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17 juin 2020

The SterØMask device designed by the company INGENICA (Immeuble Le Terminal - 2 rue Charron - 44800 Saint Herblain) was subject to penetration performance qualification tests on FFP2 masks subjected to several disinfection cycles according to the standard described in the EN149. The CERTAM laboratory has issued a test report entitled " **Qualification de performances d'efficacité de filtration sur masques FFP2 soumis à un protocole de désinfection par UV-C** " dated May 13, 2020.

The objective of these tests was to assess the filtration performance of FFP2 masks in new condition and after having undergone 10 wearing cycles (4h) each followed by an ultraviolet disinfection (UV-C) cycle at a dose of 2000mJ/cm².
3 FFP2 masks were subjected to an aerosol of sodium chloride, 3 others to an aerosol of paraffin oil as described in the standards EN149 and more specifically in the standard EN13274-7 (06/2019) concerning the penetration tests liquid and solid particulate aerosols.
1 FFP2 mask was followed longitudinally after each porting + disinfection cycle, the other FFP2 masks were tested after 0, 4 and 10 disinfection cycles.

The conclusions of the filtration efficiency performance qualification are as follows:

1. No significant difference was noted between the filtration efficiency of new, unworn masks and the filtration efficiency of the masks after disinfection simulation (4 successive 4-hour wearing cycles each followed by an exposure to 2000mJ / cm² d 'UVC) for solid aerosols.
2. A decrease in the efficiency of filtration with liquid aerosols after simulation of disinfection (4 successive 4-hour portings each followed by exposure to 2000mJ / cm² of UVC) seems to be observed. This result must however be confirmed statistically.
3. No significant difference was noted between the breathability of new unworn masks and the breathability of the masks after simulated disinfection, for the 2 types of aerosols tested.
4. From 7 disinfection cycles, a reduction in the filtration efficiency of the mask seems to be observed on solid aerosols. This last observation will be confirmed by the consolidation of the tests; if this is the case, 6 carrying cycles + disinfection would not cause non-compliance with regard to filtration performance according to EN149.

In conclusion, it appears that after at least 4 4-hour carrying cycles each followed by UVC disinfection cycles, there is no deterioration in filtration performance with regard to standard EN149 (filtration greater than or equal to 94 %).