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Date:
30 May 2018

TEST REPORT

of the product: M6103 Wet Wipe Floor Disinfection ("ready-to-use Tuchsystem")
used for: Disinfection of surfaces used in the medical area
Test methods: Chemical disinfectants and antiseptics - Quantitative test method for the evaluation of bactericidal and yeasticidal activity on non-porous surfaces with mechanical action employing wipes in the medical area (4-field test) - Test method and requirements (phase 2, step 2); German version EN 16615:2015
Requirements and Methods for VAH Certification of Chemical Disinfection Procedures" (issued: 02 April 2015)

Client:
Sample-No.: PL 18/52
Product: M6103 Wet Wipe Floor Disinfection
Lot-No.: M6103
Manufacturer:
Cloth: Non-Woven
Material: Microwave 100 g
Size: 220 x 300 mm, folded
Disinfectants: Ethanol, Isopropanol, Benzalkoniumchloride
Appearance / Odour: liquid, clear / product specific
Active substances: disinfectants, solvents, surfactants, perfume
Impregnation quantity: 30 g / sheet
pH-value: 7.02



Date of delivery of the product: 24 April 2018
Test period: 15 and 28 May 2018
Storage conditions: room temperature
Test area: PVC-Floor Solid 521-029 with PUR coverage
Test organisms: *Staphylococcus aureus* ATCC 6538
Enterococcus hirae ATCC 10541
Pseudomonas aeruginosa ATCC 15442
Candida albicans ATCC 10231

Comment:

The results of some controls of the 4-field-test were not within the required threshold limit values, however, the necessary reduction factors were achieved. Therefore the results presented in this test report are accepted as valid.

The cloths were folded once only.

Table 1

Quantitative surface test for the evaluation of bactericidal activity according to DIN EN 16615

Test product:	M6103 Wet Wipe Floor Disinfection
Test date:	15 May 2018
Comment:	Dilution neutralization method, spread plate, number of plates: 2/ml
Neutralizer:	Polysorbate 80 30 g/l, Lecithin 3 g/l, L-histidine 1 g/l, sodium thiosulfate 5 g/l, demineralized water ad 1000 ml
Germ carrier / cloth material:	PVC with PUR Coating, size 2 mm / standard
Temperature / rel. humidity:	21.7 °C / 39.3 %
Incubation:	36 ± 1 °C / 48 h
Test organism:	Staphylococcus aureus ATCC 6538
Organic burden:	0.3 % albumin + 0.3 % sheep erythrocytes
Drying time:	30 min
Test run:	1 (immediately after opening the system)

Test suspension and control after drying

Test suspension (N and N ₀)	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 310 \times 10^7$	lg N = 9.49
	10 ⁻⁷	<u>318</u>	>330	9.17 ≤ lg N ≤ 9.70?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁸	<u>30</u>	<u>24</u>	N ₀ = N/20 7.88 ≤ lg N ₀ ≤ 8.40?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Control before drying (D _{C0})	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 99 \times 10^5$	lg T ₀ = 7.00
	10 ⁻⁴	>330	>330	6.88 ≤ lg T ₀ ≤ 8.40?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁵	<u>84</u>	<u>114</u>		
Control after drying (D _{C1}) t = 5 min	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 114 \times 10^5$	lg T ₁ = 7.06
	10 ⁻⁴	>330	>330	6.88 ≤ lg T ₁ ≤ 8.40?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁵	<u>92</u>	<u>136</u>		

Validation

Validation suspension (N _{Vo})			Neutralizer or filtration control (B)			Method validation (C) product concentration: 100 %		
V _{C1}	<u>80</u>	$\bar{x} = 69$	V _{C1}	<u>58</u>	$\bar{x} = 49$	V _{C1}	<u>48</u>	$\bar{x} = 51$
V _{C2}	<u>58</u>		V _{C2}	<u>40</u>		V _{C2}	<u>54</u>	
30 ≤ \bar{x} from N _{Vo} ≤ 160? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no			\bar{x} from B ≥ 0.5 × \bar{x} from N _{Vo} ? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no			\bar{x} from C ≥ 0.5 × \bar{x} from N _{Vo} ? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		

Table 1 (continuation)

Test results

Test field 1 (reduction)

Product-concentration	Dilution step	V _c	N _a (= \bar{x} or \bar{x}_{wm})	lg N _a	lg R (= lg T _i - lg N _a)	lg R ≥ 5 ?	Time of action	
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	0 0 0	<14	<1.15	>5.91	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min	
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	not evaluable						5 min

 Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	V _c			V _(T2 to T4) (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _(T2 to T4) ≤ 50 cfu/25 cm ² ?	Time of action	
		T ₂	T ₃	T ₄				
100 %	10 ⁰ 10 ⁻¹	0 0	0 0	0 0	0	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min	
100 %	10 ⁰ 10 ⁻¹	not evaluable						5 min

 N_w Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	Test field 1 cfu/ml	V _c			V _{Nw(T2 to T4)} (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _{Nw(T2 to T4)} ≥ 10 cfu/25 cm ² ?	Time of action
			T ₂	T ₃	T ₄			
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	>330 >330 >330	>330 <u>>330</u>	>330 <u>>330</u>	>330 <u>183</u>	1.41 x 10 ⁴	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	>330 289 28	<u>152</u> <u>23</u>	<u>129</u> <u>24</u>	<u>68</u> <u>4</u>	6.10 x 10 ²	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

Comment:

 V_c = colony forming units (cfu) / ml

 \bar{x} / \bar{x}_{wm} = arithmetic mean / weighted mean

R = germ reduction

underlined = used for further calculation

Assessment of the amount of disinfectant delivered from the cloth

Product concentration - Time of action	Weight of the cloth incl. the vessel (g)		Delivered product amount (g)
	before wiping	after wiping	
100 % - 2 min	51.1314	50.5199	0.6115
WSH - 2 min	36.6367	35.9480	0.6887
100 % - 5 min	52.6097	52.0130	0.5967
WSH - 5 min	36.6671	36.0020	0.6651

Table 1a

Quantitative surface test for the evaluation of bactericidal activity according to DIN EN 16615

Test product: M6103 Wet Wipe Floor Disinfection
 Test date: 28 May 2018
 Comment: Dilution neutralization method, spread plate, number of plates: 2/ml
 Neutralizer: Polysorbate 80 30 g/l, Lecithin 3 g/l, L-histidine 1 g/l, sodium thiosulfate 5 g/l, demineralized water ad 1000 ml
 Germ carrier / cloth material: PVC with PUR Coating, size 2 mm / standard
 Temperature / rel. humidity: 21.0 °C / 56.4 %
 Incubation: 36 ± 1 °C / 48 h
 Test organism: ***Staphylococcus aureus*** ATCC 6538
 Organic burden: 0.3 % albumin + 0.3 % sheep erythrocytes
 Drying time: 60 min
 Test run: 1 (13 days after opening the system)

Test suspension and control after drying

Test suspension (N and N ₀)	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 219.09 \times 10^7$	lg N = 9.34
	10 ⁻⁷	<u>228</u>	<u>208</u>	9.17 ≤ lg N ≤ 9.70?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁸	<u>24</u>	<u>22</u>	N ₀ = N/20 7.88 ≤ lg N ₀ ≤ 8.40?	lg N ₀ = 8.04 <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Control before drying (D _{C0})	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 95 \times 10^5$	lg T ₀ = 6.98
	10 ⁻⁴	>330	>330	6.88 ≤ lg T ₀ ≤ 8.40?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁵	<u>92</u>	<u>98</u>		
Control after drying (D _{Ct}) t = 5 min	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 94 \times 10^5$	lg T _t = 6.97
	10 ⁻⁴	>330	>330	6.88 ≤ lg T _t ≤ 8.40?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁵	<u>76</u>	<u>112</u>		

Table 1a (continuation)

Test results

Test field 1 (reduction)

Product-concentration	Dilution step	V _c	N _a (= \bar{x} or \bar{x}_{wm})	lg N _a	lg R (= lg T _i - lg N _a)	lg R ≥ 5 ?	Time of action
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	8 0 0	<14	<1.15	>5.82	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	0 0 0	<14	<1.15	>5.82	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

 Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	V _c			V _(T2 to T4) (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _(T2 to T4) ≤ 50 cfu/25 cm ² ?	Time of action
		T ₂	T ₃	T ₄			
100 %	10 ⁰ 10 ⁻¹	0 0	0 0	0 0	0	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min
100 %	10 ⁰ 10 ⁻¹	0 0	0 0	0 0	0	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

 N_w Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	Test field 1 cfu/ml	V _c			V _{Nw(T2 to T4)} (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _{Nw(T2 to T4)} ≥ 10 cfu/25 cm ² ?	Time of action
			T ₂	T ₃	T ₄			
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	178 32 2	<u>36</u> 8	<u>32</u> 5	<u>37</u> 3	1.75 x 10 ²	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

Comment:

 V_c = colony forming units (cfu) / ml

 \bar{x} / \bar{x}_{wm} = arithmetic mean / weighted mean

R = germ reduction

 = used for further calculation

Assessment of the amount of disinfectant delivered from the cloth

Product concentration - Time of action	Weight of the cloth incl. the vessel (g)		Delivered product amount (g)
	before wiping	after wiping	
100 % - 5 min	53.8757	53.1914	0.6843
100 % - 5 min	53.7870	53.1411	0.6459
WSH - 5 min	36.8853	36.3421	0.5432

Table 2

Quantitative surface test for the evaluation of bactericidal activity according to DIN EN 16615

Test product:	M6103 Wet Wipe Floor Disinfection
Test date:	15 May 2018
Comment:	Dilution neutralization method, spread plate, number of plates: 2/ml
Neutralizer:	Polysorbate 80 30 g/l, Lecithin 3 g/l, L-histidine 1 g/l, sodium thiosulfate 5 g/l, demineralized water ad 1000 ml
Germ carrier / cloth material:	PVC with PUR Coating, size 2 mm / standard
Temperature / rel. humidity:	21.7 °C / 39.3 %
Incubation:	36 ± 1 °C / 48 h
Test organism:	Enterococcus hirae ATCC 10541
Organic burden:	0.3 % albumin + 0.3 % sheep erythrocytes
Drying time:	30 min
Test run:	1 (immediately after opening the system)

Test suspension and control after drying

Test suspension (N and N ₀)	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 230.91 \times 10^7$	lg N = 9.36
	10 ⁻⁷	<u>228</u>	<u>236</u>	9.17 ≤ lg N ≤ 9.70?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁸	<u>24</u>	<u>20</u>	N ₀ = N/20 7.88 ≤ lg N ₀ ≤ 8.40?	lg N ₀ = 8.06 <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Control before drying (D _{Co})	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 97 \times 10^5$	lg T ₀ = 6.99
	10 ⁻⁴	>330	>330	6.88 ≤ lg T ₀ ≤ 8.40?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁵	<u>94</u>	<u>80</u>		
Control after drying (D _{C1}) t = 5 min	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 60 \times 10^5$	lg T ₁ = 6.78
	10 ⁻⁴	>330	>330	6.88 ≤ lg T ₁ ≤ 8.40?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
	10 ⁻⁵	<u>60</u>	<u>60</u>		

Validation

Validation suspension (N _{Vo})			Neutralizer or filtration control (B)			Method validation (C) product concentration: 100 %		
V _{C1}	<u>78</u>	$\bar{x} = 68$	V _{C1}	<u>88</u>	$\bar{x} = 83$	V _{C1}	<u>52</u>	$\bar{x} = 67$
V _{C2}	<u>58</u>		V _{C2}	<u>78</u>		V _{C2}	<u>82</u>	
30 ≤ \bar{x} from N _{Vo} ≤ 160? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no			\bar{x} from B ≥ 0.5 × \bar{x} from N _{Vo} ? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no			\bar{x} from C ≥ 0.5 × \bar{x} from N _{Vo} ? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		

Table 2 (continuation)

Test results

Test field 1 (reduction)

Product-concentration	Dilution step	V _c	N _a (= \bar{x} or \bar{x}_{wm})	lg N _a	lg R (= lg T _i - lg N _a)	lg R ≥ 5 ?	Time of action	
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	<u>20</u> 2 0	20	1.30	5.48	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min	
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	not evaluable						5 min

 Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	V _c			V _(T2 to T4) (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _(T2 to T4) ≤ 50 cfu/25 cm ² ?	Time of action	
		T ₂	T ₃	T ₄				
100 %	10 ⁰ 10 ⁻¹	<u>0</u> 0	<u>0</u> 0	<u>0</u> 0	0	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min	
100 %	10 ⁰ 10 ⁻¹	not evaluable						5 min

 N_w Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	Test field 1 cfu/ml	V _c			V _{Nw(T2 to T4)} (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _{Nw(T2 to T4)} ≥ 10 cfu/25 cm ² ?	Time of action
			T ₂	T ₃	T ₄			
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	198 11 0	<u>69</u> 8	<u>26</u> 2	<u>5</u> 1	1.67 x 10 ²	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	>330 79 4	<u>189</u> 17	<u>59</u> 7	>330 <u>31</u>	9.27 x 10 ²	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

Comment:

 V_c = colony forming units (cfu) / ml

R = germ reduction

 \bar{x} / \bar{x}_{wm} = arithmetic mean / weighted mean

 = used for further calculation

Assessment of the amount of disinfectant delivered from the cloth

Product concentration - Time of action	Weight of the cloth incl. the vessel (g)		Delivered product amount (g)
	before wiping	after wiping	
100 % - 2 min	54.2229	53.5772	0.6457
WSH - 2 min	36.7806	36.0427	0.7379
100 % - 5 min	55.7671	55.0928	0.6743
WSH - 5 min	36.6740	35.8769	0.7971

Table 2a

Quantitative surface test for the evaluation of bactericidal activity according to DIN EN 16615

Test product: M6103 Wet Wipe Floor Disinfection
 Test date: 28 May 2018
 Comment: Dilution neutralization method, spread plate, number of plates: 2/ml
 Neutralizer: Polysorbate 80 30 g/l, Lecithin 3 g/l, L-histidine 1 g/l, sodium thiosulfate 5 g/l, demineralized water ad 1000 ml
 Germ carrier / cloth material: PVC with PUR Coating, size 2 mm / standard
 Temperature / rel. humidity: 21.0 °C / 56.4 %
 Incubation: 36 ± 1 °C / 48 h
 Test organism: *Enterococcus hirae* ATCC 10541
 Organic burden: 0.3 % albumin + 0.3 % sheep erythrocytes
 Drying time: 60 min
 Test run: 1 (13 days after opening the system)

Test suspension and control after drying

Test suspension (N and N ₀)	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 45 \times 10^8$	lg N = 9.65
	10 ⁻⁷	>330	>330	9.17 ≤ lg N ≤ 9.70?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁸	<u>44</u>	<u>46</u>	N ₀ = N/20 7.88 ≤ lg N ₀ ≤ 8.40?	lg N ₀ = 8.35 <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Control before drying (D _{Co})	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 108 \times 10^5$	lg T ₀ = 7.03
	10 ⁻⁴	>330	>330	6.88 ≤ lg T ₀ ≤ 8.40?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁵	<u>78</u>	<u>138</u>		
Control after drying (D _{Ct}) t = 5 min	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 53 \times 10^5$	lg T _t = 6.72
	10 ⁻⁴	>330	>330	6.88 ≤ lg T _t ≤ 8.40?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
	10 ⁻⁵	<u>50</u>	<u>56</u>		

Table 2a (continuation)

Test results

Test field 1 (reduction)

Product-concentration	Dilution step	V _C	N _a (= \bar{x} or \bar{x}_{wm})	lg N _a	lg R (= lg T ₁ - lg N _a)	lg R ≥ 5 ?	Time of action
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	0 0 0	<14	<1.15	>5.57	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	46 6 1	46	1.66	5.06	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

 Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	V _C			V _(T2 to T4) (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _(T2 to T4) ≤ 50 cfu/25 cm ² ?	Time of action
		T ₂	T ₃	T ₄			
100 %	10 ⁰ 10 ⁻¹	0 0	0 0	0 0	0	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min
100 %	10 ⁰ 10 ⁻¹	3 0	3 0	0 0	10	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

 N_w Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	Test field 1 cfu/ml	V _C			V _{Nw(T2 to T4)} (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _{Nw(T2 to T4)} ≥ 10 cfu/25 cm ² ?	Time of action
			T ₂	T ₃	T ₄			
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	177 21 6	28 2	31 12	36 7	1.58 x 10 ²	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

Comment:

 V_C = colony forming units (cfu) / ml

 \bar{x} / \bar{x}_{wm} = arithmetic mean / weighted mean

R = germ reduction

 = used for further calculation

Assessment of the amount of disinfectant delivered from the cloth

Product concentration - Time of action	Weight of the cloth incl. the vessel (g)		Delivered product amount (g)
	before wiping	after wiping	
100 % - 5 min	51.0514	50.2597	0.7917
100 % - 5 min	51.7006	51.0034	0.6972
WSH - 5 min	36.7842	35.9830	0.8012

Table 3

Quantitative surface test for the evaluation of bactericidal activity according to DIN EN 16615

Test product:	M6103 Wet Wipe Floor Disinfection
Test date:	15 May 2018
Comment:	Dilution neutralization method, spread plate, number of plates: 2/ml
Neutralizer:	Polysorbate 80 30 g/l, Lecithin 3 g/l, L-histidine 1 g/l, sodium thiosulfate 5 g/l, demineralized water ad 1000 ml
Germ carrier / cloth material:	PVC with PUR Coating, size 2 mm / standard
Temperature / rel. humidity:	21.7 °C / 39.3 %
Incubation:	36 ± 1 °C / 48 h
Test organism:	<i>Pseudomonas aeruginosa</i> ATCC 15442
Organic burden:	0.3 % albumin + 0.3 % sheep erythrocytes
Drying time:	30 min
Test run:	1 (immediately after opening the system)

Test suspension and control after drying

Test suspension (N and N ₀)	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 105 \times 10^8$	lg N = 10.02
	10 ⁻⁷	>330	>330	9.17 ≤ lg N ≤ 9.70?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
	10 ⁻⁸	<u>98</u>	<u>112</u>	N ₀ = N/20 7.88 ≤ lg N ₀ ≤ 8.40?	lg N ₀ = 8.72 <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Control before drying (D _{C0})	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 180 \times 10^4$	lg T ₀ = 6.26
	10 ⁻⁴	<u>178</u>	<u>182</u>	6.88 ≤ lg T ₀ ≤ 8.40?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
	10 ⁻⁵	<u>18</u>	<u>18</u>		
Control after drying (D _{C1}) t = 5 min	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 162.86 \times 10^4$	lg T ₁ = 6.21
	10 ⁻⁴	<u>152</u>	<u>168</u>	6.88 ≤ lg T ₁ ≤ 8.40?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
	10 ⁻⁵	10	<u>22</u>		

Validation

Validation suspension (N _{v0})			Neutralizer or filtration control (B)			Method validation (C) product concentration: 100 %		
V _{C1}	<u>94</u>	$\bar{x} = 85$	V _{C1}	<u>64</u>	$\bar{x} = 65$	V _{C1}	<u>70</u>	$\bar{x} = 63$
V _{C2}	<u>76</u>		V _{C2}	<u>66</u>		V _{C2}	<u>56</u>	
30 ≤ \bar{x} from N _{v0} ≤ 160? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no			\bar{x} from B ≥ 0.5 × \bar{x} from N _{v0} ? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no			\bar{x} from C ≥ 0.5 × \bar{x} from N _{v0} ? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		

Table 3 (continuation)

Test results

Test field 1 (reduction)

Product-concentration	Dilution step	V _c	N _a (= \bar{x} or \bar{x}_{wm})	lg N _a	lg R (= lg T ₁ - lg N _a)	lg R ≥ 5 ?	Time of action
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	<u>0</u> 0 0	<14	<1.15	>5.06	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	<u>0</u> 0 0	<14	<1.15	>5.06	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

 Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	V _c			V _(T2 to T4) (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _(T2 to T4) ≤ 50 cfu/25 cm ² ?	Time of action
		T ₂	T ₃	T ₄			
100 %	10 ⁰ 10 ⁻¹	<u>0</u> 0	<u>0</u> 0	<u>0</u> 0	0	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min
100 %	10 ⁰ 10 ⁻¹	<u>0</u> 0	<u>0</u> 0	<u>0</u> 0	0	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

 N_w Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	Test field 1 cfu/ml	V _c			V _{Nw(T2 to T4)} (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _{Nw(T2 to T4)} ≥ 10 cfu/25 cm ² ?	Time of action
			T ₂	T ₃	T ₄			
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	145 19 7	<u>30</u> 2	<u>0</u> 0	<u>2</u> 0	53.33	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	>330 137 10	<u>10</u> 4	<u>1</u> 0	<u>1</u> 0	20	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

Comment:

 V_c = colony forming units (cfu) / ml

 \bar{x} / \bar{x}_{wm} = arithmetic mean / weighted mean

R = germ reduction

 = used for further calculation

Assessment of the amount of disinfectant delivered from the cloth

Product concentration - Time of action	Weight of the cloth incl. the vessel (g)		Delivered product amount (g)
	before wiping	after wiping	
100 % - 2 min	53.3108	52.6710	0.6398
WSH - 2 min	36.6645	35.9305	0.7340
100 % - 5 min	51.7675	51.1336	0.6339
WSH - 5 min	36.7886	36.1452	0.6434

Table 4

Quantitative surface test for the evaluation of yeasticidal activity according to DIN EN 16615

Test product: M6103 Wet Wipe Floor Disinfection
 Test date: 15 May 2018
 Comment: Dilution neutralization method, spread plate, number of plates: 2/ml
 Neutralizer: Polysorbate 80 30 g/l, Lecithin 3 g/l, L-histidine 1 g/l, sodium thiosulfate 5 g/l, demineralized water ad 1000 ml
 Germ carrier / cloth material: PVC with PUR Coating, size 2 mm / standard
 Temperature / rel. humidity: 21.7 °C / 39.3 %
 Incubation: 30 ± 1°C / 72 h
 Test organism: **Candida albicans** ATCC 10231
 Organic burden: 0.3 % albumin + 0.3 % sheep erythrocytes
 Drying time: 30 min
 Test run: 1 (immediately after opening the system)

Test suspension and control after drying

Test suspension (N and N ₀)	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 88 \times 10^7$	lg N = 8.94
	10 ⁻⁶	>330	>330	8.17 ≤ lg N ≤ 8.70?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
	10 ⁻⁷	<u>80</u>	<u>96</u>	N ₀ = N/20 6.88 ≤ lg N ₀ ≤ 7.40?	lg N ₀ = 7.64 <input type="checkbox"/> yes <input checked="" type="checkbox"/> no

Control before drying (D _{C0})	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 104 \times 10^4$	lg T ₀ = 6.02
	10 ⁻³	>330	>330	5.88 ≤ lg N ₀ ≤ 7.40?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁴	<u>114</u>	<u>94</u>		

Control after drying (D _{C1}) t = 5 min	N	V _{C1}	V _{C2}	$\bar{x}_{wm} = 102 \times 10^4$	lg T ₁ = 6.01
	10 ⁻³	>330	>330	5.88 ≤ lg T ₁ ≤ 7.40?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	10 ⁻⁴	<u>94</u>	<u>110</u>		

Validation

Validation suspension (N _{v0})			Neutralizer or filtration control (B)			Method validation (C) product concentration: 100 %		
V _{C1}	<u>81</u>	$\bar{x} = 82$	V _{C1}	<u>67</u>	$\bar{x} = 72.5$	V _{C1}	<u>80</u>	$\bar{x} = 69$
V _{C2}	<u>83</u>		V _{C2}	<u>78</u>		V _{C2}	<u>58</u>	
30 ≤ \bar{x} from N _{v0} ≤ 160? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no			\bar{x} from B ≥ 0.5 × \bar{x} from N _{v0} ? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no			\bar{x} from C ≥ 0.5 × \bar{x} from N _{v0} ? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		

Table 4 (continuation)

Test results

Test field 1 (reduction)

Product-concentration	Dilution step	V _c	N _a (= \bar{x} or \bar{x}_{wm})	lg N _a	lg R (= lg T _i - lg N _a)	lg R ≥ 4 ?	Time of action
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	<u>0</u> 0 0	<14	<1.15	>4.86	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min
100 %	10 ⁰ 10 ⁻¹ 10 ⁻²	<u>0</u> 0 0	<14	<1.15	>4.86	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

 Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	V _c			V _(T2 to T4) (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _(T2 to T4) ≤ 50 cfu/25 cm ² ?	Time of action
		T ₂	T ₃	T ₄			
100 %	10 ⁰ 10 ⁻¹	<u>0</u> 0	<u>0</u> 0	<u>0</u> 0	0	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min
100 %	10 ⁰ 10 ⁻¹	<u>0</u> 0	<u>0</u> 0	<u>0</u> 0	0	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

 N_w Test field T₂ to T₄ (cfu/25 cm²)

Product-concentration	Dilution step	Test field 1 cfu/ml	V _c			V _{Nw(T2 to T4)} (= \bar{x} or $\bar{x}_{wm} \times 5$) cfu/25cm ²	V _{Nw(T2 to T4)} ≥ 10 cfu/25 cm ² ?	Time of action
			T ₂	T ₃	T ₄			
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	148 13 1	<u>6</u> 0	<u>0</u> 0	<u>0</u> 0	10	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	2 min
Water	10 ⁰ 10 ⁻¹ 10 ⁻²	>330 137 17	<u>7</u> 1	<u>0</u> 0	<u>0</u> 0	11.67	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	5 min

Comment:

 V_c = colony forming units (cfu) / ml

 \bar{x} / \bar{x}_{wm} = arithmetic mean / weighted mean

R = germ reduction

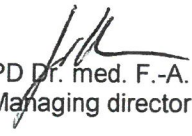
 = used for further calculation

Assessment of the amount of disinfectant delivered from the cloth

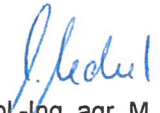
Product concentration - Time of action	Weight of the cloth incl. the vessel (g)		Delivered product amount (g)
	before wiping	after wiping	
100 % - 2 min	52.7848	52.2011	0.5837
WSH - 2 min	36.7413	36.0910	0.6503
100 % - 5 min	51.2082	50.6064	0.6018
WSH - 5 min	36.6123	35.8704	0.7419

Product: M6103 Wet Wipe Floor Disinfection

Note: The test results only relate to the test product under investigation. Partial reproduction of this report only with written consent of the iki - Institut für Krankenhaushygiene und Infektionskontrolle GmbH, Gießen.



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