

Report: CVC.21B114.IB

Issued: 16 April 2021

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Test Report:

EN 1276:2019

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)

Identification of the test laboratory:

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

Identification of the client:

Coventry Chemicals Ltd
Woodhams Road, Coventry, CV3 4FX, United Kingdom

Identification of the sample:

21B/114

Name of the product:

Antibac Concentrate

Batch number/reference and
expiry date (if available):

AQSB1 P177/2

Date of delivery:

25 February 2021

Storage conditions:

Room temperature in darkness

Product diluent recommended by
the manufacturer for use:

Not disclosed

Active substance(s) and their
concentrations (s) (optional):

Not disclosed

Appearance of the product:

Clear colourless liquid

Notes:

- 1) The test results in this report relate only to the sample(s) tested.
- 2) This test report may not be reproduced except in full, adapted, altered or used to create a derivative work, without written approval from Abbott Analytical Ltd.

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Test method and its validation:

Method: Dilution-neutralisation

Neutraliser: 100.0 g/l Polysorbate 80 + 30.0 g/l Lecithin +
30.0 g/l Tryptone Soya Broth + 5.0 g/l Sodium thiosulphate +
1.0 g/l L-histidine (Neutraliser B)

Neutraliser validation: Validated in accordance with EN 1276:2019 (5.5.2)

Experimental conditions:

Period of analysis: 13 April 2021 to 15 April 2021

Product test concentration(s): 10% v/v

Diluent used for product test solution(s): Hard water

Contact time(s): 5 min ± 10 s

Test temperature(s): 20°C ± 1°C

Interfering substance: 3.0 g/l bovine albumin (dirty conditions)

Temperature of incubation: 36°C ± 1°C

Identification of the bacterial strain(s) used: *Pseudomonas aeruginosa* (NCIMB 10421)
Escherichia coli (NCTC 10418)
Staphylococcus aureus (NCTC 10788)
Enterococcus hirae (NCIMB 8192)

Deviations: None

Remarks:

- 1) All test conditions are as requested by the client, irrespective of whether these are in accordance with EN 1276:2019 (5.4.2) or EN 1276:2019 (5.5.1.1).

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Requirements:

The product shall demonstrate at least a 5 decimal log (lg) reduction against every test organism.

Conclusion:

According to EN 1276:2019, this sample of Antibac Concentrate possesses bactericidal activity against all of the referenced strains of *Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus* and *Enterococcus hirae*, when tested at a concentration of 10% with a contact time of 5 minutes at 20°C under dirty conditions.

Report prepared by:

Signed:



Name:

Tony Watson

Position:

General Manager

Date:

16 April 2021

Approved by:

Signed:



Name:

Kirsty Murden

Position:

Laboratory Manager

Date:

16 April 2021

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Results: EN 1276:2019

RST 002 (Issue 5)

Test organism:	<i>Pseudomonas aeruginosa</i>	(NCIMB 10421)
Date of test:	13 April 2021	Test temperature: 20°C ± 1°C
Interfering substance:	3.0 g/l bovine albumin	
Dilution-neutralisation method:	Pour plate	Number of plates: 1 / ml
Neutraliser:	B	Incubation temperature: 36°C ± 1°C

Validation and controls:

Validation suspension (N_{V_0})			Experimental conditions control (A)			Neutraliser or filtration control (B)			Method validation (C) Product conc.: 10%		
Vc1	48	$\bar{x} =$	Vc1	50	$\bar{x} =$	Vc1	51	$\bar{x} =$	Vc1	53	$\bar{x} =$
Vc2	52	50	Vc2	55	52.5	Vc2	51	51	Vc2	50	51.5
30 ≤ \bar{x} of N_{V_0} ≤ 160 ?			\bar{x} of A ≥ 0.5 x \bar{x} of N_{V_0} ?			\bar{x} of B ≥ 0.5 x \bar{x} of N_{V_0} ?			\bar{x} of C ≥ 0.5 x \bar{x} of N_{V_0} ?		
<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no		

Test suspension (N and N_0):

N	Vc1	Vc2	\bar{x} wm = 2.58 x 10 ⁸ ;	lg N = 8.41
10 ⁻⁶	248	264	$N_0 = N / 10$;	lg N_0 = 7.41
10 ⁻⁷	29	26	7.17 ≤ lg N_0 ≤ 7.70 ?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no

Test:

Conc. of the product	Contact time	Vc1	Vc2	N_a ($\bar{x} \times 10$)	lg N_a	lg R (lg N_0 - lg N_a)
10%	5 min	0	0	<140	<2.15	>5.26

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Results: EN 1276:2019

RST 002 (Issue 5)

Test organism:	<i>Escherichia coli</i>	(NCTC 10418)
Date of test:	13 April 2021	Test temperature: 20°C ± 1°C
Interfering substance:	3.0 g/l bovine albumin	
Dilution-neutralisation method:	Pour plate	Number of plates: 1 / ml
Neutraliser:	B	Incubation temperature: 36°C ± 1°C

Validation and controls:

Validation suspension (N_{V_0})			Experimental conditions control (A)			Neutraliser or filtration control (B)			Method validation (C) Product conc.: 10%		
Vc1	50	$\bar{x} =$	Vc1	47	$\bar{x} =$	Vc1	48	$\bar{x} =$	Vc1	47	$\bar{x} =$
Vc2	46	48	Vc2	49	48	Vc2	51	49.5	Vc2	49	48
30 ≤ \bar{x} of N_{V_0} ≤ 160 ?			\bar{x} of A ≥ 0.5 x \bar{x} of N_{V_0} ?			\bar{x} of B ≥ 0.5 x \bar{x} of N_{V_0} ?			\bar{x} of C ≥ 0.5 x \bar{x} of N_{V_0} ?		
<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no		

Test suspension (N and N_0):

N	Vc1	Vc2	\bar{x} wm = 2.25 x 10 ⁸ ;	lg N = 8.35
10 ⁻⁶	232	216	$N_0 = N / 10$;	lg N_0 = 7.35
10 ⁻⁷	26	22	7.17 ≤ lg N_0 ≤ 7.70 ?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no

Test:

Conc. of the product	Contact time	Vc1	Vc2	N_a ($\bar{x} \times 10$)	lg N_a	lg R (lg N_0 - lg N_a)
10%	5 min	0	0	<140	<2.15	>5.20

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RST 002 (Issue 5)

Test organism:	<i>Staphylococcus aureus</i>	(NCTC 10788)	
Date of test:	13 April 2021	Test temperature:	20°C ± 1°C
Interfering substance:	3.0 g/l bovine albumin		
Dilution-neutralisation method:	Pour plate	Number of plates:	1 / ml
Neutraliser:	B	Incubation temperature:	36°C ± 1°C

Validation and controls:

Validation suspension (N_{V_0})			Experimental conditions control (A)			Neutraliser or filtration control (B)			Method validation (C) Product conc.: 10%		
Vc1	50	$\bar{x} =$	Vc1	55	$\bar{x} =$	Vc1	50	$\bar{x} =$	Vc1	54	$\bar{x} =$
Vc2	53	51.5	Vc2	51	53	Vc2	53	51.5	Vc2	51	52.5
30 ≤ \bar{x} of N_{V_0} ≤ 160 ?			\bar{x} of A ≥ 0.5 × \bar{x} of N_{V_0} ?			\bar{x} of B ≥ 0.5 × \bar{x} of N_{V_0} ?			\bar{x} of C ≥ 0.5 × \bar{x} of N_{V_0} ?		
<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no		

Test suspension (N and N_0):

N	Vc1	Vc2	\bar{x} wm = 2.53 × 10 ⁸ ;	lg N = 8.40
10 ⁻⁶	256	240	$N_0 = N / 10$;	lg N_0 = 7.40
10 ⁻⁷	28	32	7.17 ≤ lg N_0 ≤ 7.70 ?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no

Test:

Conc. of the product	Contact time	Vc1	Vc2	N_a ($\bar{x} \times 10$)	lg N_a	lg R (lg N_0 - lg N_a)
10%	5 min	0	0	<140	<2.15	>5.25

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RST 002 (Issue 5)

Test organism:	<i>Enterococcus hirae</i>	(NCIMB 8192)	
Date of test:	13 April 2021	Test temperature:	20°C ± 1°C
Interfering substance:	3.0 g/l bovine albumin		
Dilution-neutralisation method:	Pour plate	Number of plates:	1 / ml
Neutraliser:	B	Incubation temperature:	36°C ± 1°C

Validation and controls:

Validation suspension (N_{V_0})			Experimental conditions control (A)			Neutraliser or filtration control (B)			Method validation (C) Product conc.: 10%		
Vc1	36	$\bar{x} =$	Vc1	35	$\bar{x} =$	Vc1	41	$\bar{x} =$	Vc1	39	$\bar{x} =$
Vc2	40	38	Vc2	39	37	Vc2	37	39	Vc2	35	37
30 ≤ \bar{x} of N_{V_0} ≤ 160 ?			\bar{x} of A ≥ 0.5 × \bar{x} of N_{V_0} ?			\bar{x} of B ≥ 0.5 × \bar{x} of N_{V_0} ?			\bar{x} of C ≥ 0.5 × \bar{x} of N_{V_0} ?		
<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no			<input checked="" type="checkbox"/> yes <input type="checkbox"/> no		

Test suspension (N and N_0):

N	Vc1	Vc2	\bar{x} wm = 2.16×10^8 ; $\lg N = 8.33$	
10^{-6}	224	208	$N_0 = N / 10$; $\lg N_0 = 7.33$	
10^{-7}	21	22	7.17 ≤ $\lg N_0$ ≤ 7.70 ? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	

Test:

Conc. of the product	Contact time	Vc1	Vc2	Na ($\bar{x} \times 10$)	$\lg Na$	$\lg R$ ($\lg N_0 - \lg Na$)
10%	5 min	0	0	<140	<2.15	>5.18

Explanations:

V_c	count per ml (one plate or more)
\bar{x}	average of V_{c1} and V_{c2} (1 + 2 duplicate)
\bar{x}_{wm}	weighted mean of \bar{x}
N	number of cells per ml in the test suspension
N_0	number of cells in the test mixture at the beginning of the contact time ($N_0 = N / 10$)
N_a	number of survivors per ml in the test mixture at the end of the contact time (before neutralisation or filtration)
R	reduction ($\lg R = \lg N_0 - \lg N_a$)
N_v	number of cells per ml in the validation suspension
N_{v_0}	number of cells in the validation mixtures at the beginning of the contact time ($N_{v_0} = N_v / 10$)
A	number of survivors per ml in the experimental conditions control mixture
B	number of survivors per ml in the neutraliser or filtration control mixture
C	number of survivors per ml in the method validation mixture

All test results have an associated uncertainty of measurement, details of which are available on request.