

Efficacy of Excimer Wave Sterilray™ light against swine influenza A viruses

Objective of the trial: to determine the virucidal activity of distant EWS light against swine influenza A (IAV) viruses.

Product analyzed: Excimer Wave Sterilray™ light (EWS).

Microorganism: IAV subtype H1N2 strain.

Exposure distance: 1 m.

Exposure times: 1, 5, 10 and 20 min.

Method of analysis: Elimination of IAV analyzed by mean infectious dose assay (TCID₅₀). Madin-Darby Canine Kidney (MOCK) cells were used to demonstrate the presence of cytopathic effect of IAV. The calculation of viral load was performed using Reed and Muench's method being expressed in TCID₅₀/mL. This assay was performed in triplicate, including control.

Results:

Initial inoculation (control) showed a viral titer of 10^{5.5} TCID₅₀/mL. The results of this trial are shown in Table 1.

Table 1. Percentage reduction of viral IAV titration at different times of exposure to distant UV light.

Tiempo de exposicion (min)	Titulo viral (TCID ₅₀ /ml)	Porcentaje de reduccion del titulo viral(%)*
1	10 ^{4.5}	90,0
5	10 ^{3,25}	99,4
10	10 ³	99,6
20	10 ^{2.5}	99,9

* Percentage of reduction of viral titer with respect to the initial inoculum

Conclusion

The product analyzed (Far UV-C Excimer) has virucidal activity against IAV.



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