BluTest
GLOBAL MICROBIOLOGY EXPERTISE

Test Report: EN 1276 2009 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)

Test Laboratory	**BluTest Laboratories Ltd** Robertson Incubator (Level 4) Robertson Building 56 Dumbarton Road Glasgow UK - G11 6NU
Identification of sample	
Name of the product	**CreBiSol X10**
Batch number	28.5.14
Client	**CREATIVE BIOCIDAL SOLUTIONS LIMITED** First Floor, Block C, Balbriggan Business Campus, Balbriggan, CO Dublin
Project Code	BT-HIP-02A(1)
Date of Delivery	30 May 2014
Storage conditions	Cool, well ventilated area. Keep container tightly closed
Active substances	DDQ50
Test Method and its validation	
Method	Chemical-neutralization
Neutralizer	Lecithin 11.7g/l, Polysorbate 80 100g/l, sodium thiosulphate 5.0g/l, sodium dodecyl sulphate 10.0g/l, sodium chloride 8.5g/l, tryptone 1.0g/l sterilized by autoclave
Experimental Conditions	
Period of analysis	26-27 June 2014
Product diluent used	Sterile, synthetic hard water
Product test concentrations	1.0 % V/V; 2.0 % V/V; 5.0 % V/V: 10.0 % V/V
Appearance product dilutions	Test mixture becomes cloudy at 10%, 5%, 2%, 1% and Control C
Contact time	t = 30 s ± 10 s
Test temperature	20°C ± 1°C
Interfering substance	3.0g/l bovine serum albumin
Stability of mixture	Stable
Temperature of incubation	37 °C ± 1°C
Identification of strains	*MRSA UK15*

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EN 1276 Results for the efficacy of CreBiSol X10 from Creative Biocidal Solutions Ltd under DIRTY CONDITIONS

Test organisms	Validation test				Bacterial test suspension (N)	Test procedure at concentration % (V/V)				
	Bacterial Suspension (Nv)	Experimental conditions (A)	Neutralizer toxicity Control or filtration control (B)	Dilution-neutralization control or filtration test control (C)			1.00%	2.00%	5.00%	10.00%
MRSA UK15 *Neat* ATCC 15442	*V*c: 49 ; 52 *N*v: 5.05E+02	Vc: 40 ; 48 A: 4.40E+01	Vc: 44 ; 48 B: 4.60E+01	Vc: 59 ; 64 C: 6.15E+01	10^{-8}: 215 ; 221 10^{-9}: 17 ; 27 N: 2.18E+10	N Na R	32 ; 37 3.45E+02 <10(8)	2 ; 4 <1.40E+02 >10(8)	0 ; 0 <1.40E+02 >10(8)	0 ; 1 <1.40E+02 >10(8)
Validation	$30 \le Nv_0 \le 160$? yes	$A \ge 0.5 \times Nv_0$? yes	$B \ge 0.5 \times Nv_0$? yes	$C \ge 0.5 \times Nv_0$? yes	$9.17 \le \log N_0 \le 9.70$? yes	Test is valid				
MRSA UK15 *10E-1 product* ATCC 15442	*V*c: 49 ; 52 *N*v: 5.05E+02	Vc: 40 ; 48 A: 4.40E+01	Vc: 44 ; 48 B: 4.60E+01	Vc: 59 ; 64 C: 6.15E+01	10^{-8}: 215 ; 221 10^{-9}: 17 ; 27 N: 2.18E+10	-1 Na R	4 ; 6 <1.40E+02	0 ; 0 <1.40E+02	0 ; 1 <1.40E+02	0 ; 0 <1.40E+02
Validation	$30 \le Nv_0 \le 160$? yes	$A \ge 0.5 \times Nv_0$? yes	$B \ge 0.5 \times Nv_0$? yes	$C \ge 0.5 \times Nv_0$? yes	$9.17 \le \log N_0 \le 9.70$? yes	Test is valid				
MRSA UK15 *10E-2 product* ATCC 15442	*V*c: 49 ; 52 *N*v: 5.05E+02	Vc: 40 ; 48 A: 4.40E+01	Vc: 44 ; 48 B: 4.60E+01	Vc: 59 ; 64 C: 6.15E+01	10^{-8}: 215 ; 221 10^{-9}: 17 ; 27 N: 2.18E+10	-2 Na R	1 ; 3 <1.40E+02	0 ; 0 <1.40E+02	0 ; 0 <1.40E+02	0 ; 0 <1.40E+02
Validation	$30 \le Nv_0 \le 160$? yes	$A \ge 0.5 \times Nv_0$? yes	$B \ge 0.5 \times Nv_0$? yes	$C \ge 0.5 \times Nv_0$? yes	$9.17 \le \log N_0 \le 9.70$? yes	Test is valid				

See comments below

*V*c = viable count

N = number of cfu/ml of the bacterial test suspension

*N*v = number of cfu/ml in the bacterial suspension

R = reduction in viability

*N*a = number of cfu/ml in the test mixture

A = number of cfu/ml of the experimental conditions validation

B = number of cfu/ml of the neutralizer toxicity validation or of the filtration validation

C = the number of cfu/ml of the dilution-neutralization validation or the membrane filtration test validation

COMMENTS

Test carried out using ~1.5-5.0 x 10 10 cfu/ml as specified by the client. Additional dilutions to be carried out for test plates (10-1 and 10-2). Make ~50mls of N (at 1.5-5.0 x 109 cfu/ml). Read 10-1 on the spec. to check the range. Centrifuge at 2000g

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Conclusion

According to a modified EN 1276 2009 procedure, **CreBiSol X10 POSESSES BACTERICIDAL** activity of > 8.0 log_{10} reduction at a concentration of **2.0 % V/V** as tested after **30 SECONDS** at **20°C** under **DIRTY** conditions (3.0 g/l bovine serum albumin) against Meticillin resistant *Staphylococcus aureus* strain UK 15.

Signed

Dr Chris Woodall, Director
BluTest Laboratories Ltd
Glasgow, UK,
Date: 30 April 2015

Expanded Uncertainty of Measurement U = ± 0.49 logs

DISCLAIMER

The results in this test report only pertain to the sample supplied.
BluTest (BT) has performed the testing detailed in this report using reasonable skill and care and has used reasonable endeavours to carry out the testing in accordance with a modified EN 1276 protocol. All forecasts, recommendations and results contained in this report are submitted in good faith. However, other than as expressly set out in this report, no warranty is given (i) in relation to the testing or the use(s) to which any results or deliverables produced in the course of the testing are or may be put by the Client or their fitness or suitability for any particular purpose or under any special conditions notwithstanding that any such purpose or conditions may have been made known to BT or (ii) that the intended results or deliverables from the testing can be achieved or (iii) that the Client can freely make use of the results or the deliverables without infringing any third party intellectual property rights and the Client will be deemed to have satisfied itself in this regard. BT shall have no liability (which is hereby excluded to the fullest extent permissible by law) in respect of any loss, liability or damage, including without limitation any indirect and/or consequential loss such as loss of profit or loss of business, market or goodwill, that the Client may suffer directly or indirectly as a result of or in connection with: (i) the performance of the testing; (ii) the use of any materials, samples or other information provided by the Client for use in the testing; and (iii) the Client's reliance upon or use of any results or deliverables provided as part of the testing.

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