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L 1554

TEST REPORT N. 50/DP/21_B

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)

Customer:
RETECH, s.r.o.
Vackova 1541/4
155 00 Praha 5 - Stodůlky

The order number: not provided
Date of order: 21. 10. 2021
Reference number: ZU/30184/2021

Identification of disinfectant- sample:

Name of the product [i]:	**ULTRASONIC CLEANING SOLUTION**
Batch number [i]:	not provided
Expiry date [i]:	24 months from manufacturing date
Manufacturing date [i]:	not provided
Storage condition [i]:	5–30 °C
Product diluent recommended by the manufacturer [i]:	ready to use
Active substance(s) and concentration(s) [i]:	ethanol: 0,558g Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides: 0,5 g Didecyl(dimethyl)ammonium-chloride: 0,125 g
Other substance (s) [i]:	
Purpose of product [i]:	PT 2 - surface disinfection outside medical area and professional use
Appearance of the product:	clear colourless liquid
Date of delivery:	21. 10. 2021
Date(s) of tests (period of analysis):	7. 12. - 9. 12. 2021

[i] - data provided by the customer

Results (for more details see the annexes to the protocol):

The disinfectant **ULTRASONIC CLEANING SOLUTION** intended for surface disinfection was tested according to ČSN EN 1276 on test organisms *Staphylococcus aureus, Pseudomonas aeruginosa, Escherichia coli* a *Enterococcus hirae*.

The required concentration was 100 %, at contact time 45 minutes, at temperature 20 °C±1 °C, under dirty conditions.

The reduction for *Staphylococcus aureus* CCM 4516 was at a concentration of 100 % >5.33 lg, at 50 % > 5.33 lg and at 0.5 % <3.96 lg.

The reduction for *Pseudomonas aeruginosa* CCM 7930 was at a concentration of 100 % >5.36 lg, at 50 % >5.36 lg and at 0.5% <3.99 lg.

The reduction for *Escherichia coli* CCM 7929 was at a concentration of 100 % >5.36 lg, at 50 % >5.36 lg and at 0.5% <3.99 lg.

The reduction for *Enterococcus hirae* CCM 4533 was at a concentration of 100 % >5.32 lg at 50 % >5.32 and at 0.5 % <3.95 lg.
The average reduction (R) in logarithmic orders with the test organism *Enterococcus hirae* CCM 4533 was at a concentration of 100 % (V/V) R> 5.33 ± 0.007 lg *.

All controls and validations were within basic limits. At least one concentration of the product demonstrated a reduction of less than 5 lg.

Conclusion:

The product **ULTRASONIC CLEANING SOLUTION** demonstrated bactericidal activity according to the standard ČSN EN 1276 under dirty conditions (bovine albumin 3.0 g/l) and a contact time of 45 minutes at a concentration of 100 and 50 %.

The average reduction (R) in logarithmic orders with the test organism *Enterococcus hirae* CCM 4533 was at a concentration of 100 % (V/V) R> 5.33 ± 0.007 lg *.

Staphylococcus aureus, Escherichia coli and *Pseudomonas aeruginosa* were tested only once and demonstrated a reduction of more than 5 lg.

* standard deviation of reproducibility

In Ostrava: 22. 12. 2021

Authorized by: MUDr. Linda Stryjová

Annex to the protocol n. 1: 50/DP/21_B

According to procedure SOP 3033 – ČSN EN 1276 - 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)

Name of the product [i]:	**ULTRASONIC CLEANING SOLUTION**
Storage condition [i]:	5–30 °C
Diluent:	water
Number of inoculated plates:	2 x 1 ml
Test method:	Neutralization- dilution method
Neutralizer:	Polysorbate 80 30 g/l + lecithin 3 g/l + sodium thiosulphate 15 g/l
Testing concentration(s) [i]:	100 %
Other testing concentration:	50 %, 0,5 %
Contact times [i]:	45 minutes
Stability and appearance of the product during tests:	clear colourless liquid
Testing temperature [i]:	20 ± 2 °C
Interfering substance(s) [i]:	Bovine albumin 3 g/l
Test organism:	***Staphylococcus aureus* CCM 4516**
Incubation temperature and time:	36 ± 1 °C, 48 h
Date(s) of tests (period of analysis):	7. 12. 2021

[i] - data provided by the customer

Processed by: Mgr. Kateřina Podjuklová
Checked by: MUDr. Linda Stryjová Signature:

Preparation of bacterial test suspension

Dilution of primary suspension	10^0	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}
Number of colonies per plate 1	>330	>330	>330	>330	>330	>330	299	29
Number of colonies per plate 2	>330	>330	>330	>330	>330	>330	311	31

Test suspension

Test suspension N	Dilution	Number of colonies per plate		C (sum of values Vc) 670 Weighted mean $\bar{x}_{wm}$= ---------- = ---------- (n1 + 0,1 n2)x10^{-6} (2+0,2)x10^{-6}
		Vc1	Vc2	$\bar{x}_{wm}$= sum of values (Vc) 670 : 2,2 x 10^6 = 3,04 x 10^8
	10^{-6}	299	311	lg N = 8.48
	10^{-7}	29	31	Je 8,17 ≤ lg N ≤ 8,70 ? yes - no
Test suspension No	N_o = N/10; lg N_o = 7.48			Je 7,17 ≤ lg N ≤ 7,70 ? yes - no

Validation and controls:

Validation suspension Nvo (Nv)			**Experimental conditions control (A)**			**Neutralizer toxicity control (B)**			**Dilution- neutralization control (C):**		
Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2
	89	98		89	94		95	93		74	65
Arithmetic mean Vc1+Vc2: $\bar{x}$ = 93,5			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 91,5			Arithmetic mean Vc1+Vc2: $\bar{x}$ =94			Arithmetic mean Vc1+Vc2: $\bar{x}$ =69,5		
Is 30 ≤ $\bar{x}$ of Nvo ≤ 160 ? yes - no			Is $\bar{x}$ of A ≥ 0,5 x $\bar{x}$ of Nvo ? yes - no			Is $\bar{x}$ of B ≥ 0,5 x $\bar{x}$ of NvB ? yes - no			Is $\bar{x}$ of C ≥ 0,5 x $\bar{x}$ of Nvo ? yes - no		

Test

Product concentrations (%)	Dilution	Number of colonies per plate		Vc1	Vc2	Na = mean $\bar{x}$ or weighted mean $\bar{x}_{wm}$ x 10	lg Na = lg ($\bar{x}$ or $\bar{x}_{wm}$) x 10	lg R = lg N_0 - lgNa lg No = 7,48	Contact time (min)
100	10^0	0	0	<14	<14	<140	<2,15	>5,33	45
50	10^0	0	0	<14	<14	<140	<2,15	>5,33	45
0,5	10^0	>330	>330	>330	>330	>3 300	>3,52	<3,96	45

Explanations:

V_c = number of cells on 1 ml (one or more plates), $\bar{x}$= mean V_{c1} a V_{c2} (1. + 2. duplicate determination);
N_a =number of viable cells on 1 ml at the end of the contact time
N = test suspension; N_o = N/10 =number of cells on 1 ml in test suspension at the beginning of contact time (time=0);
N_{vo} = N_v/10 = number of cells on 1 ml in validation suspension at the beginning of the contact time(time= 0);
N_{vb}= number of cells on 1 ml in validation suspension for the control neutralizer (B);
$\bar{x}_{wm}$ = weighted mean $\bar{x}$; R = reduction (lg R = lg N_0 - lg Na).

Annex to the protocol n. 2: 50/DP/21_B

According to procedure SOP 3033 – ČSN EN 1276 - 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)

Name of the product [i]:	**ULTRASONIC CLEANING SOLUTION**
Storage condition [i]:	5–30 °C
Diluent:	water
Number of inoculated plates:	2 x 1 ml
Test method:	Neutralization- dilution method
Neutralizer:	Polysorbate 80 30 g/l + lecithin 3 g/l + sodium thiosulphate 15 g/l
Testing concentration(s) [i]:	100 %
Other testing concentration:	50 %, 0,5 %
Contact times [i]:	45 minutes
Stability and appearance of the product during tests:	clear colourless liquid
Testing temperature [i]:	20 ± 2 °C
Interfering substance(s) [i]:	Bovine albumin 3 g/l
Test organism:	***Pseudomonas aerugonisa* CCM 7930**
Incubation temperature and time:	36 ± 1 °C, 48 h
Date(s) of tests (period of analysis):	7. 12. 2021

[i] - data provided by the customer

Processed by: Mgr. Kateřina Podjuklová
Checked by: MUDr. Linda Stryjová Signature:

Preparation of bacterial test suspension

Dilution of primary suspension	10^0	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}
Number of colonies per plate 1	>330	>330	>330	>330	>330	>330	312	42
Number of colonies per plate 2	>330	>330	>330	>330	>330	>330	>330	32

Test suspension

Test suspension N	Dilution	Number of colonies per plate		C (sum of values Vc) 716 Weighted mean $\bar{x}_{wm}$= ---------- = ---------- (n1 + 0,1 n2)x10^{-6} (2+0,2)x10^{-6}
		Vc1	Vc2	$\bar{x}_{wm}$= sum of values (Vc) 716 : 2,2 x 10^6 = 3,25 x 10^8
	10^{-6}	312	>330	lg N = 8.51
	10^{-7}	42	32	Je 8,17 ≤ lg N ≤ 8,70 ? <u>yes</u> - no
Test suspension No	N_o = N/10; lg N_o = 7.51			Je 7,17 ≤ lg N ≤ 7,70 ? <u>yes</u> - no

Validation and controls:

Validation suspension Nvo (Nv)			**Experimental conditions control (A)**			**Neutralizer toxicity control (B)**			**Dilution- neutralization control (C):**		
Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2
	124	139		112	108		121	109		89	94
Arithmetic mean Vc1+Vc2: $\bar{x}$ = 131,5			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 110			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 115			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 91,5		
Is 30 ≤ $\bar{x}$ of Nvo ≤ 160 ? yes - no			Is $\bar{x}$ of A ≥ 0,5 x $\bar{x}$ of Nvo ? yes - no			Is $\bar{x}$ of B ≥ 0,5 x $\bar{x}$ of NvB ? yes - no			Is $\bar{x}$ of C ≥ 0,5 x $\bar{x}$ of Nvo ? yes - no		

Test

Product concentrations (%)	Dilution	Number of colonies per plate		Vc1	Vc2	Na = mean $\bar{x}$ or weighted mean $\bar{x}_{wm}$ x 10	lg Na = lg ($\bar{x}$ or $\bar{x}_{wm}$) x 10	lg R = lg N_0 - lgNa lg No = 7,51	Contact time (min)
100	10^0	0	0	<14	<14	<140	<2,15	>5,36	45
50	10^0	0	0	<14	<14	<140	<2,15	>5,36	45
0,5	10^0	>330	>330	>330	>330	>3 300	>3,52	<3,99	45

Explanations:

V_c = number of cells on 1 ml (one or more plates), $\bar{x}$= mean V_{c1} a V_{c2} (1. + 2. duplicate determination);
N_a =number of viable cells on 1 ml at the end of the contact time
N = test suspension; N_o = N/10 =number of cells on 1 ml in test suspension at the beginning of contact time (time=0);
N_{vo} = Nv/10= number of cells on 1 ml in validation suspension at the beginning of the contact time(time= 0);
N_{vb}= number of cells on 1 ml in validation suspension for the control neutralizer (B);
$\bar{x}_{wm}$ = weighted mean $\bar{x}$; R = reduction (lg R = lg N_0 - lg Na).

Annex to the protocol n. 3: 50/DP/21_B

According to procedure SOP 3033 – ČSN EN 1276 - 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)

Name of the product [i]:	**ULTRASONIC CLEANING SOLUTION**
Storage condition [i]:	5–30 °C
Diluent:	water
Number of inoculated plates:	2 x 1 ml
Test method:	Neutralization- dilution method
Neutralizer:	Polysorbate 80 30 g/l + lecithin 3 g/l + sodium thiosulphate 15 g/l
Testing concentration(s) [i]:	100 %
Other testing concentration:	50 %, 0,5 %
Contact times [i]:	45 minutes
Stability and appearance of the product during tests:	clear colourless liquid
Testing temperature [i]:	20 ± 2 °C
Interfering substance(s) [i]:	Bovine albumin 3 g/l
Test organism:	***Escherichia coli* CCM 7929**
Incubation temperature and time:	36 ± 1 °C, 48 h
Date(s) of tests (period of analysis):	7. 12. 2021

[i] - data provided by the customer

Processed by: Mgr. Kateřina Podjuklová
Checked by: MUDr. Linda Stryjová Signature:

Preparation of bacterial test suspension

Dilution of primary suspension	10^0	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}
Number of colonies per plate 1	>330	>330	>330	>330	>330	>330	>330	22
Number of colonies per plate 2	>330	>330	>330	>330	>330	>330	>330	29

Test suspension

Test suspension N	Dilution	Number of colonies per plate		C (sum of values Vc) 711 Weighted mean $\bar{x}_{wm}$= ---------- = ---------- (n1 + 0,1 n2)x10^{-6} (2+0,2)x10^{-6}
		Vc1	Vc2	$\bar{x}_{wm}$= sum of values (Vc) 711 : 2,2 x 10^6 = 3,23 x 10^8
	10^{-6}	>330	>330	lg N = 8.51
	10^{-7}	22	29	Je 8,17 ≤ lg N ≤ 8,70 ? <u>yes</u> - no
Test suspension No	N_o = N/10; lg N_o = 7.51			Je 7,17 ≤ lg N ≤ 7,70 ? <u>yes</u> - no

Validation and controls:

Validation suspension Nvo (Nv)			**Experimental conditions control (A)**			**Neutralizer toxicity control (B)**			**Dilution- neutralization control (C):**		
Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2
	109	94		84	79		84	88		64	62
Arithmetic mean Vc1+Vc2: $\bar{x}$ = 101,5			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 81,5			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 86			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 63		
Is 30 ≤ $\bar{x}$ of Nvo ≤ 160 ? yes - no			Is $\bar{x}$ of A ≥ 0,5 x $\bar{x}$ of Nvo ? yes - no			Is $\bar{x}$ of B ≥ 0,5 x $\bar{x}$ of NvB ? yes - no			Is $\bar{x}$ of C ≥ 0,5 x $\bar{x}$ of Nvo ? yes - no		

Test

Product concentrations (%)	Dilution	Number of colonies per plate		Vc1	Vc2	Na = mean $\bar{x}$ or weighted mean $\bar{x}_{wm}$ x 10	lg Na = lg ($\bar{x}$ or $\bar{x}_{wm}$) x 10	lg R = lg N_0 - lgNa lg No = 7,51	Contact time (min)
100	10^0	0	0	<14	<14	<140	<2,15	>5,36	45
50	10^0	0	0	<14	<14	<140	<2,15	>5,36	45
0,5	10^0	>330	>330	>330	>330	>3 300	>3,52	<3,99	45

Explanations:

V_c = number of cells on 1 ml (one or more plates), $\bar{x}$= mean V_{c1} a V_{c2} (1. + 2. duplicate determination);
N_a =number of viable cells on 1 ml at the end of the contact time
N = test suspension; N_o = N/10 =number of cells on 1 ml in test suspension at the beginning of contact time (time=0);
N_{vo} = Nv/10= number of cells on 1 ml in validation suspension at the beginning of the contact time(time= 0);
N_{vb}= number of cells on 1 ml in validation suspension for the control neutralizer (B);
$\bar{x}_{wm}$ = weighted mean $\bar{x}$; R = reduction (lg R = lg N_0 - lg Na).

Annex to the protocol n. 4: 50/DP/21_B

According to procedure SOP 3033 – ČSN EN 1276 - 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)

Name of the product [i]:	**ULTRASONIC CLEANING SOLUTION**
Storage condition [i]:	5–30 °C
Diluent:	water
Number of inoculated plates:	2 x 1 ml
Test method:	Neutralization- dilution method
Neutralizer:	Polysorbate 80 30 g/l + lecithin 3 g/l + sodium thiosulphate 15 g/l
Testing concentration(s) [i]:	100 %
Other testing concentration:	50 %, 0,5 %
Contact times [i]:	45 minutes
Stability and appearance of the product during tests:	clear colourless liquid
Testing temperature [i]:	20 ± 2 °C
Interfering substance(s) [i]:	Bovine albumin 3 g/l
Test organism:	***Enterococcus hirae*** **CCM 4533**
Incubation temperature and time:	36 ± 1 °C, 48 h
Date(s) of tests (period of analysis):	7. 12. 2021

[i] - data provided by the customer

Processed by: Mgr. Kateřina Podjuklová
Checked by: MUDr. Linda Stryjová Signature:

Preparation of bacterial test suspension

Dilution of primary suspension	10^0	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}
Number of colonies per plate 1	>330	>330	>330	>330	>330	>330	294	29
Number of colonies per plate 2	>330	>330	>330	>330	>330	>330	293	31

Test suspension

Test suspension N	Dilution	Number of colonies per plate		C (sum of values Vc) 647 Weighted mean $\bar{x}_{wm}$= ---------- = ---------- (n1 + 0,1 n2)x10^{-6} (2+0,2)x10^{-6}
		Vc1	Vc2	$\bar{x}_{wm}$= sum of values (Vc) 647 : 2,2 x 10^6 = 2,94 x 10^8
	10^{-6}	294	293	lg N = 8.47
	10^{-7}	29	31	Je 8,17 ≤ lg N ≤ 8,70 ? yes - no
Test suspension No	N_o = N/10; lg N_o = 7.47			Je 7,17 ≤ lg N ≤ 7,70 ? yes - no

Validation and controls:

Validation suspension Nvo (Nv)			**Experimental conditions control (A)**			**Neutralizer toxicity control (B)**			**Dilution- neutralization control (C):**		
Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2	Number of colonies per plate	Vc1	Vc2
	104	111		94	81		84	85		64	71
Arithmetic mean Vc1+Vc2: $\bar{x}$ = 107,5			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 87,5			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 84,5			Arithmetic mean Vc1+Vc2: $\bar{x}$ = 67,5		
Is 30 ≤ $\bar{x}$ of Nvo ≤ 160 ? yes - no			Is $\bar{x}$ of A ≥ 0,5 x $\bar{x}$ of Nvo ? yes - no			Is $\bar{x}$ of B ≥ 0,5 x $\bar{x}$ of NvB ? yes - no			Is $\bar{x}$ of C ≥ 0,5 x $\bar{x}$ of Nvo ? yes - no		

Test

Product concentrations (%)	Dilution	Number of colonies per plate		Vc1	Vc2	Na = mean $\bar{x}$ or weighted mean $\bar{x}_{wm}$ x 10	lg Na = lg ($\bar{x}$ or $\bar{x}_{wm}$) x 10	lg R = lg N_0 - lgNa lg No = 7,47	Contact time (min)
100	10^0	0	0	<14	<14	<140	<2,15	>5,32	45
50	10^0	0	0	<14	<14	<140	<2,15	>5,32	45
0,5	10^0	>330	>330	>330	>330	>3 300	>3,52	<3,95	45

Explanations:

V_c = number of cells on 1 ml (one or more plates), $\bar{x}$= mean V_{c1} a V_{c2} (1. + 2. duplicate determination);
N_a =number of viable cells on 1 ml at the end of the contact time
N = test suspension; N_o = N/10 =number of cells on 1 ml in test suspension at the beginning of contact time (time=0);
N_{vo} = Nv/10= number of cells on 1 ml in validation suspension at the beginning of the contact time(time= 0);
N_{vb}= number of cells on 1 ml in validation suspension for the control neutralizer (B);
$\bar{x}_{wm}$ = weighted mean $\bar{x}$; R = reduction (lg R = lg N_0 - lg Na).

Annex to the protocol n. 5: 50/DP/21_B

According to procedure SOP 3033 – ČSN EN 1276 - 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)

Replicates for test organism *Enterococcus hirae*:
For each replicate, a different test bacterial suspension and a test dose of 100 % product were prepared.

Name of the product [i]:	**ULTRASONIC CLEANING SOLUTION**
Storage condition [i]:	5–30 °C
Diluent:	water
Number of inoculated plates:	2 x 1 ml
Test method:	Neutralization- dilution method
Neutralizer:	Polysorbate 80 30 g/l + lecithin 3 g/l + sodium thiosulphate 15 g/l
Testing concentrations [i]:	100 %
Other testing concentration:	
Contact times [i]:	45 minutes
Stability and appearance of the product during tests:	clear colourless liquid
Testing temperature [i]:	20 ± 2 °C
Interfering substance(s) [i]:	Bovine albumin 3 g/l
Test organism:	***Enterococcus hirae* CCM 4533**
Incubation temperature and time:	36 ± 1 °C, 48 h
Date(s) of tests (period of analysis):	8. 12. 2021

[i] - data provided by the customer

Processed by: Mgr. Kateřina Podjuklová
Checked by: MUDr. Linda Stryjová Signature:

Test suspension

N. of repetition	Dilution	Number of colonies per plate		N = $\bar{x}_{wm}$= sum of values (Vc) C : 2,2 x 10^6 No = N/10
		Vc1	Vc2	
1 (7. 12. 2021)	10^{-6}	294	293	N = 2,94 x 10^8 lg N = 8,47
	10^{-7}	29	31	No = 2,94 x 10^6 lg No = 7,47
2	10^{-6}	298	302	N = 2,97 x 10^8 lg N = 8,47
	10^{-7}	25	28	No = 2,97 x 10^6 lg No = 7,47
3	10^{-6}	300	311	N = 3,06 x 10^8 lg N = 8,49
	10^{-7}	29	33	No = 3,06 x 10^6 lg No = 7,49
4	10^{-6}	293	297	N = 2,93 x 10^8 lg N = 8,47
	10^{-7}	25	29	No = 2,93 x 10^6 lg No = 7,47
5	10^{-6}	320	312	N = 3,17 x 10^8 lg N = 8,50
	10^{-7}	31	35	No = 3,17 x 10^6 lg No = 7,50
6	10^{-6}	299	302	N = 3,01 x 10^8 lg N = 8,48
	10^{-7}	28	34	No = 3,01 x 10^6 lg No = 7,48

Test

N. of repetition (concentration 100 %)	Dilution	Number of colonies per plate		Vc1	Vc2	Na = mean $\bar{x}$ or weighted mean $\bar{x}_{wm}$ x 10	lg Na = lg ($\bar{x}$ or $\bar{x}_{wm}$) x 10	lg R = lg N_0 - lgNa	Contact time (min)
1 (7. 12. 2021)	10^0	0	0	<14	<14	<140	<2,15	>5,32	45
2	10^0	0	0	<14	<14	<140	<2,15	>5,32	45
3	10^0	0	0	<14	<14	<140	<2,15	>5,34	45
4	10^0	0	0	<14	<14	<140	<2,15	>5,32	45
5	10^0	0	0	<14	<14	<140	<2,15	>5,35	45
6	10^0	0	0	<14	<14	<140	<2,15	>5,33	45
Average reduction:								**>5.33 lg**	
Standard deviation:								**± 0.007 lg**	

End of the protocol