



EVS-EN 13697:2015+ A1:2019
OÜ BALTACHEMI
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Quantitative non-porous surface test for the evaluation of bactericidal activity

TEST REPORT no 509

1. General information and material

Client:

OY FINNSCO
Reg. 2387841-4
Peltosaarenkatu 19 FI-11130 Riihimäki, Finland

2. Identification of sample

Name of the product:

PRO-10® PINTADESI

Batch number:

23.04.2020

Microbiologist
Ljudmila Shljapnikova
Ph.D.
Head of the Laboratory

Manufacturer: OY FINNSCO
Date of delivery: 2020/05/05
Storage conditions: room temperature and darkness
Apperance of the product: clear colorless liquid
Recommended diluent: product is ready for use
Active substance: Ethanol 73,5 %

3. Test conditions

Test period: 2020/05/06 – 2020/05/11
Date of tests: 2020/05/06
Product test concentrations: 100 %
Exposure time: 30 sec, 60 sec
Test temperature: 19,5 °C ± 0,5°C
Interfering substance: clean conditions (0,3 g/l bovine albumine)
Neutralizer: Polysorbate 80, 30 g/l; Lecithin, 3 g/l; Saponin, 30 g/l
Test organisms: Escherichia coli ATCC 10536, Staphylococcus aureus ATCC 6538, Enterococcus hirae ATCC 10541, Pseudomonas aeruginosa ATCC 15442, Candida albicans ATCC 10231, Aspergillus brasiliensis ATCC 16404
Incubation temperature: for bacteria 36,5 °C ± 0,5°C; for fungi 29,5 °C ± 0,5°C

4. Method**5. Results****6. Conclusion**

In accordance with EN 13697:2015+A1:2019 product PRO-10® PINTADESI, batch number 23.04.2020 at concentration 100 % possesses bactericidal activity on non-porous surfaces in 30 s. at 20 °C under clean conditions (0,3 g/l bovine albumin) for referenced strains Escherichia coli ATCC 10536, Staphylococcus aureus ATCC 6538, Pseudomonas aeruginosa ATCC 15442, Enterococcus hirae ATCC 10541(R > 4 lg), and product PRO-10® PINTADESI, batch number 23.04.2020 possesses yeasticidal activity in 30 s. for Candida albicans ATCC 10231 (R >3) and product PRO-10® PINTADESI, batch number 23.04.2020 possesses fungicidal activity in 60 sec. for reference strain Aspergillus brasiliensis ATCC 16404 (R>3).

Total 10 pages
Annex on 7 pages

2020/05/11

Annex 1

Escherichia coli

Validation test			
Test organism	Dilution range	NC Neutralization control	NT Neutralization test
Escherichia coli ATCC 10536	-4 -5 lg	119/132 12/16 126.82 x 10 ⁵ 7,10	112/123 17/13 1120.45 x 10 ⁵ 7,08

Test

Test organism	Bacterial test suspension N	Water control		Test results	
		Dilution range	Nc	Dilution range	Concentration 100 %
					Contact times
					30 sec.
Escherichia coli ATCC 10536	-6 >200/ >200 -7 27/15 0,53 x 10 ⁷ N 6,72	-4	125/138	1	0/0
		-5	10/19	-1	0/0
		lg	132,72 x 10 ⁵ 7,12	-2	0/0
				Nd Nst R	<0,1 0 >7,02

Annex 2

Staphylococcus aureus

Validation test			
Test organism	Dilution range	NC Neutralization control	NT Neutralization test
Staphylococcus aureus ATCC 6538	-4 -5 lg	>100/>100 13/17 15 x 10 ⁶ 7,18	>100/>100 15/14 14,5 x 10 ⁶ 7,16

Test

Test organism	Bacterial test suspension N	Water control		Test results	
		Dilution range	Nc	Dilution range	Concentration 100 %
					Contact-time
					30 sec.
Staphylococcus aureus ATCC 6538	-6 >300/>300	-4	>100/>100	1	0/0
	-7 41/56	-5	12/16	-1	0/0
	1,21 x 10 ⁷	lg	1,4 x 10 ⁷	-2	0/0
	N 7,08		7,15	Nd Nst R	<0,1 0 >7,05

Annex 3

Pseudomonas aeruginosa

Validation test			
Test organism	Dilution range	NC Neutralization control	NT Neutralization test
Pseudomonas aeruginosa ATCC 15442	-4 -5 lg	>100/>100 18/15 16,5 x 10 ⁶ 7,22	>100/>100 11/14 12,5 x 10 ⁶ 7,1

Test

Test organism	Bacterial test suspension N	Water control		Test results	
		Dilution range	Nc	Dilution range	Concentration 100 %
					Contact-time
					30 sec.
Pseudomonas aeruginosa ATCC 15442	-6 >300/>300	-4	>100/>100	1	0/0
	-7 29/40	-5	10/17	-1	0/0
	8.63 x 10 ⁶	lg	3,5 x 10 ⁶	-2	0/0
	Lg 6.93		7,13	Nd Nst R	<0,1 0 >7,03

Annex 4

Enterococcus hirae

Validation test			
Test organism	Dilution range	NC Neutralization control	NT Neutralization test
Enterococcus hirae ATCC 10541	-4 -5 lg	>100/>100 16/20 18 x 10 ⁶ 7,26	>100/>100 12/17 14,5 x 10 ⁶ 7,16

Test

Test organism	Bacterial test suspension N		Water control		Test results	
			Dilution range	Nc	Dilution range	Concentration 100 %
						Contact-times
						30 sec.
Enterococcus hirae ATCC 10541	-6	200/218	-4	>100/>100	1	0/0
	-7	23/15	-5	19/13	-1	0/0
				1,6 x 10 7	-2	0/0
					Nd	<0,1
		5,18 x 10 6	lg	lg 7,2	Nst	0
	N 6,71			R	>7,1	

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Annex 5

Candida albicans

Validation test			
Test organism	Dilution range	NC Neutralization control	NT Neutralization test
Candida albicans ATCC 10231	-3 -4 lg	18/29 2/3 23,5 x 10 ⁴ 5,37	21/26 4/1 23,63 x 10 ⁴ 5,37

Test						
Test organism	Bacterial test suspension N		Water control		Test results	
			Dilution range	Nc	Dilution range	Concentration 100 %
						Contact-times
						30 sec.
Candida albicans ATCC 10231	-5	>100/>100	-3	28/20	1	0/0
	-6	18/22	-4	4/3	-1	0/0
				24 x 10 4	-2	0/0
		0,5 x 10 6	lg	lg 5,37	Nd	<0,1
		lg 5,7			Nst	0
				R	>5,27	

Annex 6

Aspergillus brasiliensis

Validation test			
Test organism	Dilution range	NC Neutralization control	NT Neutralization test
<i>Aspergillus brasiliensis</i> ATCC 16404	-3	30/23	20/27
	-4	2/5	2/1
		27,27 x 10 ⁴	22,72 x 10 ⁴
	lg	5,44	5,37

Test						
Test organism	Bacterial test suspension N		Water control		Test results	
			Dilution range	Nc	Dilution range	Concentration 100 %
						Contact-times
						60 sec.
Aspergillus brasiliensis ATCC 16404	-5	168/152	-3	26/29	1	0/0
	-6	13/18	-4	3/2	-1	0/0
				27,27 x 10 4	-2	0/0
		8,75x 10 5	lg	Lg 5,44	Nd	<0,1
		N 5,94			Nst	0
					R	>5,34

$$N = \lg 10 \left[\frac{x + x^*}{2} \times \frac{0,025}{d} \right]$$

$$N_c \text{ or } N_d = \log 10 \left[\frac{a + a^*}{2} \times \frac{10}{d} \right]$$

$$N_C \text{ or } N_T = \log 10 \left[\frac{y + y^*}{2} \times \frac{10}{d} \right]$$

$$R = N_c - N_d$$

- N – is the number of colonies for 1 ml test suspension
x , x* – is the is number of colonies for 1 ml sample
a, y – is the number of colonies for 1 ml sample
d – is the dilution factor for the dilution taken into account
Nc – is the log 10 number of cfu per test surface of the water control
Nd – is the log 10 number of cfu per test surface of the disinfectant test
Nts – is the number of cfu remaining on the test surface
NC – is the log 10 number of cfu per test surface of the neutralization control
NT– is the log 10 number of cfu per test surface of the neutralization test
cfu – colony forming units
R – is the microbicidal effect