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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:

Adamtech Ltd
Unit 7B, Whitebridge Estate, Whitebridge Lane, Stone, ST15 8LQ,
United Kingdom

Identification of the sample:

20F/006

Name of the product:

55gsm Sontara 9960 Ethanol/IPA Wipes

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

N/A

Date of delivery:

01 June 2020

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:

White wipes from which was squeezed a 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.

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:	21 July 2020 to 23 July 2020
Product test concentration(s):	Neat liquid squeezed from wipes
Diluent used for product test solution(s):	N/A
Contact time(s):	60 s ± 5 s
Test temperature(s):	20°C ± 1°C
Interfering substance:	0.3 g/l bovine albumin (clean conditions)
Temperature of incubation:	36°C ± 1°C
Identification of the bacterial strain(s) used:	<i>Pseudomonas aeruginosa</i> (NCIMB 10421) <i>Escherichia coli</i> (NCTC 10418) <i>Staphylococcus aureus</i> (NCTC 10788) <i>Enterococcus hirae</i> (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).
- 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.

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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, the liquid squeezed from this sample of 55gsm Sontara 9960 Ethanol/IPA Wipes possesses bactericidal activity against all of the referenced strains of *Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus* and *Enterococcus hirae*, when tested neat with a contact time of 60 seconds at 20°C under clean conditions.

Report prepared by:

Signed:



Name:

Karl Cumings

Position:

Microbiologist

Date:

24 July 2020

Approved by:

Signed:



Name:

Tony Watson

Position:

General Manager

Date:

24 July 2020

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Results: EN 1276:2019

RST 002 (Issue 4)

Test organism:	<i>Pseudomonas aeruginosa</i>	(NCIMB 10421)
Date of test:	21 July 2020	
Test temperature:	20°C ± 1°C	Incubation temperature: 36°C ± 1°C
Dilution-neutralisation method:	Pour plate	Number of plates: 1 / ml
Neutraliser:	B	Test conditions: Clean conditions

Validation and controls:

Validation suspension (N_{v_0})			Experimental conditions control (A)			Neutraliser or filtration control (B)			Method validation (C) Product conc.: <i>Neat</i> *		
Vc1	98	\bar{x} =	Vc1	100	\bar{x} =	Vc1	95	\bar{x} =	Vc1	167	\bar{x} =
Vc2	132	115	Vc2	98	99	Vc2	113	104	Vc2	173	170
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 = 4.70 × 10 ⁸ ;	lg N = 8.67
10 ⁻⁶	>330	>330	$N_0 = N / 10$;	lg N_0 = 7.67
10 ⁻⁷	39	55	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)
<i>Neat</i> *	60 s	0	0	<140	<2.15	>5.52

*Neat liquid squeezed from wipes

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Results: EN 1276:2019

RST 002 (Issue 4)

Test organism:	<i>Escherichia coli</i>	(NCTC 10418)
Date of test:	21 July 2020	
Test temperature:	20°C ± 1°C	Incubation temperature: 36°C ± 1°C
Dilution-neutralisation method:	Pour plate	Number of plates: 1 / ml
Neutraliser:	B	Test conditions: Clean conditions

Validation and controls:

Validation suspension (N_{v0})			Experimental conditions control (A)			Neutraliser or filtration control (B)			Method validation (C) Product conc.: <i>Neat</i> *		
Vc1	80	$\bar{x} =$	Vc1	90	$\bar{x} =$	Vc1	82	$\bar{x} =$	Vc1	104	$\bar{x} =$
Vc2	83	81.5	Vc2	94	92	Vc2	84	83	Vc2	119	111.5
30 ≤ \bar{x} of N_{v0} ≤ 160 ?			\bar{x} of A ≥ 0.5 × \bar{x} of N_{v0} ?			\bar{x} of B ≥ 0.5 × \bar{x} of N_{v0} ?			\bar{x} of C ≥ 0.5 × \bar{x} of N_{v0} ?		
<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 = 2.67 × 10 ⁸ ;	lg N = 8.43
10 ⁻⁶	261	265	$N_0 = N / 10$;	lg N_0 = 7.43
10 ⁻⁷	27	35	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)
<i>Neat</i> *	60 s	0	0	<140	<2.15	>5.28

*Neat liquid squeezed from wipes

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Results: EN 1276:2019

RST 002 (Issue 4)

Test organism:	<i>Staphylococcus aureus</i>	(NCTC 10788)
Date of test:	21 July 2020	
Test temperature:	20°C ± 1°C	Incubation temperature: 36°C ± 1°C
Dilution-neutralisation method:	Pour plate	Number of plates: 1 / ml
Neutraliser:	B	Test conditions: Clean conditions

Validation and controls:

Validation suspension (N_{V_0})			Experimental conditions control (A)			Neutraliser or filtration control (B)			Method validation (C) Product conc.: <i>Neat</i> *		
Vc1	82	\bar{x} =	Vc1	86	\bar{x} =	Vc1	110	\bar{x} =	Vc1	124	\bar{x} =
Vc2	90	86	Vc2	89	87.5	Vc2	95	102.5	Vc2	133	128.5
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 = 2.89 × 10 ⁸ ;	lg N = 8.46
10 ⁻⁶	275	294	$N_0 = N / 10$;	lg N_0 = 7.46
10 ⁻⁷	31	35	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)
<i>Neat</i> *	60 s	0	0	<140	<2.15	>5.31

*Neat liquid squeezed from wipes

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Results: EN 1276:2019

RST 002 (Issue 4)

Test organism:	<i>Enterococcus hirae</i>	(NCIMB 8192)
Date of test:	21 July 2020	
Test temperature:	20°C ± 1°C	Incubation temperature: 36°C ± 1°C
Dilution-neutralisation method:	Pour plate	Number of plates: 1 / ml
Neutraliser:	B	Test conditions: Clean conditions

Validation and controls:

Validation suspension (N_{v0})			Experimental conditions control (A)			Neutraliser or filtration control (B)			Method validation (C) Product conc.: <i>Neat</i> *		
Vc1	98	\bar{x} =	Vc1	110	\bar{x} =	Vc1	107	\bar{x} =	Vc1	111	\bar{x} =
Vc2	112	105	Vc2	114	112	Vc2	100	103.5	Vc2	115	113
30 ≤ \bar{x} of N_{v0} ≤ 160 ?			\bar{x} of A ≥ 0.5 × \bar{x} of N_{v0} ?			\bar{x} of B ≥ 0.5 × \bar{x} of N_{v0} ?			\bar{x} of C ≥ 0.5 × \bar{x} of N_{v0} ?		
<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 = 2.64 × 10 ⁸ ;	lg N = 8.42
10 ⁻⁶	253	272	$N_0 = N / 10$;	lg N_0 = 7.42
10 ⁻⁷	19	36	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} × 10)	lg Na	lg R (lg N_0 - lg Na)
<i>Neat</i> *	60 s	0	0	<140	<2.15	>5.27

*Neat liquid squeezed from wipes

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.