

Wellisair: Efficiency against Human Respiratory Syncytial Virus (wet conditions)

Virus test report (n° 20191212-3): September 12th, 2019 Laboratory of virus contaminants of water and food from the University of Barcelona

Scope: measure the effectiveness of Wellisair for the surface disinfection against Human Respiratory Syncytial Virus (RSV), the leading viral cause of acute lower respiratory tract infections: bronchiolitis and pneumonia.

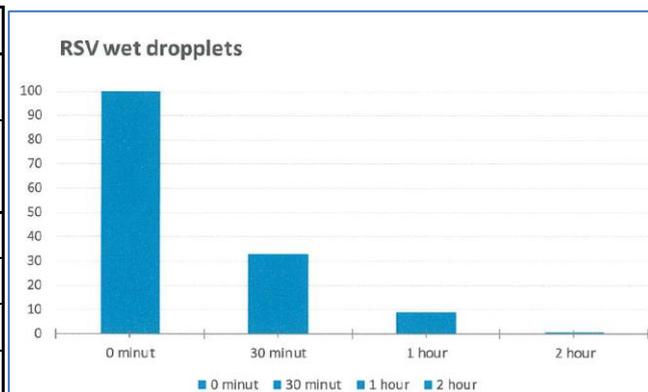
Procedure: Wellisair was located in a methacrylate box with one hundred microliter droplets over small pieces of glass, wet at room temperature.

At each testing time viruses were recovered in culture medium (MEM) and the viral particles were quantified by TCID₅₀ in Hep2 cells.



Results:

RSV concentration decay under wet conditions			
	No treatment	Wellisair Treatment	
Time	Viruses (PFU/ml)	Viruses (PFU/ml)	Reduction (%)
0 min	3,58x10 ⁵	3,58x10 ⁵	-
30 min	2,60x10 ⁵	8,08x10 ⁴	67%
1h	2,82x10 ⁵	5,00x10 ⁴	91%
2h	1,77x10 ⁵	6,55x10 ³	99%



Conclusions: Wellisair air disinfection was able to reduce 99% of the initial concentration of RSV after 2 hours of treatment. The efficiency of Wellisair on aerosols receiving equivalent doses could be expected to be at least equivalent.