Digitally signed by Bunic Gheorghe
Date: 2024.11.08 21:34:09 EET
Reason: MoldSign Signature
Location: Moldova
MOLDOVA EUROPEANĂ

Chemila, spol. s r.o., Za Dráhou 4386/3, Hodonín 69501, Phone +420518340919, chemila@chemila.cz
Chemical and Microbiological Laboratory, Testing Laboratory No. 1273 certified by Czech Accreditation Institute according to ČSN EN ISO/IEC 17025:2005.

Copy No.: 1
Issue No.: 1

Test report No. S103/2019

DETERMINATION OF BACTERICIDAL (EN 16615:2015) ACTIVITY OF THE PRODUCT **F173**

Sample ID: S103/2019
Sample name: **F173**
Client: Christeyn France S.A., 31, Rue de la Maladrie, 44124 Vertou, France
Producer: Christeyn France S.A., 31, Rue de la Maladrie, 44124 Vertou, France
Sampling point: Christeyn France S.A., 31, Rue de la Maladrie, 44124 Vertou, France

Incoming date:
5.3.2019

Delivery date:
1.7.2019

Hodonín, 1.7.2019

TESTING LABORATORY CERTIFIED BY CZECH ACCREDITATION INSTITUTE
Chemila, spol. s r.o.
Za Dráhou 4386/3
695 01 Hodonín
CZ
č. 1273

Ing. Jana Šlitrová, Head of Laboratory

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01

Subject of testing:
Determination of bactericidal activity of the product.

Identification of the sample:

Name of the product:	**F173**
Batch number:	181221/0823-01
Date of manufacture:	21/12/2018
Expiry date:	2021-11
Manufacturer:	Christeyn France S.A., 31, Rue de la Maladrie, 44124 Vertou, France
Incoming date:	5.3.2019
Storage conditions:	5 – 30 °C

Active compounds and concentrations:
CAS 2372-82-9 N-(3-aminopropyl)-N-dodecylpropane-1,3 diamine 5.5 %
CAS 7173-51-5 Didecyldimethylammonium chloride 3.5 %

Experimental conditions:	**Testing of disinfecting efficiency of chemical disinfecting and antiseptic agents on carriers** SOP-M-19-00 (EN 16615:2015)
Period of analysis:	30.4. – 2.5.2019
Lab temperature:	20 °C ± 2.5 °C
Temperature of media:	20 °C ± 1 °C
Test method:	dilution neutralization method
Neutralization medium:	Dey-Engley Neutralizing Broth M 1062
Product diluent:	hard water
Appearance of the product:	light yellow liquid
Water control:	hard water + polysorbate 80
Test concentration:	0.1%, 0.25%
Contact time:	15 min
Interfering substances:	3 g/l BSA and 3 ml/l sheep erythrocytes (dirty conditions)
Test organisms:	*Pseudomonas aeruginosa* ATCC 15442 *Staphylococcus aureus* ATCC 6538 *Enterococcus hirae* ATCC 10541
Incubation conditions:	37 °C ± 1 °C, 24 (48) hours
Test surface:	PVC with PUR coating, width 2.5 mm, 20 cm x 50 cm. The surface is cleaned by 70% n-propanol. After drying draw 4 squares 5 cm x 5 cm 5 cm apart, mark them as test fields 1 to 4. The drying controls D_{C0} and D_{Ct} are performed on smaller surface (7 cm x 13 cm, 2 squares 5 cm x 5 cm).
Wipe:	17.5 cm x 28 cm, 55% cellulose, 45% polyethylenterephtalate (PET), the wipe is used only once. 30 minutes before testing put the wipe in Petri dish with 16 ml of the product solution. The wet wipe is weighed before and after testing.
Test weight:	granite, lenght 11.9 cm, width 8.2 cm, height 8.4 cm, weight 2.4 kg
Tampons:	sterile, length 150 mm, disposable, tip made of pure cotton without compounds inhibiting or supporting the effect of product solution or growth of microorganisms, producer F.L. Medical
Parafilm:	Parafilm® M, 10.2 cm x 38 m, producer Brand disposable, protecting the horisontal surface and vertical surfaces before contamination during wiping.

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01
Page: 3

Test procedure:

1. Preparation of the test suspension
2. Determination of CFU in the test suspension
3. Quantitative test on carriers according to EN 16615:2015
4. Incubation and calculation
5. Expression and interpretation of results

Note:
Bactericidal activity – the capability of a product to produce a reduction in the number of viable bacterial cells of relevant organisms under defined conditions on nonporous surface in the field 1 by at least a 5 lg reduction (10^5).
$R = D_{Ct}/ N_a$ or $lg\ R = lg\ D_{Ct} - lg\ N_a$ the reduction in viability, the drying time: 15 – 20 min

The standard:
EN 16615:2015 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) April 2015
EN ISO 4833-1 Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony count at 30 degrees C by the pour plate technique, September 2013

The Number of CFU in the tested product **F173** (SOP-M-07-00 (EN ISO 4833-1)): 0 CFU/ml

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01

1. Testing the efficacy of chemical disinfectant **F173** on *Pseudomonas aeruginosa* ATCC 15442 on non-porous surfaces

Tab No. 1.1 Verification of methodology, temperature 20°C, dirty conditions

Validation of suspension (N_{V0})				Neutralizer toxicity control (B)				Method validation (C), product conc. 0.25%			
V_{c1}	60	$\Phi_{Nvo} = 52$		V_{c1}	72	$\Phi_B = 51.5$		V_{c1}	38	$\Phi_C = 52.5$	
V_{c2}	44			V_{c2}	31			V_{c2}	67		
$30 \leq \Phi_{Nvo} \leq 160$				$\Phi_B \geq 0.5\ \Phi_{Nvo}$				$\Phi_C \geq 0.5\ \Phi_{Nvo}$			
x	yes		no	x	yes		no	x	yes		no

Tab No. 1.2 Test suspension

Test suspension N	Dilution	V_{c1}	V_{c1}	Test suspension N_0			
$\Phi = 48 \times 10^8 = \lg 9.68$	10^{-7}	> 330	> 330	$N_0 = N/20$, $\lg N_0 = 8.38$			
$9.17 \leq \lg N \leq 9.70$	10^{-8}	62	34	$7.88 \leq \lg N_0 \leq 8.40$			
				x	yes		no

Tab No. 1.2.1 Drying in time 0

Drying control (D_{C0})	Dilution	V_{c1}	V_{c1}	$\lg D_{C0} = \lg (\Phi \times 5 \times 10^5) = 7.93$			
	10^{-5}	168	175	$6.88 \leq \lg D_{C0} \leq 8.40$			
	10^{-6}	18	17				
				x	yes		no

Tab No. 1.2.2 Drying in time t

Drying control (D_{Ct})	Dilution	V_{c1}	V_{c1}	$\lg D_{Ct} = \lg (\Phi \times 5 \times 10^5) = 7.87$			
	10^{-5}	152	143	$6.88 \leq \lg D_{Ct} \leq 8.40$			
	10^{-6}	16	14				
				x	yes		no

Tab No. 1.3.1 Test with water N_w – the effect of water (Wipe with hard water + polysorbate 80) on *Pseudomonas aeruginosa* ATCC 15442 on non-porous surfaces, dirty conditions

Field / contact time (min)	Dilution after test procedure	V_c	$N_W = (\Phi \times 5)$	N_W requirement >10 cfu/25 cm^2
2 / 15	10^0	3	15	yes
3 / 15	10^0	3	15	yes
4 / 15	10^0	4	20	yes

Tab No. 1.3.2.1 Test – the effect of **F173** (Wipe with product solution) on *Pseudomonas aeruginosa* ATCC 15442 on non-porous surfaces, dirty conditions, field 2-4

Test concentration (%) /contact time (min) /conditions / field	Dilution after test procedure	V_c	$N_a = (\Phi \times 5)$	N_a requirement <50 cfu/25 cm^2
0.25/15/dirty/2	10^0	0	<14	yes
0.25/15/dirty/3	10^0	0	<14	yes
0.25/15/dirty/4	10^0	0	<14	yes

Tab No. 1.3.2.2 Test – the effect of **F173** (Wipe with product solution) on *Pseudomonas aeruginosa* ATCC 15442 on non-porous surfaces, dirty conditions, field 2-4

Test concentration (%) /contact time (min) /conditions / field	Dilution after test procedure	V_c	$N_a = (\Phi \times 5)$	N_a requirement <50 cfu/25 cm^2
0.1/15/dirty/2	10^0	3	15	yes
0.1/15/dirty/3	10^0	0	<14	yes
0.1/15/dirty/4	10^0	0	<14	yes

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01

Tab No. 1.3.3 Test – the effect of **F173** (Wipe with product solution) on *Pseudomonas aeruginosa* ATCC 15442 on non-porous surfaces, dirty conditions, field 1

Test concentration (%) /contact time (min) /conditions / field	Dilution after test procedure	V_{c1}	V_{c2}	lg N_a (Φ x 5)	**lg R (lg D_{Ct} = 7.87)**
0.25/15/dirty/1	10^0	<14	<14	<1.85	**≥ 6.02**
0.1/15/dirty/1	10^{-1}	21	31	3.11	**4.76**

Tab No. 1.4 Test – weight of wipes before and after testing

Weight of wipes	Weight before testing (g)	Weight after testing (g)	Difference (g)
F173 (Wipe with 0.25% solution)	18.9	17.9	1.0
F173 (Wipe with 0.1% solution)	19.1	17.7	1.4
Wipe with hard water + polysorbate 80	19.1	17.9	1.2

Note: V_c = value is the number of cfu per ml, Φ = average V_{c1} a V_{c2} (1. + 2. duplicate V_c values), N = the number of cfu/ml in the bacterial test suspension, N_{V0} = the number of cfu/ml in the bacterial test suspension for validation, N_a = the number of viable bacterial cells per ml in the test mixture, A, B, C = the number of viable bacterial cells per ml in control tests (A – experimental conditions validation, B – neutralizer toxicity validation, C – method validation $R = D_{Ct}/ N_a$ or $\lg R = \lg D_{Ct} - \lg N_a$ the reduction in viability

Prepared by: Mgr. Karolína Světlíková, Lab Technician

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01

2. Testing the efficacy of chemical disinfectant **F173** on *Staphylococcus aureus* ATCC 6538 on non-porous surfaces

Tab No. 2.1 Verification of methodology, temperature 20°C, dirty conditions

Validation of suspension (N_{V0})			Neutralizer toxicity control (B)			Method validation (C), product conc. 0.25%		
V_{c1}	37	$\Phi_{Nvo} = 41.5$	V_{c1}	33	$\Phi_B = 36.5$	V_{c1}	33	$\Phi_C = 31$
V_{c2}	46		V_{c2}	40		V_{c2}	29	
$30 \leq \Phi_{Nvo} \leq 160$			$\Phi_B \geq 0.5\ \Phi_{Nvo}$			$\Phi_C \geq 0.5\ \Phi_{Nvo}$		
x	yes	no	x	yes	no	x	yes	no

Tab No. 2.2 Test suspension

Test suspension N	Dilution	V_{c1}	V_{c1}	Test suspension N_0
$\Phi = 42.5 \times 10^8 = \lg 9.63$	10^{-7}	> 330	> 330	$N_0 = N/20$, $\lg N_0 = 8.33$
$9.17 \leq \lg N \leq 9.70$	10^{-8}	48	37	$7.88 \leq \lg N_0 \leq 8.40$
				x yes no

Tab No. 2.2.1 Drying in time 0

Drying control (D_{C0})	Dilution	V_{c1}	V_{c1}	$\lg D_{C0} = \lg (\Phi \times 5 \times 10^5) = 7.80$
	10^{-4}	> 330	> 330	$6.88 \leq \lg D_{C0} \leq 8.40$
	10^{-5}	132	119	
				x yes no

Tab No. 2.2.2 Drying in time t

Drying control (D_{Ct})	Dilution	V_{c1}	V_{c1}	$\lg D_{Ct} = \lg (\Phi \times 5 \times 10^5) = 7.75$
	10^{-4}	> 330	> 330	$6.88 \leq \lg D_{Ct} \leq 8.40$
	10^{-5}	109	118	
				x yes no

Tab No. 2.3.1 Test with water N_w – the effect of water (Wipe with hard water + polysorbate 80) on *Staphylococcus aureus* ATCC 6538 on non-porous surfaces, dirty conditions

Field / contact time (min)	Dilution after test procedure	V_c	$N_W = (\Phi \times 5)$	N_W requirement >10 cfu/25 cm^2
2 / 15	10^0	5	25	yes
3 / 15	10^0	5	25	yes
4 / 15	10^0	8	40	yes

Tab No. 2.3.2.1 Test – the effect of **F173** (Wipe with product solution) on *Staphylococcus aureus* ATCC 6538 on non-porous surfaces, dirty conditions, field 2-4

Test concentration (%) /contact time (min) /conditions / field	Dilution after test procedure	V_c	$N_a = (\Phi \times 5)$	N_a requirement <50 cfu/25 cm^2
0.25/15/dirty/2	10^0	1	<14	yes
0.25/15/dirty/3	10^0	3	15	yes
0.25/15/dirty/4	10^0	3	15	yes

Tab No. 2.3.2.2 Test – the effect of **F173** (Wipe with product solution) on *Staphylococcus aureus* ATCC 6538 on non-porous surfaces, dirty conditions, field 2-4

Test concentration (%) /contact time (min) /conditions / field	Dilution after test procedure	V_c	$N_a = (\Phi \times 5)$	N_a requirement <50 cfu/25 cm^2
0.1/15/dirty/2	10^0	0	<14	yes
0.1/15/dirty/3	10^0	2	<14	yes
0.1/15/dirty/4	10^0	0	<14	yes

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01

Tab No. 2.3.3 Test – the effect of **F173** (Wipe with product solution) on *Staphylococcus aureus* ATCC 6538 on non-porous surfaces, dirty conditions, field 1

Test concentration (%) /contact time (min) /conditions / field	Dilution after test procedure	V_{c1}	V_{c2}	lg N_a (Φ x 5)	**lg R ($lg D_{Ct} = 7.75$)**
0.25/15/dirty/1	10^0	17	18	1.94	**5.81**
0.1/15/dirty/1	10^0	78	74	2.58	**5.17**

Tab No. 2.4 Test – weight of wipes before and after testing

Weight of wipes	Weight before testing (g)	Weight after testing (g)	Difference (g)
F173 (Wipe with 0.25% solution)	19.2	17.9	1.3
F173 (Wipe with 0.1% solution)	19.2	18.0	1.2
Wipe with hard water + polysorbate 80	19.3	18.3	1.0

Note: V_c = value is the number of cfu per ml, Φ = average V_{c1} a V_{c2} (1. + 2. duplicate V_c values), N = the number of cfu/ml in the bacterial test suspension, N_{V0} = the number of cfu/ml in the bacterial test suspension for validation, N_a = the number of viable bacterial cells per ml in the test mixture, A, B, C = the number of viable bacterial cells per ml in control tests (A – experimental conditions validation, B – neutralizer toxicity validation, C – method validation $R = D_{Ct}/ N_a$ or $lg R = lg D_{Ct} – lg N_a$ the reduction in viability

Prepared by: Mgr. Karolína Světlíková, Lab Technician

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01

3. Testing the efficacy of chemical disinfectant **F173** on *Enterococcus hirae* ATCC 10541 on non-porous surfaces

Tab No. 3.1 Verification of methodology, temperature 20°C, dirty conditions

Validation of suspension (N_{V0})			Neutralizer toxicity control (B)			Method validation (C), product conc. 0.25%		
V_{c1}	49	$\Phi_{Nvo} = 45$	V_{c1}	46	$\Phi_B = 43$	V_{c1}	26	$\Phi_C = 38$
V_{c2}	41		V_{c2}	40		V_{c2}	50	
$30 \leq \Phi_{Nvo} \leq 160$			$\Phi_B \geq 0.5\ \Phi_{Nvo}$			$\Phi_C \geq 0.5\ \Phi_{Nvo}$		
x	yes	no	x	yes	no	x	yes	no

Tab No. 3.2 Test suspension

Test suspension N	Dilution	V_{c1}	V_{c1}	Test suspension N_0
$\Phi = 45.5 \times 10^8 = \lg 9.66$	10^{-7}	> 330	> 330	$N_0 = N/20$, $\lg N_0 = 8.36$
$9.17 \leq \lg N \leq 9.70$	10^{-8}	42	49	$7.88 \leq \lg N_0 \leq 8.40$
				x yes no

Tab No. 3.2.1 Drying in time 0

Drying control (D_{C0})	Dilution	V_{c1}	V_{c1}	$\lg D_{C0} = \lg (\Phi \times 5 \times 10^5) = 7.77$
	10^{-4}	> 330	> 330	$6.88 \leq \lg D_{C0} \leq 8.40$
	10^{-5}	110	126	
				x yes no

Tab No. 3.2.2 Drying in time t

Drying control (D_{Ct})	Dilution	V_{c1}	V_{c1}	$\lg D_{Ct} = \lg (\Phi \times 5 \times 10^5) = 7.67$
	10^{-4}	> 330	> 330	$6.88 \leq \lg D_{Ct} \leq 8.40$
	10^{-5}	99	88	
				x yes no

Tab No. 3.3.1 Test with water N_w – the effect of water (Wipe with hard water + polysorbate 80) on *Enterococcus hirae* ATCC 10541 on non-porous surfaces, dirty conditions

Field / contact time (min)	Dilution after test procedure	V_c	$N_W = (\Phi \times 5)$	N_W requirement >10 cfu/25 cm^2
2 / 15	10^0	18	90	yes
3 / 15	10^0	72	360	yes
4 / 15	10^0	18	90	yes

Tab No. 3.3.2.1 Test – the effect of **F173** (Wipe with product solution) on *Enterococcus hirae* ATCC 10541 on non-porous surfaces, dirty conditions, field 2-4

Test concentration (%) /contact time (min) /conditions / field	Dilution after test procedure	V_c	$N_a = (\Phi \times 5)$	N_a requirement <50 cfu/25 cm^2
0.25/15/dirty/2	10^0	2	<14	yes
0.25/15/dirty/3	10^0	3	15	yes
0.25/15/dirty/4	10^0	0	<14	yes

Tab No. 3.3.2.2 Test – the effect of **F173** (Wipe with product solution) on *Enterococcus hirae* ATCC 10541 on non-porous surfaces, dirty conditions, field 2-4

Test concentration (%) /contact time (min) /conditions / field	Dilution after test procedure	V_c	$N_a = (\Phi \times 5)$	N_a requirement <50 cfu/25 cm^2
0.1/15/dirty/2	10^0	7	35	yes
0.1/15/dirty/3	10^0	0	<14	yes
0.1/15/dirty/4	10^0	0	<14	yes

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01

Tab No. 3.3.3 Test – the effect of **F173** (Wipe with product solution) on *Enterococcus hirae* ATCC 10541 on non-porous surfaces, dirty conditions, field 1

Test concentration (%) /contact time (min) /conditions / field	Dilution after test procedure	V_{c1}	V_{c2}	lg N_a (Φ x 5)	**lg R (lg D_{Ct} = 7.67)**
0.25/15/dirty/1	10^0	<14	<14	<1.85	**≥ 5.82**
0.1/15/dirty/1	10^0	77	68	2.56	**5.11**

Tab No. 3.4 Test – weight of wipes before and after testing

Weight of wipes	Weight before testing (g)	Weight after testing (g)	Difference (g)
F173 (Wipe with 0.25% solution)	19.2	18.1	1.1
F173 (Wipe with 0.1% solution)	19.0	17.9	1.1
Wipe with hard water + polysorbate 80	19.4	18.1	1.3

Note: V_c = value is the number of cfu per ml, Φ = average V_{c1} a V_{c2} (1. + 2. duplicate V_c values), N = the number of cfu/ml in the bacterial test suspension, N_{V0} = the number of cfu/ml in the bacterial test suspension for validation, N_a = the number of viable bacterial cells per ml in the test mixture, A, B, C = the number of viable bacterial cells per ml in control tests (A – experimental conditions validation, B – neutralizer toxicity validation, C – method validation $R = D_{Ct}/ N_a$ or $\lg R = \lg D_{Ct} - \lg N_a$ the reduction in viability

Prepared by: Mgr. Karolína Světlíková, Lab Technician

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01

4. Evaluation of bactericidal activity of the product **F173**

Tab No. 4.1 The efficacy of chemical disinfectant **F173** on test strains – bactericidal activity on non-porous surfaces, dirty conditions, field 1

Bactericidal and yeasticidal activity of the product (EN 16615:2015)						
Strain	Test temperature [°C]	Contact time [min]	Product test concentrations [%]	Interfering substances – conditions	lg R EN 16615:2015	**lg R**
Pseudomonas aeruginosa ATCC 15442	20	15	0.25	dirty	≥ 5	**< 5**
Staphylococcus aureus ATCC 6538	20	15	0.25	dirty	≥ 5	**> 5**
Enterococcus hirae ATCC 10541	20	15	0.25	dirty	≥ 5	**> 5**
Pseudomonas aeruginosa ATCC 15442	20	15	0.1	dirty	≥ 5	**> 5**
Staphylococcus aureus ATCC 6538	20	15	0.1	dirty	≥ 5	**> 5**
Enterococcus hirae ATCC 10541	20	15	0.1	dirty	≥ 5	**> 5**

Note: V_c = value is the number of cfu per ml, Φ = average V_{c1} a V_{c2} (1. + 2. duplicate V_c values), N = the number of cfu/ml in the test suspension, N_{V0} = the number of cfu/ml in the test suspension for validation, N_a = the number of bacteria and fungi per ml in the test mixture, A, B, C = the number of bacteria and fungi per ml in control tests (A – experimental conditions validation, B – neutralizer toxicity validation, C – method validation $R = D_{Ct}/ N_a$ or $\lg R = \lg D_{Ct} - \lg N_a$ the reduction in viability

Prepared by: Mgr. Karolína Světlíková, Lab Technician

Description: *Testing the efficacy of chemical disinfectants and antiseptics*

Sample ID: S103/2019
Rep No: 62
Sample name: **F173**
Sampled: by client
Sampling point: Christeyn France S.A., Vertou
Client: Christeyn France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 26.2.2019
Sample delivered: 5.3.2019
Testing date: 30.4. – 2.5.2019
Delivered amount: 150 ml
Batch No: 181221/0823-01
Page: 11

Interpretation:
Results of tests are in Tabs.
According to EN 16615:2015 the tested product **F173**, batch No. 181221/0823-01, in the concentration 0.25%, diluted in hard water (soaked wipe) and in the contact time 15 min under dirty conditions at temperature 20 °C ± 2.5 °C by the dilution neutralization method **decreased** on non-porous surfaces on field 1 the number of viable bacterial cells of *Pseudomonas aeruginosa* ATCC 15442, *Staphylococcus aureus* ATCC 6538, *Enterococcus hirae* ATCC 10541 by at least a 5 lg reduction.

Conclusion:
The product **F173** is capable of reducing the number of viable bacterial cells of the relevant organisms on non-porous surfaces under defined conditions to the declared values and, consequently, may be called bactericidal.

1.7.2019, Hodonín

TESTING LABORATORY CERTIFICATE ACCREDITATION INSTITUTE
-2-
Chemila, spol. s.r.o.
Za Dráhou 4306/3
695 01 Hodonín
č. 1273

.....

Ing. Barbora Stoklásková, Leader of Study