Abbott Analytical

Consulting Scientists to the Disinfectant Industry

Certificate of Analysis

Sample(s):	One sample of Remuvit		
Received from:	Klenitise Ltd. 14 Cherry Grove, Sketty, Swansea, SA2 8AS		
Date received:	23 July 2010	**Date tested:**	28 July 2010
Certificate no:	10G.130E-KR.CLE	**Certificate date:**	30 July 2010
Sample ref:	10G/130	**Page:**	1 of 2
Analysis required:	EN 1276, Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic and institutional areas - Test method and requirements (phase 2, step 1)		

Product stored at:	Room temperature
Active substance:	Not declared
Test conditions:	'Dirty'
Interfering substance:	3.0g/l bovine albumin
Product test concentration:	20% v/v
Product diluent used during test:	Sterile hard water 300mg/l $CaCO_3$
Contact time:	5 minutes
Test temperature:	20°C ± 0.5°C
Neutralising solution:	30g/l polysorbate 80, 3g/l lecithin, 1g/l histidine, 1g/l cysteine
Incubation temperature:	37°C ± 1°C
Identification of bacterial strain(s) used:	*Pseudomonas aeruginosa* NCIMB 10421 *Escherichia coli* NCTC 10418 *Salmonella typhimurium* NCTC 12023 *Enterobacter cloacae* NCIMB 8151

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Test results:

Test Organism	*Pseudomonas aeruginosa*		*Escherichia coli*		*Salmonella typhimurium*		*Enterobacter cloacae*	
10^{-1} Validation Suspension	Vc1 366	Vc2 334	Vc1 304	Vc2 358	Vc1 366	Vc2 382	Vc1 444	Vc2 378
	Nv0 3.50 x10^{3}		Nv0 3.31 x10^{3}		Nv0 3.74 x10^{3}		Nv0 4.11 x10^{3}	
10^{0} Experimental Control	Vc1 322	Vc2 304	Vc1 314	Vc2 356	Vc1 333	Vc2 370	Vc1 296	Vc2 354
	A 3.13 x10^{2}		A 3.35 x10^{2}		A 3.52 x10^{2}		A 3.25 x10^{2}	
10^{0} Neutraliser Control	Vc1 338	Vc2 314	Vc1 328	Vc2 348	Vc1 380	Vc2 322	Vc1 328	Vc2 366
	B 3.26 x10^{2}		B 3.38 x10^{2}		B 3.51 x10^{2}		B 3.47 x10^{2}	
10^{0} Method Validation	Vc1 326	Vc2 350	Vc1 326	Vc2 350	Vc1 346	Vc2 318	Vc1 314	Vc2 302
	C 3.38 x10^{2}		C 3.38 x10^{2}		C 3.32 x10^{2}		C 3.08 x10^{2}	
10^{-6} Test Suspension	Vc1 312	Vc2 255	Vc1 246	Vc2 352	Vc1 292	Vc2 188	Vc1 324	Vc2 288
10^{-7}	Vc1 28	Vc2 23	Vc1 35	Vc2 42	Vc1 23	Vc2 30	Vc1 33	Vc2 41
	N 2.69 x10^{8}		N 3.42 x10^{8}		N 2.53 x10^{8}		N 3.38 x10^{8}	
10^{-2} Results	Vc1 0	Vc2 0	Vc1 0	Vc2 0	Vc1 0	Vc2 0	Vc1 0	Vc2 0
	Na < 1.00 x10^{2} R > 2.69 x10^{6}		Na < 1.00 x10^{2} R > 3.42 x10^{6}		Na < 1.00 x10^{2} R > 2.53 x10^{6}		Na < 1.00 x10^{2} R > 3.38 x10^{6}	
Log_{10} Reduction	> 6.43		> 6.53		> 6.40		> 6.53	

Vc = Viable count
Nv = cfu/ml in the validation suspension
N = cfu/ml in the test suspension
Na = cfu/ml in the test mixture
R = Reduction in viability

Requirements & Conclusion:

To pass EN 1276 a log_{10} reduction of at least 5 is required.

This batch of Remuvit, when diluted to 20% v/v, passes the requirements of EN 1276 for bactericidal activity in 5 minutes at 20°C under 'dirty' conditions against the reference organisms detailed.

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