

Report: SSL.19D033.VPf

Issued: 22 November 2019

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Test Report:

EN 1656:2019

Chemical disinfectants and antiseptics – Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants and antiseptics used in the veterinary area – 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:

Safe Solutions (Safe4) Ltd
Wharton Green, Bostock Road, Winsford, CW7 3BD, United Kingdom

Identification of the sample:

19D/033

Name of the product:	Safe4 Disinfectant Cleaner
Batch number/reference and expiry date (if available):	3558
Date of delivery:	10 April 2019
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 green 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: 30.0 g/l Polysorbate 80 + 5.0 g/l Lecithin + 1.0 g/l L-histidine +
1.0 g/l L-cysteine (Neutraliser A)
Neutraliser validation: Validated in accordance with EN 1656:2019 (5.5.2)

Experimental conditions:

Period of analysis: 13 November 2019 to 15 November 2019
Product test concentration(s): 2% v/v
Diluent used for product test solution(s): Hard water
Contact time(s): 30 min ± 10 s
Test temperature(s): 10°C ± 1°C
Interfering substance: 10.0 g/l bovine albumin + 10.0 g/l yeast extract (high-level soiling)
Temperature of incubation: 36°C ± 1°C
Identification of the bacterial strain(s) used: *Providencia alcalifaciens* (DSM 30120)

Deviations: None

Remarks:

- 1) All test conditions are as requested by the client, irrespective of whether these are in accordance with EN 1656:2019 (5.4.2) or EN 1656:2019 (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 1656:2019, this sample of Safe4 Disinfectant Cleaner possesses bactericidal activity against the referenced strain of *Providencia alcalifaciens*, when tested at a concentration of 2% with a contact time of 30 minutes at 10°C under high-level soiling.

Report prepared by:

Signed:



Name:

Tony Watson

Position:

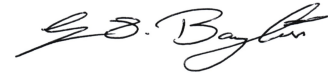
General Manager

Date:

22 November 2019

Approved by:

Signed:



Name:

Gareth Bayliss

Position:

Laboratory Manager

Date:

22 November 2019

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Results: EN 1656:2019

RST 003 (Issue 4)

Test organism:	<i>Providencia alcalifaciens</i>	(DSM 30120)
Date of test:	13 November 2019	
Test temperature:	10°C ± 1°C	Incubation temperature: 36°C ± 1°C
Dilution-neutralisation method:	Pour plate	Number of plates: 1 / ml
Neutraliser:	A	Test conditions: High-level soiling

Validation and controls:

Validation suspension (N_{V_0})			Experimental conditions control (A)			Neutraliser or filtration control (B)			Method validation (C) Product conc.: 2%		
Vc1	93	$\bar{x} =$	Vc1	90	$\bar{x} =$	Vc1	89	$\bar{x} =$	Vc1	94	$\bar{x} =$
Vc2	91	92	Vc2	87	88.5	Vc2	92	90.5	Vc2	91	92.5
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 = 4.25 × 10 ⁸ ;	lg N = 8.63
10 ⁻⁶	>330	>330	$N_0 = N / 10$;	lg N_0 = 7.63
10 ⁻⁷	44	41	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)
2%	30 min	34	40	370	2.57	5.06

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.