



Central Laboratory of the Intitute (SÚJCHBO, v.v.i.)

TESTING REPORT NO. 1/20/LBMO - Brno

Assessment of Decontamination Effect of Filtration Material						
Order No.	1/20					
Order accepted on:	10 June, 2020					
Ordering Party						
Name/Legal/Private Person:	RESPILON Group s.r.o.					
Registered office:	Jaselská 14, 602 00 Brno,					
Testing done at:	Laboratory of Biological Monitoring and Protection in Brno, National Institute for NBC Protection					
Proxy:	-					
Party Accepting the Order						
Testing done at:	Laboratory of Biological Monitoring and Protection in Brno, National Institute for NBC Protection					
Testing done on:	28 July, 2020					
Tester:	Mgr. Kateřina Rosenbergová, PhD.					
Used methods:						
Testing report issued on:	23 September, 2020					
Issuer:	Mgr. Oldřich Kubíček, CSc.					
Testing license issued by the State Office for Nuclear Safety – Prague (SÚJB)						
Identification No.						
License expires on:						
Copy No.	1	Distribution:	Copy No.1	RESPILON Group s.r.o.	Identification No.	SUJCHBO/2494 /B-1.2.2/20/KU
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			Copy No. 3	Laboratory of Biological Monitoring and Protection (LBMO)		
			Copy No. 4			



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Subject of Testing:

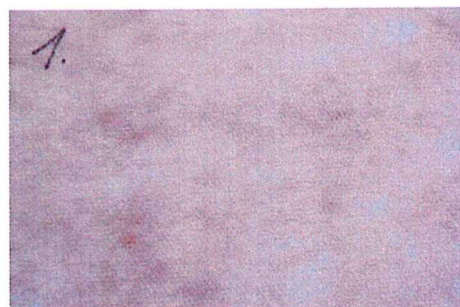
Bactericidal and viricidal effect of tested material

Testing procedure – Description

Internal procedure of LBMO – No.: Cultivation assessment of microbicidal effect of protective material B-MIKR-01.

Nanomaterial (material with active copper layer):

S.No. 1 Virus and bacteria deactivating layer – Respilon VKB01



Bacterial cultures:

Staphylococcus aureus (strain CCM 299)
Streptococcus agalactiae (strain CCM 6187)
Escherichia coli (strain CCM 3954)
Pseudomonas aeruginosa (strain CCM 1960)

strains from **the Czech Collection of Microorganisms at Masaryk University Brno – Faculty of Science**

Virus culture:

influenza virus (A/sw/Brno/12) isolate from **the Department of Infectious Diseases and Microbiology at Faculty of Veterinary Medicine – Brno**

Systematic procedure:

The material was cut into 1x1 cm squares. Bacterial or viral culture respectively was applied on one square and covered with a second square of the material. The incubation of the samples was performed at room temperature for 1 min, 5 min, 30 min, and 180 min. The cultures were then eluted into distilled water.

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Bacterial cultures were then plated on blood agar (BA) plates and incubated for 24 hours at 37 °C.

7-day-old chicken embryos were infected with the virus culture and incubated for 3 days at 37 °C.

Results:

No – full growth

Yes – 100% growth inhibition

NT – not tested

Staphylococcus aureus concentration $1,07 \times 10^8 \pm 0,21 \times 10^8$ CFU/ml

Growth inhibition (100 %) corresponds to the decrease in viability of at least $1,07 \times 10^6$ times

sample	Incubation period			
	1 min	5 min	30 min	180 min
	Growth inhibition (100 %)			
1	no	no	no	yes

Streptococcus agalactiae concentration $1,1 \times 10^8 \pm 0,9 \times 10^7$ CFU/ml

Growth inhibition (100 %) corresponds to the decrease in viability of at least $1,1 \times 10^6$ times

sample	Incubation period			
	1 min	5 min	30 min	180 min
	Growth inhibition (100 %)			
1	no	no	yes	NT

E. coli concentration $1,32 \times 10^8 \pm 0,18 \times 10^8$ CFU/ml

Growth inhibition (100 %) corresponds with the decrease in viability of at least $1,32 \times 10^6$ times

sample	Incubation period			
	1 min	5 min	30 min	180 min
	Growth inhibition (100 %)			
1	no	no	no	yes

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Pseudomonas aeruginosa concentration $9,4 \times 10^7 \pm 0,5 \times 10^7$ CFU/ml

Growth inhibition (100 %) corresponds to the decrease in viability of at least $9,4 \times 10^5$ times


sample	Incubation period				
	1 min	5 min	30 min	180 min	
	Growth inhibition (100 %)				
1	no	no	no	yes	

Titer of influenza virus 1 : 256

sample	Incubation period				
	1 min	5 min	30 min	180 min	
	Growth inhibition (100 %)				
1	no	no	yes	NT	

Growth inhibition (100 %) corresponds with the decrease in viability of at least 256 times

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Monitoring and Protection

The test results relate only to the subject of these tests. Without written permission from LCMP the testing report shall not be reproduced in any way other than as a whole.

Appendixes: No

-----End of Report-----

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