

Sasson Industries
Industrial Park, Kidmat Galil, Hazor St.
IL -

Hamburg, 15 October 2020

Expert opinion

Bactericidal Activity of **Vega wipes General Cleaning and disinfecting wet wipes** in the quantitative suspension test according to DIN EN 1276:2019 (Phase 2, Step 1)

The disinfectant **Vega wipes General Cleaning and disinfecting wet wipes** was tested and evaluated according to DIN 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)".

According to the test report no. L20/1165.1 dated 15/10/2020 of Dr. Brill + Partner GmbH the preparation showed bactericidal activity under dirty conditions.

Vega wipes General Cleaning and disinfecting wet wipes complies with the requirements of DIN EN 1276:2019 (phase 2, step 1) with the following concentration-time relationship:

| | | | |
|----------------------|-------------------------|--------------|------------------|
| Bactericidal: | dirty conditions | 100 % | 5 minutes |
|----------------------|-------------------------|--------------|------------------|

Dr. Florian H. H. Brill

Test report no L20/1165.1

Quantitative suspension test for the evaluation of bactericidal activity of **Vega wipes General Cleaning and disinfecting wet wipes**
in Food, Industrial, Domestic and Institutional Areas (DIN EN 1276:2019; Phase 2, Step 1*)

In accordance with your order, we tested the preparation **Vega wipes General Cleaning and disinfecting wet wipes** for its activity in the quantitative suspension test according to DIN EN 1276:2019* under dirty conditions.

1 General Information and Material

1.1 Client

Client: Sasson Industries, Mr Bobby Wechsler, Industrial Park, Kidmat Galil, Hazor St., IL -
Date of order: 07/08/2020
Confirmation no.: 217273

1.2 Identification of Test Laboratory

Location: Dr. Brill + Partner GmbH · Institute for Hygiene and Microbiology, Stiegstück 34, DE-22339 Hamburg, Germany
Study manager: Dipl.-Ing. Dr. rer. nat. Andreas Kampe
Scientific assistant: Dipl.-Biol. Dr. rer. nat. Jan-Hendrik Klock
Laboratory technicians: Carmela Jänicke

1.3 Table of Contents

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1.4 Identification of Sample

Name of product: **Vega wipes General Cleaning and disinfecting wet wipes**
Batch no.: -

* Test procedure accredited according to DIN EN ISO/IEC 17025. Test report issued by Dr. Brill + Partner GmbH, Stiegstück 34, DE - 22339 Hamburg, Phone +49 40 557631-0, Telefax +49 40 557631-11, www.brillhygiene.com. No copying or transmission, in whole or in part, of this test report without the explicit prior written permission. The test results exclusively apply to the tested samples. Information on measurement uncertainty and Version history on request. © Dr. Brill + Partner GmbH 2020

| | |
|---------------------------------------|---|
| Manufacturer: | Sasson Industries |
| Date of delivery: | 23/07/2020 |
| Storage conditions: | room temperature and darkness |
| Appearance of product: | clear liquid |
| Odour: | characteristic |
| Recommended diluent: | Product is ready for use |
| Diluent used: | distilled water (DW, pH 7.0) |
| pH value, undiluted: | 7.0 |
| pH value, 80 % (measured in diluent): | 7.2 |
| pH value, 50 % (measured in diluent): | 7.1 |
| pH value, 10 % (measured in diluent): | 6.3 |
| Active agents (Manufacturer's data): | 0 – 2.5 % Alkyl Dimethyl Benzyl Ammonium Chloride 0 – 2.5 % Alkyl Dimethyl Ethylbenzyl Ammonium Chloride |

1.5 Test Conditions

| | | |
|------------------------------|---|------------|
| Test period: | 01/10/ - 05/10/2020 | |
| Lab task no.: | L20/1165.1 | |
| Product test concentrations: | 10 + 50 + 80 % | |
| Exposure time: | 5 minutes | |
| Test temperature: | 20°C ± 1°C | |
| Incubation temperature: | 36°C ± 1°C | |
| Organic load: | dirty conditions (3.0 g/L bovine albumin) | |
| Neutraliser: | 60 g/L polysorbate 80, 60 g/L saponine, 8 g/L lecithin, 1 g/L histidine, 25 g/L sodium dodecyl sulphate (TLSH-SDS) | |
| Test organisms: | <i>Staphylococcus aureus</i> | ATCC 6538 |
| | <i>Escherichia coli</i> | ATCC 10536 |
| | <i>Enterococcus hirae</i> | ATCC 10541 |
| | <i>Pseudomonas aeruginosa</i> | ATCC 15442 |

2 Methods

The tests were carried out according to DIN 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)".

3 Results

The test results based on DIN EN 1276:2019 are summarised in tables 1.

The test bacteria were sufficiently (RF >5) inactivated with the following concentration-time relationship:

| | | | |
|---------------|------------------|------|-----------|
| Bactericidal: | dirty conditions | 10 % | 5 minutes |
|---------------|------------------|------|-----------|

Hamburg, 15/10/2020

Dipl.-Ing. Dr. rer. nat. Andreas Kampe
Study Manager

Dipl.-Biol. Dr. rer. nat. Jan-Hendrik Klock
Deputy Head of Laboratory



Table 1.1: Validation, Controls and Evaluation

Product name: **Vega wipes General Cleaning and disinfecting wet wipes** Batch: -
Test organism: *Staphylococcus aureus* Temperature: 20°C ± 1°C
Organic load: dirty conditions Neutraliser: TLSH-SDS

| Suspension for validation (N _{v0}) | | Control of test conditions (A) | | | | | | | | | |
|--|---------------------|---|-----------|--|-----------------|---|---------------------------------|---------------------------------|---------------------------------|-------|--------|
| | | n.t. | | 5 minutes | | n.t. | | | | | |
| Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | | | | |
| V _{c1} | 61 | | | V _{c1} | 56 | | | | | | |
| V _{c2} | 45 | | | V _{c2} | 57 | | | | | | |
| 30 ≤ \bar{x} of N _{v0} ≤ 160 | | Yes | | \bar{x} of A(5') is ≥ 0,5 x \bar{x} of N _{v0} ? | | Yes | | | | | |
| | | \bar{x} of A(1') is ≥ 0,5 x \bar{x} of N _{v0} ? | | | | \bar{x} of A(10') is ≥ 0,5 x \bar{x} of N _{v0} ? | | | | | |
| Control of neutraliser (B) | | Validation of method (C) at highest product concentration: 80 % | | | | | | | | | |
| | | n.t. | | 5 minutes | | n.t. | | | | | |
| Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | | | | |
| V _{c1} | 44 | | | V _{c1} | 45 | | | | | | |
| V _{c2} | 56 | | | V _{c2} | 77 | | | | | | |
| \bar{x} of B is ≥ 0,5 x \bar{x} of N _{v0} ? | | Yes | | \bar{x} of C(5') is ≥ 0,5 x \bar{x} of N _{v0} ? | | Yes | | | | | |
| | | \bar{x} of C(1') is ≥ 0,5 x \bar{x} of N _{v0} ? | | | | \bar{x} of C(10') is ≥ 0,5 x \bar{x} of N _{v0} ? | | | | | |
| Test suspension (N and N ₀) | N | Microbial count of plates | | | V _{c1} | V _{c2} | $\bar{x}_{wm} / \lg N$ | N ₀ =N/10; $\lg N_0$ | 7,17 ≤ N ₀ ≤ 7,70 ? | | |
| | 1,00E-06 | 240 | | 200 | 240 | 200 | 2,23E+08 | 7,35 | Yes | | |
| | 1,00E-07 | 20 | | 31 | 20 | 31 | 8,35 | | | | |
| Product concentration [%] | Exposure time [min] | Microbial count of plates | | | V _{c1} | V _{c2} | N _a = \bar{x} x 10 | $\lg N_a$ | $\lg R$ ($\lg N_0 = 7,35$) | | |
| | | 10 | 5 | 0 | | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,20 |
| | | 50 | 5 | 0 | | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,20 |
| | | 80 | 5 | 0 | | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,20 |

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Table 1.2: Validation, Controls and Evaluation

Product name: **Vega wipes General Cleaning and disinfecting wet wipes** Batch: -
Test organism: *Enterococcus hirae* Temperature: 20°C ± 1°C
Organic load: dirty conditions Neutraliser: TLSH-SDS

| Suspension for validation (N ₀) | | Control of test conditions (A) | | | | | | | | |
|---|---------------------|---|-----------|---|-----------------|--|---------------------------------|---------------------------------|---------------------------------|--------|
| | | n.t. | | 5 minutes | | n.t. | | | | |
| Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | | | |
| V _{c1} | 45 | | | V _{c1} | 48 | | | | | |
| V _{c2} | 44 | | | V _{c2} | 51 | | | | | |
| 30 ≤ \bar{x} of N ₀ ≤ 160 | | Yes | | \bar{x} of A(5') is ≥ 0,5 x \bar{x} of N ₀ ? | | Yes | | | | |
| | | \bar{x} of A(1') is ≥ 0,5 x \bar{x} of N ₀ ? | | | | \bar{x} of A(10') is ≥ 0,5 x \bar{x} of N ₀ ? | | | | |
| Control of neutraliser (B) | | Validation of method (C) at highest product concentration: 80 % | | | | | | | | |
| | | n.t. | | 5 minutes | | n.t. | | | | |
| Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | | | |
| V _{c1} | 37 | | | V _{c1} | 44 | | | | | |
| V _{c2} | 50 | | | V _{c2} | 58 | | | | | |
| \bar{x} of B is ≥ 0,5 x \bar{x} of N ₀ ? | | Yes | | \bar{x} of C(5') is ≥ 0,5 x \bar{x} of N ₀ ? | | Yes | | | | |
| | | \bar{x} of C(1') is ≥ 0,5 x \bar{x} of N ₀ ? | | | | \bar{x} of C(10') is ≥ 0,5 x \bar{x} of N ₀ ? | | | | |
| Test suspension (N and N ₀) | N | Microbial count of plates | | | V _{c1} | V _{c2} | $\bar{x}_{wm} / \lg N$ | N ₀ =N/10; $\lg N_0$ | 7,17 ≤ N ₀ ≤ 7,70 ? | |
| | 1,00E-06 | 200 | | 220 | 200 | 220 | 2,19E+08 | 7,34 | Yes | |
| | 1,00E-07 | 30 | | 32 | 30 | 32 | 8,34 | | | |
| Product concentration [%] | Exposure time [min] | Microbial count of plates | | | V _{c1} | V _{c2} | N _a = \bar{x} x 10 | $\lg N_a$ | $\lg R$ ($\lg N_0 = 7,34$) | |
| | 10 | 5 | 0 | | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,19 |
| | 50 | 5 | 0 | | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,19 |
| | 80 | 5 | 0 | | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,19 |

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Table 1.3: Validation, Controls and Evaluation

Product name: **Vega wipes General Cleaning and disinfecting wet wipes** Batch: -
Test organism: *Escherichia coli* Temperature: 20°C ± 1°C
Organic load: dirty conditions Neutraliser: TLSH-SDS

| Suspension for validation (N _{v0}) | | Control of test conditions (A) | | | | | | |
|--|---------------------|---|-----------|--|-----------------|---------------------------------|---------------------------------|---------------------------------|
| | | n.t. | | 5 minutes | | n.t. | | |
| Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | |
| V _{c1} | 80 | V _{c1} | | V _{c1} | 61 | V _{c1} | | |
| V _{c2} | 85 | V _{c2} | | V _{c2} | 72 | V _{c2} | | |
| 30 ≤ \bar{x} of N _{v0} ≤ 160 | | Yes | | \bar{x} of A(1') is ≥ 0,5 x \bar{x} of N _{v0} ? | | Yes | | |
| | | | | \bar{x} of A(5') is ≥ 0,5 x \bar{x} of N _{v0} ? | | | | |
| Control of neutraliser (B) | | Validation of method (C) at highest product concentration: 80 % | | | | | | |
| | | n.t. | | 5 minutes | | n.t. | | |
| Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | |
| V _{c1} | 50 | V _{c1} | | V _{c1} | 98 | V _{c1} | | |
| V _{c2} | 60 | V _{c2} | | V _{c2} | 91 | V _{c2} | | |
| \bar{x} of B is ≥ 0,5 x \bar{x} of N _{v0} ? | | Yes | | \bar{x} of C(1') is ≥ 0,5 x \bar{x} of N _{v0} ? | | Yes | | |
| | | | | \bar{x} of C(5') is ≥ 0,5 x \bar{x} of N _{v0} ? | | | | |
| Test suspension (N and N ₀) | N | Microbial count of plates | | V _{c1} | V _{c2} | $\bar{x}_{wm} / \lg N$ | N ₀ =N/10; $\lg N_0$ | 7,17 ≤ N ₀ ≤ 7,70 ? |
| | 1,00E-06 | >330 | >330 | >330 | >330 | 4,80E+08 | 7,68 | Yes |
| | 1,00E-07 | 49 | 47 | 49 | 47 | 8,68 | | |
| Product concentration [%] | Exposure time [min] | Microbial count of plates | | V _{c1} | V _{c2} | N _a = \bar{x} x 10 | $\lg N_a$ | $\lg R$ ($\lg N_0 = 7,68$) |
| 10 | 5 | 0 | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,53 |
| 50 | 5 | 0 | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,53 |
| 80 | 5 | 0 | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,53 |

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Table 1.4: Validation, Controls and Evaluation

Product name: **Vega wipes General Cleaning and disinfecting wet wipes** Batch: -
Test organism: *Pseudomonas aeruginosa* Temperature: 20°C ± 1°C
Organic load: dirty conditions Neutraliser: TLSH-SDS

| Suspension for validation (N _{v0}) | | Control of test conditions (A) | | | | | | |
|--|---------------------|---|-----------|--|-----------------|---------------------------------|---------------------------------|---------------------------------|
| | | n.t. | | 5 minutes | | n.t. | | |
| Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | |
| V _{c1} | 83 | | | V _{c1} | 63 | | | |
| V _{c2} | 69 | | | V _{c2} | 66 | | | |
| 30 ≤ \bar{x} of N _{v0} ≤ 160 | | Yes | | \bar{x} of A(5') is ≥ 0,5 x \bar{x} of N _{v0} ? | | Yes | | |
| | | \bar{x} of A(10') is ≥ 0,5 x \bar{x} of N _{v0} ? | | | | | | |
| Control of neutraliser (B) | | Validation of method (C) at highest product concentration: 80 % | | | | | | |
| | | n.t. | | 5 minutes | | n.t. | | |
| Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | Microbial count | \bar{x} | |
| V _{c1} | 55 | | | V _{c1} | 66 | | | |
| V _{c2} | 60 | | | V _{c2} | 75 | | | |
| \bar{x} of B is ≥ 0,5 x \bar{x} of N _{v0} ? | | Yes | | \bar{x} of C(5') is ≥ 0,5 x \bar{x} of N _{v0} ? | | Yes | | |
| | | \bar{x} of C(10') is ≥ 0,5 x \bar{x} of N _{v0} ? | | | | | | |
| Test suspension (N and N ₀) | N | Microbial count of plates | | V _{c1} | V _{c2} | $\bar{x}_{wm} / \lg N$ | N ₀ =N/10; $\lg N_0$ | 7,17 ≤ N ₀ ≤ 7,70 ? |
| | 1,00E-06 | >330 | >330 | >330 | >330 | 4,95E+08 | 7,69 | Yes |
| | 1,00E-07 | 42 | 57 | 42 | 57 | 8,69 | | |
| Product concentration [%] | Exposure time [min] | Microbial count of plates | | V _{c1} | V _{c2} | N _a = \bar{x} x 10 | $\lg N_a$ | $\lg R$ ($\lg N_0 = 7,69$) |
| 10 | 5 | 0 | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,54 |
| 50 | 5 | 0 | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,54 |
| 80 | 5 | 0 | 0 | <14 | <14 | <140 | <2,15 | ≥ 5,54 |

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4 List of Abbreviations

| | | |
|-----------------|---|---|
| A | = | control of test conditions |
| B | = | control of neutraliser |
| C | = | validation of method at highest product concentration |
| N | = | test suspension |
| N _{vo} | = | suspension for validation |
| n.t. | = | not tested |
| N ₀ | = | microbial count of test suspension N / 10 (microbial count at time index 0) |
| R | = | germ reduction in log ₁₀ -steps |
| V _c | = | viable microbial count per ml |
| \bar{x} | = | weighted mean of N |

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