Abbott Analytical

Consulting Scientists to the Disinfectant Industry

Test Report

Product name:	TriBioSan		
Batch or ref no:			
Manufacturer or supplier:	Eco-Mist Biotechnics International Ltd Unit A2, Mainline Industrial Estate, Milnthorpe, LA7 7LR		
Sample ref:	17K/006	**Date received:**	4 October 2017
Date tested:	4 October 2017	**Report date:**	11 July 2018 [1]
Report no:	17K.006IB2.CEG [1]	**Page:**	1 of 6
Analysis required:	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)		
Storage conditions:	Room temperature in darkness		
Appearance of product (solution):	Clear colourless liquid		
Active substance(s) and their concentration(s):	Not disclosed		

Notes

The test results in this report relate only to the sample tested, as received from the client.

D C Watson BSc,CBiol,MRSB

Abbott Analytical Limited
Unit 2, Hickmans Road,
Birkenhead, CH41 1JH, United Kingdom

Telephone: +44 (0)151 345 6753
email: enqs@abbottanalytical.co.uk
www.abbottanalytical.co.uk

Registered address: Kemp House, 160 City Road,
London, EC1V 2NX, United Kingdom

A company registered in England and Wales
Company number 10031406

Experimental conditions

Concentration(s) of product tested:	Neat [2]
Product diluent:	N/A
Test organism(s):	*Pseudomonas aeruginosa* (DSM 939) *Escherichia coli* (NCTC 10418) *Staphylococcus aureus* (NCTC 10788) *Enterococcus hirae* (DSM 3320)
Contact time(s):	1 min ± 5 s
Test temperature:	20 °C ± 1 °C
Test conditions:	Clean
Interfering substance:	0.3 g/l bovine albumin
Method:	Dilution-neutralisation
Neutralising solution:	30 g/l Polysorbate 80 + 3 g/l Lecithin + 1 g/l L-histidine + 1 g/l L-cysteine
Incubation temperature:	36 °C ± 1 °C

Remarks

1) Re-issued with amended product name and supplier details.
   Original report 17K.006IB.CEG dated 6 October 2017.

2) Products can only be tested at a concentration of 80 % or less as some dilution is always produced by adding the test organisms and interfering substance. To counteract this dilution the product supplied contained active levels at 125 % of their normal levels.

Conclusion

When tested neat this sample of TriBioSan meets the requirements of EN 1276:2009 for bactericidal activity in 1 minute at 20 °C, under clean conditions, against the referenced strains of *Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus* and *Enterococcus hirae*.

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Results: *Pseudomonas aeruginosa* (DSM 939)

Validation and controls:

Validation suspension (Nv_o)			Experimental conditions control (A)			Neutralizer or filtration control (B)			Method validation (C)		
$Vc1$	61	$\bar{x}$ =	$Vc1$	66	$\bar{x}$ =	$Vc1$	60	$\bar{x}$ =	$Vc1$	60	$\bar{x}$ =
$Vc2$	63	62	$Vc2$	65	65.5	$Vc2$	63	61.5	$Vc2$	60	60
$30 \le \bar{x}\ (Nv_o) \le 160$? ☒ *yes* ☐ *no*			$\bar{x}\ (A) \ge 0.5 \times \bar{x}\ (Nv_o)$? ☒ *yes* ☐ *no*			$\bar{x}\ (B) \ge 0.5 \times \bar{x}\ (Nv_o)$? ☒ *yes* ☐ *no*			$\bar{x}\ (C) \ge 0.5 \times \bar{x}\ (Nv_o)$? ☒ *yes* ☐ *no*		

Test suspension:
(*N* and N_o)

N	$Vc1$	$Vc2$	$\bar{x}$(wm) = 4.60 x10^{8} ; lg N = 8.66
10^{-6}	>330	>330	$N_o = N/10$; lg N_o = 7.66
10^{-7}	48	44	$7.17 \le \lg N_o \le 7.70$? ☒ *yes* ☐ *no*
Control of weighted mean counts (N)			Quotient = N/A Between 5 and 15 ? ☐ *yes* ☐ *no*

Test:

Product test conc.	Contact time	$Vc1$	$Vc2$	Na = ($\bar{x}$ x10)	lg Na =	lg R = (lg N_o − lg Na)	Status
Neat	*1 min*	*0*	*0*	< 140	< 2.15	> 5.51	*PASS*

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Results: *Escherichia coli* (NCTC 10418)

Validation and controls:

Validation suspension (Nv_o)			Experimental conditions control (A)			Neutralizer or filtration control (B)			Method validation (C)		
$Vc1$	62	$\bar{x}$ =	$Vc1$	63	$\bar{x}$ =	$Vc1$	60	$\bar{x}$ =	$Vc1$	60	$\bar{x}$ =
$Vc2$	61	61.5	$Vc2$	59	61	$Vc2$	60	60	$Vc2$	57	58.5
$30 \leq \bar{x}\ (Nv_o) \leq 160$? ☒ yes ☐ no			$\bar{x}\ (A) \geq 0.5 \times \bar{x}\ (Nv_o)$? ☒ yes ☐ no			$\bar{x}\ (B) \geq 0.5 \times \bar{x}\ (Nv_o)$? ☒ yes ☐ no			$\bar{x}\ (C) \geq 0.5 \times \bar{x}\ (Nv_o)$? ☒ yes ☐ no		

Test suspension:
(N and N_o)

N	$Vc1$	$Vc2$	$\bar{x}$(wm) = 4.00 x10^{8} ; lg N = 8.60
10^{-6}	>330	>330	$N_o = N/10$; lg N_o = 7.60
10^{-7}	38	42	$7.17 \leq \lg N_o \leq 7.70$? ☒ yes ☐ no
Control of weighted mean counts (N)			Quotient = N/A Between 5 and 15 ? ☐ yes ☐ no

Test:

Product test conc.	Contact time	$Vc1$	$Vc2$	Na = ($\bar{x}$ x10)	lg Na =	lg R = (lg N_o − lg Na)	Status
Neat	*1 min*	*0*	*0*	< 140	< 2.15	> 5.45	*PASS*

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Results: *Staphylococcus aureus* (NCTC 10788)

Validation and controls:

Validation suspension (Nv_o)			Experimental conditions control (A)			Neutralizer or filtration control (B)			Method validation (C)		
$Vc1$	47	$\bar{x}$ =	$Vc1$	46	$\bar{x}$ =	$Vc1$	41	$\bar{x}$ =	$Vc1$	43	$\bar{x}$ =
$Vc2$	48	47.5	$Vc2$	48	47	$Vc2$	45	43	$Vc2$	45	44
$30 \leq \bar{x}\ (Nv_o) \leq 160$? ☒ yes ☐ no			$\bar{x}\ (A) \geq 0.5 \times \bar{x}\ (Nv_o)$? ☒ yes ☐ no			$\bar{x}\ (B) \geq 0.5 \times \bar{x}\ (Nv_o)$? ☒ yes ☐ no			$\bar{x}\ (C) \geq 0.5 \times \bar{x}\ (Nv_o)$? ☒ yes ☐ no		

Test suspension:
(N and N_o)

N	$Vc1$	$Vc2$	$\bar{x}$(wm) = 4.40 x10^{8} ; lg N = 8.64
10^{-6}	>330	>330	$N_o = N/10$; lg N_o = 7.64
10^{-7}	45	43	$7.17 \leq \lg N_o \leq 7.70$? ☒ yes ☐ no
Control of weighted mean counts (N)			Quotient = N/A Between 5 and 15 ? ☐ yes ☐ no

Test:

Product test conc.	Contact time	$Vc1$	$Vc2$	Na = ($\bar{x}$ x10)	lg Na =	lg R = (lg N_o − lg Na)	Status
Neat	*1 min*	*0*	*0*	< 140	< 2.15	> 5.49	*PASS*

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Results: *Enterococcus hirae* (DSM 3320)

Validation and controls:

Validation suspension (Nv_o)			Experimental conditions control (A)			Neutralizer or filtration control (B)			Method validation (C)		
$Vc1$	57	$\bar{\kappa}$ =	$Vc1$	61	$\bar{\kappa}$ =	$Vc1$	59	$\bar{\kappa}$ =	$Vc1$	63	$\bar{\kappa}$ =
$Vc2$	56	56.5	$Vc2$	60	60.5	$Vc2$	61	60	$Vc2$	61	62
$30 \leq \bar{\kappa}\ (Nv_o) \leq 160$? ☒ yes ☐ no			$\bar{\kappa}\ (A) \geq 0.5 \times \bar{\kappa}\ (Nv_o)$? ☒ yes ☐ no			$\bar{\kappa}\ (B) \geq 0.5 \times \bar{\kappa}\ (Nv_o)$? ☒ yes ☐ no			$\bar{\kappa}\ (C) \geq 0.5 \times \bar{\kappa}\ (Nv_o)$? ☒ yes ☐ no		

Test suspension:
(N and N_o)

N	$Vc1$	$Vc2$	$\bar{\kappa}$(wm) = 4.55 x10^{8} ; lg N = 8.66
10^{-6}	>330	>330	$N_o = N/10$; lg N_o = 7.66
10^{-7}	46	45	$7.17 \leq \lg N_o \leq 7.70$? ☒ yes ☐ no
Control of weighted mean counts (N)			Quotient = N/A Between 5 and 15 ? ☐ yes ☐ no

Test:

Product test conc.	Contact time	$Vc1$	$Vc2$	Na = ($\bar{\kappa}$ x10)	lg Na =	lg R = (lg N_o − lg Na)	Status
Neat	*1 min*	*0*	*0*	< 140	< 2.15	> 5.51	*PASS*

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