

05.01.2020
Page 1 of 10

Microbiology Study Report No.:39846.19

Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFSKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

Test Method:

The study was performed according to the sponsor's protocol.

Purpose

Studying the antimicrobial efficiency of pulsed ultraviolet radiation generated by the Yanex-2M unit against several multi-drug resistance microorganisms.

Test microorganisms:

1. *Klebsiella pneumonia* (ATCC 10031)
2. *Staphylococcus aureus* MRSA (ATCC 700699)
3. CRE *carbapenem-resistant enterobacteriaceae* (hospital strain)
4. *Acinetobacter baumannii* (ATCC BAA-747)
5. VRE *Vancomycin resistant enterococcus* (hospital strain)
6. *Clostridium difficile* (hospital strain produces toxin B)

Test media and solutions:

Tryptic Soy Agar (TSA)
TSA + Sheep Blood (TSBA)
Buffered Sodium Chloride-Peptone solution pH 7.0

Test procedure:

For bacteria 1-5: Six (6) Petri plates were inoculated with 0,01mL bacterial suspension containing about 10^8 - 10^9 CFU/ml (each test microorganism was tested separately). The plates were put into the incubator at 37°C for 50 minutes to dry. After drying 3 plates were treated by the sponsor for 4 minutes with Yanex-2M Mobile Pulsed xenon UV unit. The rest 3 plates were served as Positive Control (PC). Microorganisms were removed from each plate by rinsing with 10 mL Buffered Sodium Chloride-Peptone solution pH 7.0 and enumerated using pour plate method on TSA.

05.01.2020
Page 2 of 10

Microbiology Study Report No.:39846.19

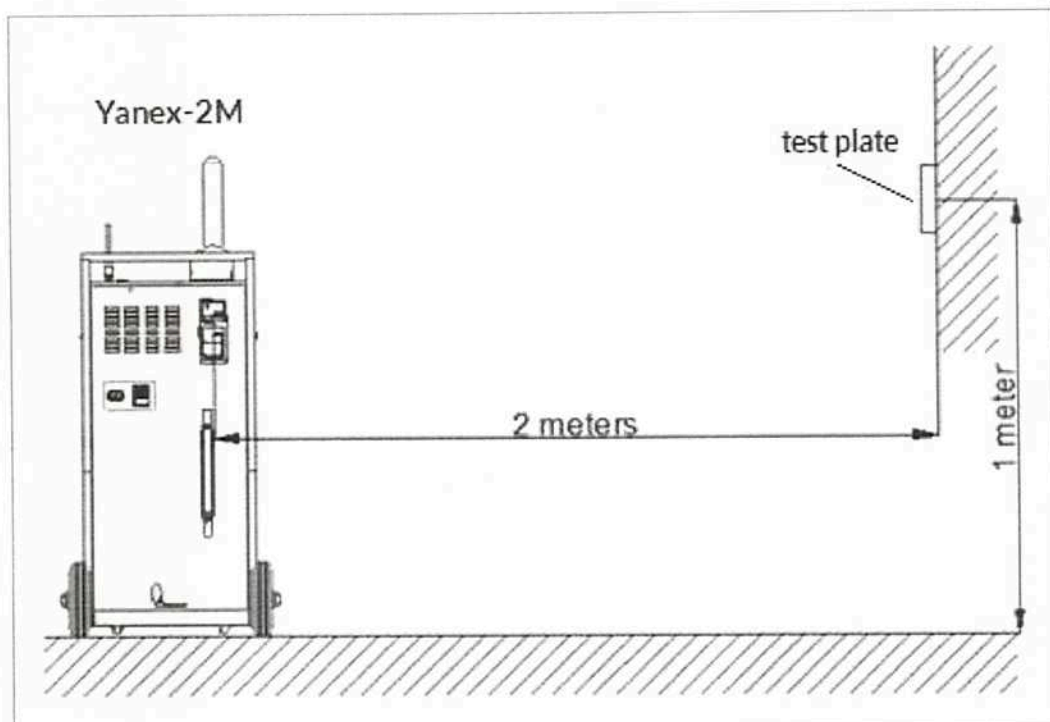
Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFSKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

For bacterium 6: Six (6) Petri plates were inoculated, dried and treated as above. Treatment time by UV: 4 and 7 minutes. Additional 3 plates were inoculated with suspension containing 500 CFU/0.01 ml, dried and treated by UV for 4 and 7 minutes. Microorganisms were removed from each plate by rinsing and enumerated using membrane filtration method. Membranes were placed onto TSBA plates and incubated in anaerobic conditions.

All plates were incubated at 35-37°C for 5 days.

The treatment of test plates is carried out from a distance of 2 meters according to the scheme below:



Microbiology Study Report No.:39846.19

Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

Results

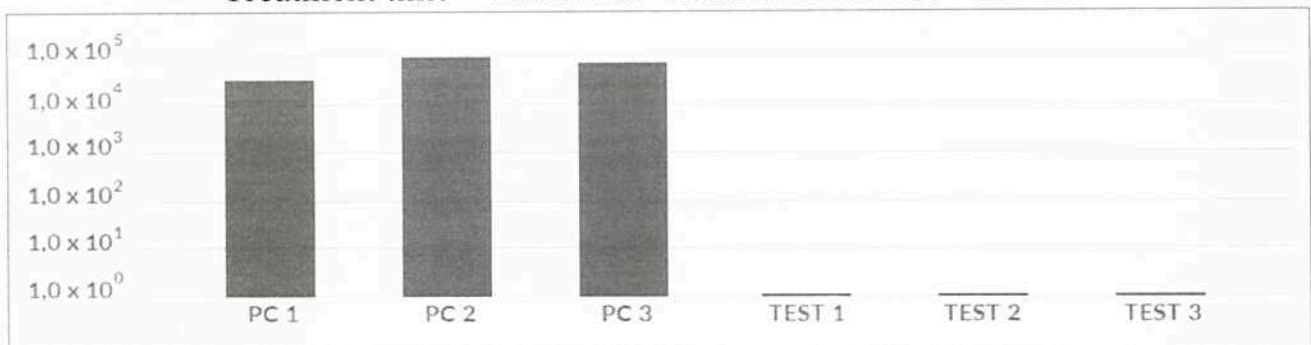
***Klebsiella pneumonia* (ATCC 10031)**

Treatment time - 4 minutes / Treatment distance - 200 cm

Plate ID	CFU/sample	Average CFU/sample	Log	Log reduction
Test 1	<1	<1	0	4.82
Test 2	<1			
Test 3	<1			
PC-1	3.40 x 10 ⁴	6.63 x 10 ⁴	4.82	
PC-2	9.30 x 10 ⁴			
PC-3	7.20 x 10 ⁴			
Inoculum size	8.50 x 10 ⁸ CFU/ml			

***Klebsiella pneumonia* (ATCC 10031)**

Treatment time - 4 minutes / Treatment distance - 200 cm



05.01.2020
Page 4 of 10

Microbiology Study Report No.:39846.19

Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFSKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

Results

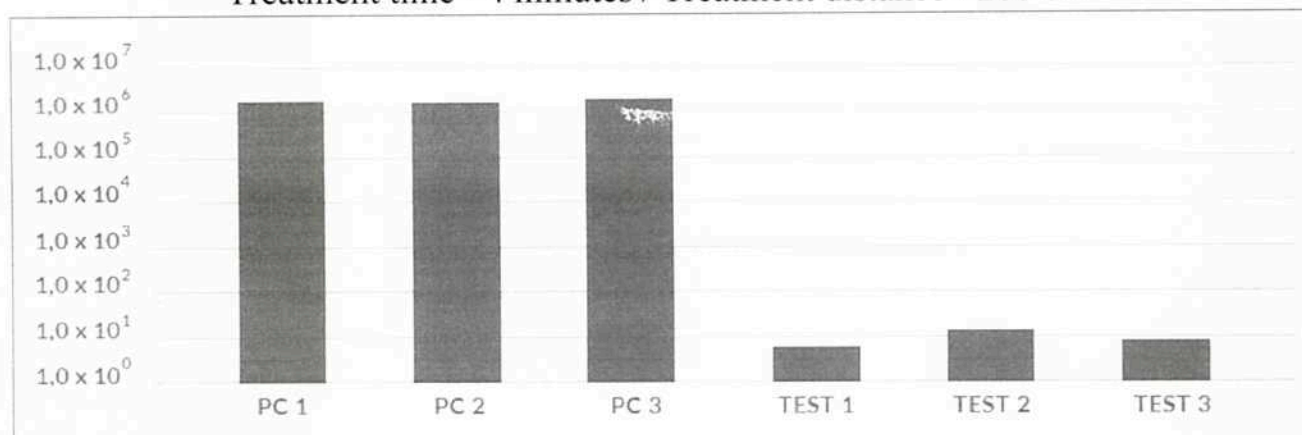
***Staphylococcus aureus* MRSA (ATCC 700699)**

Treatment time - 4 minutes / Treatment distance - 200 cm

Plate ID	CFU/sample	Average CFU/sample	Log	Log reduction
Test 1	6	10	1	5.26
Test 2	14			
Test 3	8			
PC-1	1.86×10^6	1.80×10^6	6.26	
PC-2	1.64×10^6			
PC-3	1.90×10^6			
Inoculum size	4.05×10^8 CFU/ml			

***Staphylococcus aureus* MRSA (ATCC 700699)**

Treatment time - 4 minutes / Treatment distance - 200 cm



05.01.2020
Page 5 of 10

Microbiology Study Report No.:39846.19

Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFSKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

Results

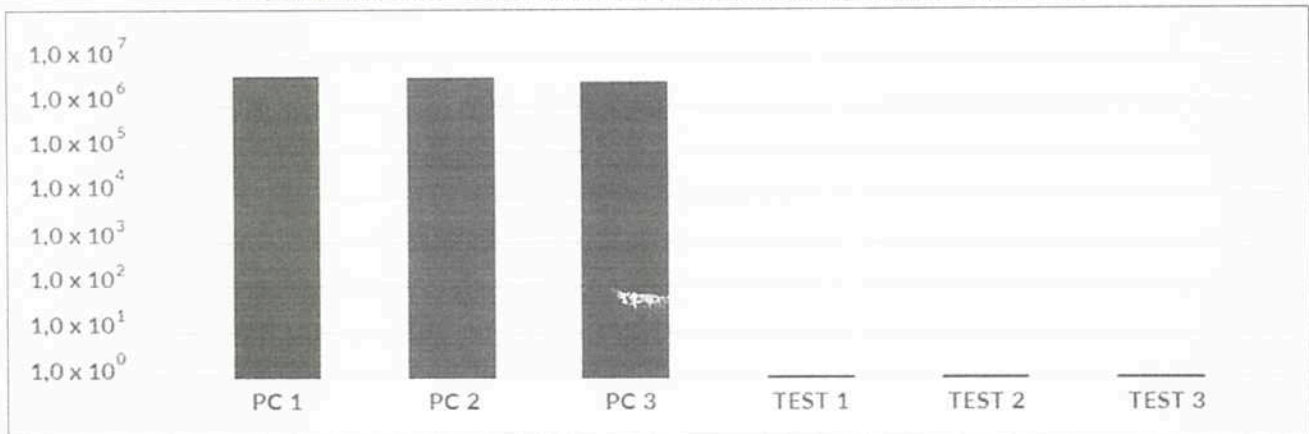
***CRE carbapenem-resistant enterobacteriaceae* (hospital strain)**

Treatment time - 4 minutes / Treatment distance - 200 cm

Plate ID	CFU/sample	Average CFU/sample	Log	Log reduction
Test 1	<1	<1	0	6.64
Test 2	<1			
Test 3	<1			
PC-1	4.80 x 10 ⁶	4.33 x 10 ⁶	6.64	
PC-2	4.60 x 10 ⁶			
PC-3	3.60 x 10 ⁶			
Inoculum size	1.26 x 10 ⁹ CFU/ml			

***CRE carbapenem-resistant enterobacteriaceae* (hospital strain)**

Treatment time - 4 minutes / Treatment distance - 200 cm



05.01.2020
Page 6 of 10

Microbiology Study Report No.:39846.19

Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFSKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

Results

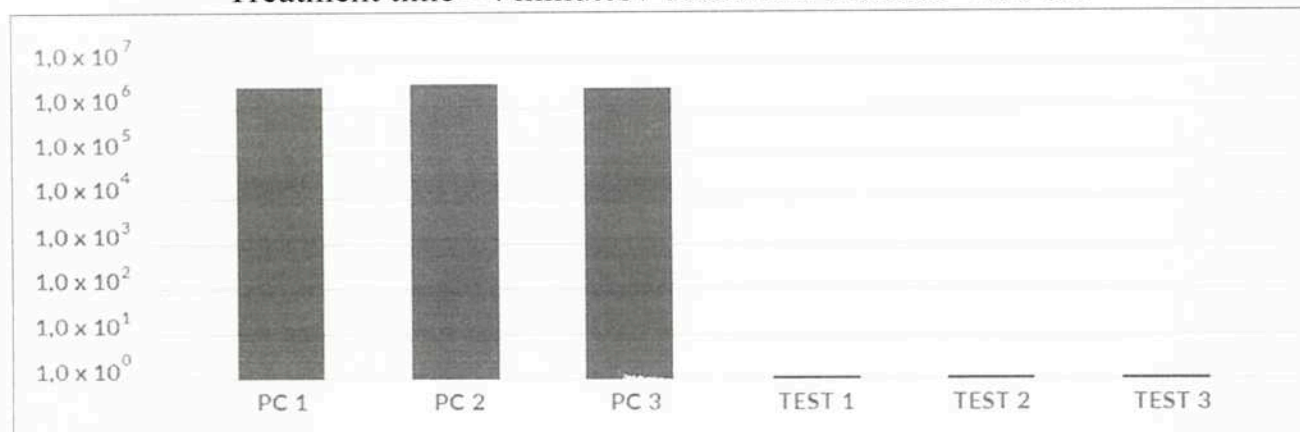
***Acinetobacter baumannii* (ATCC BAA-747)**

Treatment time - 4 minutes / Treatment distance - 200 cm

Plate ID	CFU/sample	Average CFU/sample	Log	Log reduction
Test 1	<1	<1	0	6.51
Test 2	<1			
Test 3	<1			
PC-1	3.18 x 10 ⁶	3.23 x 10 ⁶	6.51	
PC-2	3.63 x 10 ⁶			
PC-3	2.89 x 10 ⁶			
Inoculum size	1.06 x 10 ⁹ CFU/ml			

***Acinetobacter baumannii* (ATCC BAA-747)**

Treatment time - 4 minutes / Treatment distance - 200 cm



Microbiology Study Report No.:39846.19

Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFSKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

Results

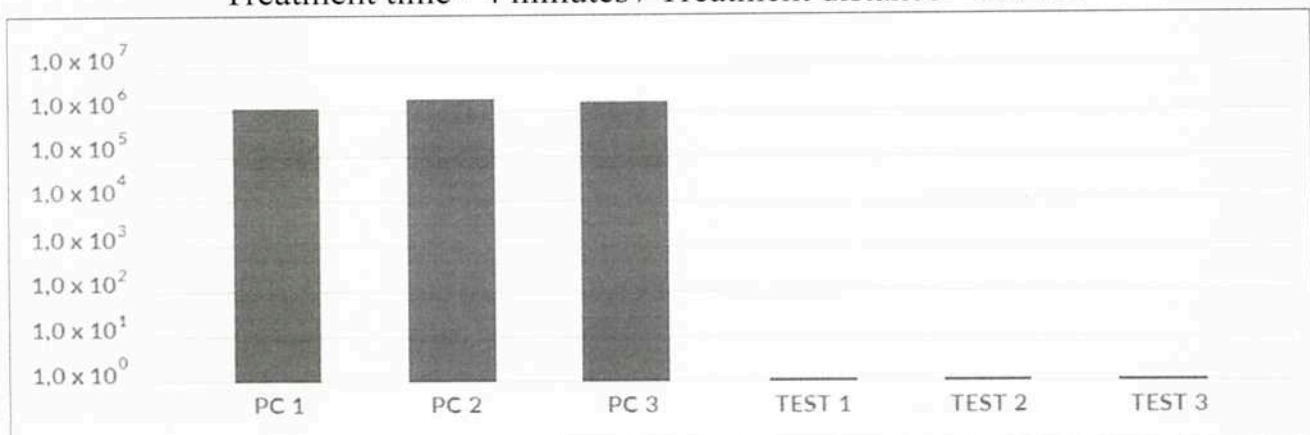
VRE *Vancomycin resistant enterococcus* (hospital strain)

Treatment time - 4 minutes / Treatment distance - 200 cm

Plate ID	CFU/sample	Average CFU/sample	Log	Log reduction
Test 1	<1	<1	0	6.21
Test 2	<1			
Test 3	<1			
PC-1	1.24 x 10 ⁶	1.63 x 10 ⁶	6.21	
PC-2	1.93 x 10 ⁶			
PC-3	1.71 x 10 ⁶			
Inoculum size	9.30 x 10 ⁸ CFU/ml			

VRE *Vancomycin resistant enterococcus* (hospital strain)

Treatment time - 4 minutes / Treatment distance - 200 cm



05.01.2020
Page 8 of 10

Microbiology Study Report No.:39846.19

Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFISKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

Results

***Clostridium difficile* (hospital strain produces toxin B)**

Treatment time - 4 minutes / Treatment distance - 200 cm

Plate ID	CFU/sample	Average CFU/sample	Log	Log reduction
Test 1	15	8	0.90	3.16
Test 2	3			
Test 3	5			
PC-1	8.80×10^3	1.14×10^4	4.06	
PC-2	1.05×10^4			
PC-3	1.48×10^4			
Inoculum size	3.10×10^8 CFU/ml			

***Clostridium difficile* (hospital strain produces toxin B)**

Treatment time - 7 minutes / Treatment distance - 200 cm

Plate ID	CFU/sample	Average CFU/sample	Log	Log reduction
Test 1	0	<1	0	4.06
Test 2	1			
Test 3	1			
PC-1	8.80×10^3	1.14×10^4	4.06	
PC-2	1.05×10^4			
PC-3	1.48×10^4			
Inoculum size	3.10×10^8 CFU/ml			

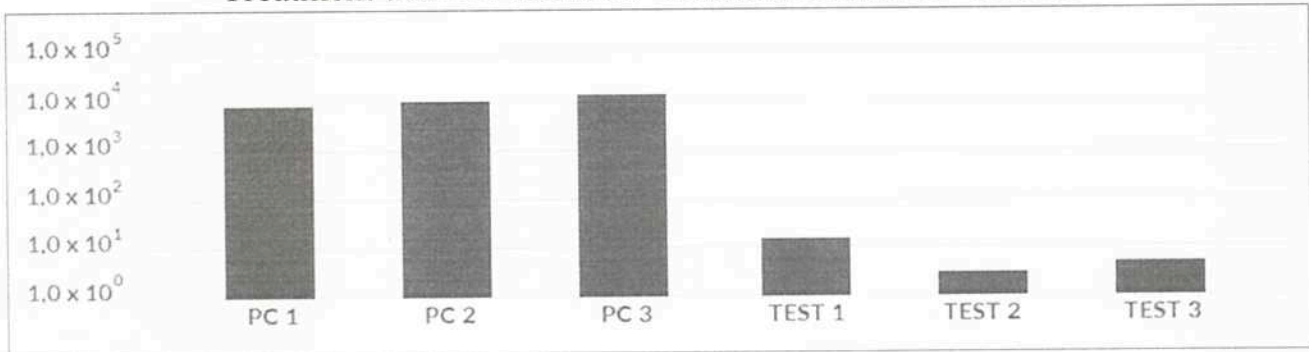
Microbiology Study Report No.:39846.19

Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

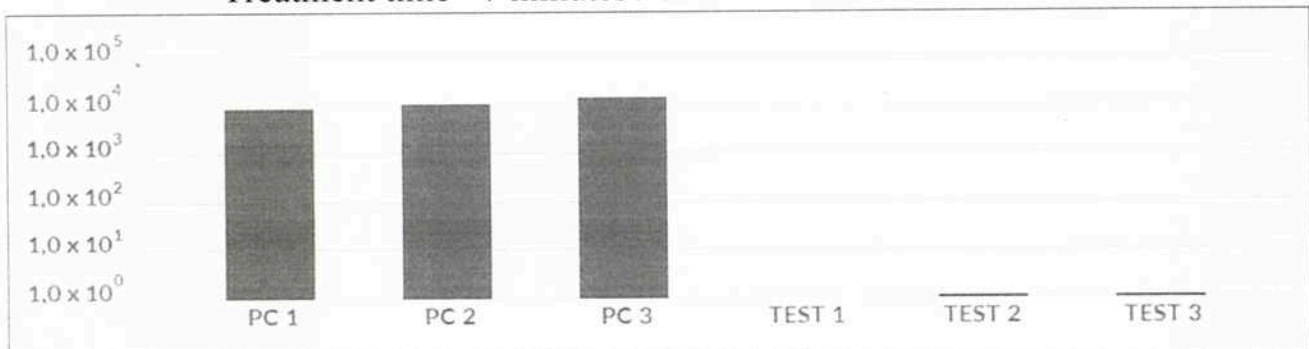
Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFSKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

Results

***Clostridium difficile* (hospital strain produces toxin B)**
Treatment time - 4 minutes / Treatment distance - 200 cm



***Clostridium difficile* (hospital strain produces toxin B)**
Treatment time - 7 minutes / Treatment distance - 200 cm



05.01.2020
Page 10 of 10

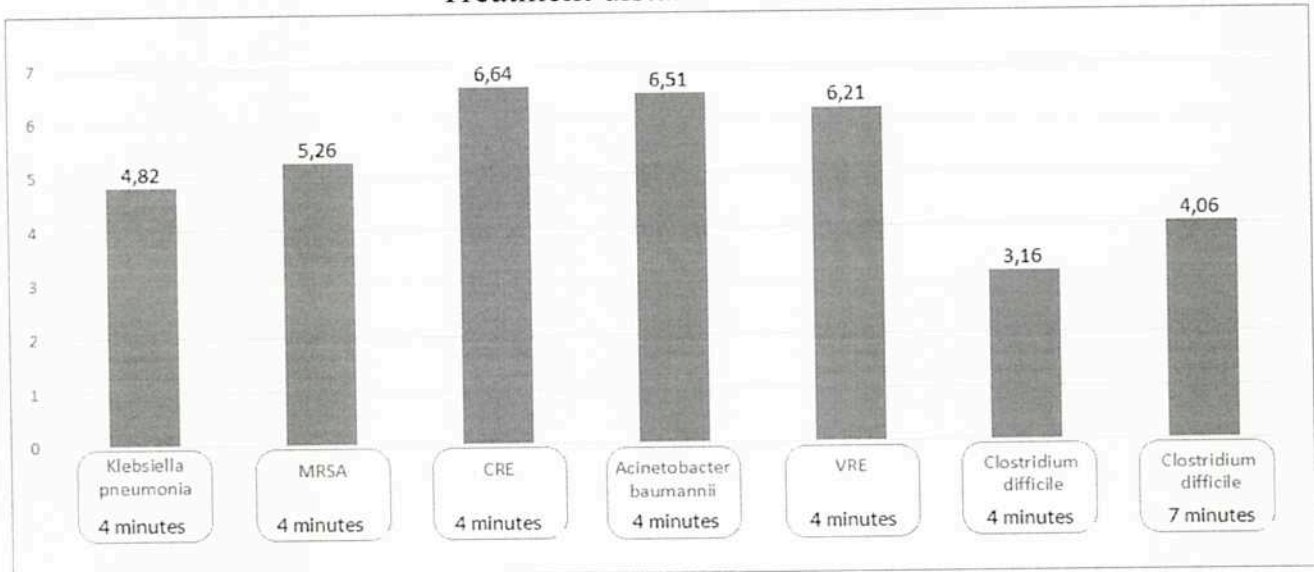
Microbiology Study Report No.:39846.19

Antimicrobial Efficiency of Yanex-2M Mobile Pulsed xenon UV unit

Customer	Indexinnovation Ltd. registration number: 515557163 Bazel 8, Tel-Aviv, 6238507, Israel Attn: Mr. Isaac YANOFSKY
Email	issy@indexinnovation.co.il
Date sample tested	November 7, 2019
Aminolab No.	101369.19-M
Sample Description	Yanex-2M Mobile Pulsed xenon UV unit

Summary results

Total Log reduction for each microorganism
Treatment distance - 200 cm



Examined by Naira Gortsunian. Ph.D: _____

hg

Confirmed by Helena Ashkenazi. Lab.Manager: _____

SAZ



This certificate is valid only when it is presented in its complete format, and it is not permitted to extract part for inclusion in any other document. The data presented, accurately expresses the results for the sample received only. It is not permitted to use Aminolab LTDs' name or its reputation in respect to the above - specified results without.

***End of certificate of analysis ***