

Wellisair: Efficiency against Rotavirus (dry conditions)

Virus test report (n° 20191212-2): September 12th, 2019 Laboratory of virus contaminants of water and food from the University of Barcelona

Scope: The effectiveness of Wellisair for the surface disinfection against Rotavirus (RoV), virus transmitted by faecal-oral route damaging the cells that line the small intestine, causing gastroenteritis.

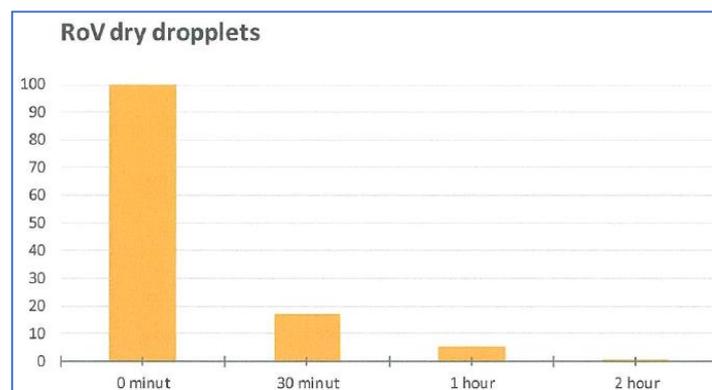
Procedure: Wellisair was located in a methacrylate box with one hundred microliter RoV droplets over small pieces of glass, dried at room temperature.

At each testing time viruses were recovered in culture medium (MEM) and the viral particles were quantified by TCID₅₀ in MA104 cells.



Results:

RoV concentration decay under dry conditions			
	No treatment	Wellisair Treatment	
Time	Viruses (PFU/ml)	Viruses (PFU/ml)	Reduction (%)
0 min	9,48x10 ⁵	3,00x10 ⁴	-
30 min	6,29x10 ⁴	1,08x10 ⁴	83%
1h	1,64x10 ⁴	3,39x10 ³	95%
2h	1,58x10 ³	5,00x10 ²	99%



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