5 min F10SCXD testing for SANS 1853
THHa108	2007-11-26 2425/07-2272/B154937	SABS SANS 1615 (1995) (>99.9%) P. aeruginosa	1:50	1:250	5 min F10SC 1:250 Saline (F10SC Antiseptic Solution)
THHa109	2008-08-25 2425/08-1118/C180918	SABS SANS 636 -2001 (>99.9%) P aeruginosa, E.coli, S. aureus	1:100	1:500	5 min F10SC testing for SANS 636-2001
THHa110	2008-10-17	SABS SANS 639—2001 Chemical Tests for Mark Scheme	1:100	1:500	Various F10SCXD Vet testing for For SANS 639
THHa111	2008-12-19 2425/08-2665/C203473	SABS SANS 636-2001 B. subtilis (>99.9%)	1:20	1:100	30 min 99.9% 30 minutes
THHa112	2009-07-28 2425/09-30/D226499	SABS SANS 636-2009 (>99.9%) P aeruginosa, E.coli, S. aureus	1:100	1:500	5 min F10SC Testing for SANS 636-2009

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa113	2009-02-26	Veterinary Laboratories Agency UK – DEFRA tests using egg culture method at 40 C in dirty conditions			1:9 (GO) 1:35 (DoP, AI&IAOM)
	2015-02-02 VO4/15 (2)	University of Pretoria, Dept of Veterinary Tropical Diseases, Virology Laboratory DEFRA NDV test 4 0 C in clean conditions using tissue culture method		1:100	No survivors
	4 March 2015 VO4/15 B	University of Pretoria, Dept of Veterinary Tropical Diseases, Virology Laboratory DEFRA NDV test 4 0 C in dirty conditions using tissue culture method		1:100	No survivors
THHa114	12 July 2006 A34/01/06	US Environmental Protection Agency Acute Oral Toxicity, OPPT 870.1100 Lab-Bio Research	1:500	1:100	(Cat.IV >5000mg/kg)
THHa115	26 February 2009 HH-0042-2009	US Environmental Protection Agency Acute Dermal Toxicity OPPTS 870.1200 Lab-Bio Research	1:500	1:1 1:100	Cat IV >5000mg/kg Cat 4 >5000mg/kg
THHa116	20 March 2008 HH-0017-2008	US Environmental Protection Agency Acute Dermal Irritation OPPTS 870.2500 Lab-Bio Research	1:500	1:1 1:100	Cat IV No irritation Cat 4 No irritation
THHa117	18 March 2007 HH-0001-2007	US Environmental Protection Agency Acute Eye Irritation OPPTS 870.2400 Lab-Bio Research	1:500	1:100	Cat IV No irritation
THHa118	23 March 2009 HH-0028-2008	US Environmental Protection Agency Acute Inhalation Toxicity OPPTS 870.1300 Lab-Bio Research	1:500	1:1 1:100	Cat IV >20mg/litre Cat IV >20mg/litre
THHa119	31 January 2009 HH-0022-2008	US Environmental Protection Agency Skin Sensitization OPPTS 870.2600 Lab-Bio Research	1:500	1:1 1:100	Not a sensitizer  Not a sensitizer
THHa120	5 March 2007 HH-0002-2007	US Environmental Protection Agency Acute Eye Irritation OPPTS 870.2400 Lab-Bio Research	1:5	1:1	Cat III Slight irritation

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa122	HH-0004-2007 HH-0005-2007	US Environmental Protection Agency Acute Dermal Irritation OPPTS 870.2500  Acute Eye Irritation OPPTS 870.2400  Acute Oral Toxicity, OPPT 870.1100  Acute Dermal Toxicity OPPTS 870.1200 Lab-Bio Research		1:50  1:50  1:50  1:50	Cat IV No irritation Cat IV No irritation Cat IV >5000mg/kg Cat IV >5000mg/kg
THHa122b	4 June 2007 HH-01-10-2006	US Environmental Protection Agency Acute Dermal Irritation OPPTS 870.2500  Acute Eye Irritation OPPTS 870.2400  Acute Oral Toxicity, OPPT 870.1100  Acute Dermal Toxicity OPPTS 870.1200 Lab-Bio Research	1:10  1:10  1:10  1:10		Cat IV No irritation Cat IV No irritation Cat IV >5000mg/kg Cat IV >5000mg/kg
THHa123	6 March 2012 B341/2012	University of Pretoria DVTD Bacteriology Laboratory Zone of Inhibition Sensitivity Test <i>Mycoplasma gallisepticum</i> NCTC 10115	1:80000	1:16000	72 hours
THHa124	7 February 2012 2423/11-F947	SABS Pharmaceutical Microbiology Department EPA Sanitizer Test - AOAC Method Dirty conditions (Min 99.9% reduction at 5 mins) <i>Pseudomonas aeruginosa</i> ATCC 15492		1:200	F10SCXD Kill 99.9972% At 5 mins
THHa125	30 January 2012 2423/11-F947	SABS Pharmaceutical Microbiology Department EPA Sanitizer Test -AOAC Method Dirty conditions (Min 99.9% reduction at 5 mins) <i>Staphylococcus aureus</i> ATCC 6538  <i>Enterobacter aerogenes</i> ATCC 13048		1:200  1:200	F10SCXD  Kill 99.99997% at 5 mins Kill 99.968% at 5 mins
THHa126	11 September 2012 V09/12	University of Pretoria, Dept of Veterinary Tropical Diseases, Virology Laboratory EPA Virucides Test Method PIS/TSS-7 <i>Canine parvovirus</i>	1:20	1:100	15 mins
THHa127	7 December 2012 B2050/2112	University of Pretoria Methicillin resistant <i>S. pseudintermedius</i> sensitivity against F10SC Veterinary Disinfectant (Zone of inhibition)		1:125 1:250 1:500 1:1000	9.89mm 8.39mm 8.17mm 6.99mm
THHa128	20 February 2015 VO4/15 (2)	University of Pretoria, Dept of Veterinary Tropical Diseases, Virology Laboratory DEFRA NDV test 4 0 C in clean conditions using tissue culture method		1:100	No survivors
THHa129	4 March 2015 VO4/15 B	University of Pretoria, Dept of Veterinary Tropical Diseases, Virology Laboratory DEFRA NDV test 4°C in dirty conditions using tissue culture method		1:100	No survivors
THHa130	13 December 2019 5695	Citrus Research International on behalf of University of Pretoria Veterinary Onderstepoort Campus F10SC tested against <i>P.lalicinus</i> ,		1 : 250	Not stated

Test ref no.	Test certificate no. /date	Test description - testing body - test standard and (pass criteria) - micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa131	IanE 23 March 2020	Noted Water hardness effect on F10 disinfectant efficacy under EN 1364 and EN13727 which are carried out using a water hardness of 250 ppm		1 : 550 To 1:100	No adverse effect
THHa132	2 June 2020 Ref 11088381 (Batch 220441)	M & L Laboratory Services (Pty) Ltd Test method SANS 51276 (EN1276). Pass criteria of 5 decimal log reduction <i>Enterococcus hirae</i> ATCC10541 <i>Escherichia coli</i> ATCC10536 <i>Pseudomonas aeruginosa</i> ATCC 15442 <i>Staphylococcus aureus</i> ATCC6538  M & L Laboratory Services (Pty) Ltd Test method SANS 51650 (EN1650). Pass criteria of 4 decimal log reduction <i>Candida albicans</i> ATCC10231 <i>Aspergillus brasiliensis</i> ATCC16404  M & L Laboratory Services (Pty) Ltd Test method SANS 53704 (EN13704). Pass criteria of 3 decimal log reduction <i>Bacillus subtilis</i> ATCC 6633		1: 500  1: 250  1:100	Passed by killing 99.999% at a 5 minute contact time  Passed by killing 99.99% at a 15 minute contact time  Passed by killing 99.9% at a 30 minute contact time
THHa133	2 June 2020 Ref 11088381 (Batch 220431)	M & L Laboratory Services (Pty) Ltd Test method SANS 51276 (EN1276). Pass criteria of 5 decimal log reduction <i>Enterococcus hirae</i> ATCC10541 <i>Escherichia coli</i> ATCC10536 <i>Pseudomonas aeruginosa</i> ATCC 15442 <i>Staphylococcus aureus</i> ATCC6538  M & L Laboratory Services (Pty) Ltd Test method SANS 51650 (EN1650). Pass criteria of 4 decimal log reduction <i>Candida albicans</i> ATCC10231 <i>Aspergillus brasiliensis</i> ATCC16404  M & L Laboratory Services (Pty) Ltd Test method SANS 53704 (EN13704). Pass criteria of 3 decimal log reduction <i>Bacillus subtilis</i> ATCC 6633		<u>F10 SCXD Disinfectant</u>  1: 500  1: 250  1:100	Passed by killing 99.999% at a 5 minute contact time  Passed by killing 99.99% at a 15 minute contact time  Passed by killing 99.9% at a 30 minute contact time
THHa134	10 November 2019 Lab Ref: TAD 19/F10SC R&D	Agricultural Research Council – Onderstepoort Veterinary Institute African Swine Fever Virus (ASFV) <i>LUS 93/1</i>		1:100	Passed by demonstrating a > log <sup>4</sup> reduction at 30 minutes contact time.
THHa135	3 September 2020 BT-HAH-02	BluTest Laboratories Ltd - EN 14476:2013 + A2:2019 EU standard. (This includes all enveloped viruses as well as all coronaviruses and SARS-CoV-2) - 4 Log reduction pass criteria - Vaccinia virus VR-1549 Elstree strain (P7)		1:250	Passed by demonstrating a log <sup>5</sup> reduction at 5 minutes contact time

Test ref no.	Test certificate no. /date	<b>Test description</b> - testing body - test standard and (pass criteria) micro organisms tested	F10 CL	F10 SC (super concentrate)	Contact Time
THHa136	3 December 2020 BT-HAH-02	BluTest Laboratories Ltd - EN 13610: - 4 Log reduction pass criteria - <i>Lactococcus lactis</i> subsp. <i>lactis</i> P001 DSM 4262 - <i>Lactococcus lactis</i> subsp. <i>lactis</i> P008 DSM 10567		1:500	Passed by demonstrating a log <sup>4</sup> reduction at 30 minutes contact time
THHa137	11 October 2021	Magalies Water Scientific Services Giardia and Cryptosporidium test Combination of EN 1276 (SANS 51276) and USEPA 1623 Giardia lamblia H3 and Cryptosporidium parvum Iowa		1 :100	No Detection after 60 min contact time