



DOTS  
UVC dosimeters  
for iJen  
MOVING

iJen

by SILAP

YOUR BREATH YOUR AIR OUR LIGHT

UVC radiation is characterized by a marked germicidal effect, with a peak of maximum effectiveness at the 254nm wavelength.

The degree of inactivation of microorganisms by means of ultraviolet radiation is directly proportional to the applied UVC dose. This UVC dose (measured mJ / cm<sup>2</sup>) is given by the power of the UVC source (μW / cm<sup>2</sup>) for the time of exposure to UVC light.

The table below shows the indicative values of the UVC dose (mJ / cm<sup>2</sup>) by type of microorganism:

% microbiological abatement	(UV dose) (mJ/cm <sup>2</sup> )			
	90%	99%	99,90%	99,99%
<b>Bacteria</b>	9	14	22	30
<b>Viruses</b>	60	111	171	222
<b>Spores</b>	52	93	140	140
<b>Protozoa</b>	45	75	91	125

TAB.A

A recent study by the state university of Milan (June 2020), analyzed the impact of UVC radiation on the new Sars-Cov-2 and noted that a dose of 3.7 mJ / is sufficient to inactivate and inhibit the reproduction of the virus. a factor of 1000, regardless of its concentration.

When we subject a surface (or an environment) to a UVC sanitizing treatment we would like to be sure that our surface has been irradiated with sufficient UVC dose to obtain the desired level of sanitization.

To ensure the efficacy and safety of the products of the iJen MOVING series, Silap offers the "Measure UVC" KIT consisting of min. 200 DOTS UltraV 100UVC (\*) dosimeters related to slips on which to affix the DOT itself after exposure (ref. FIG. 1) .

The DOTS UltraV 100UVC dosimeters (\*) provide an indication of the UVC dose that has hit the sanitized surface.



FIG.1

(\*) UltraV™ UVC Dosimeter by INTELLEGO TECHNOLOGIES

How do the DOTS UltraV 100UVC dosimeters work?

The DOTS dosimeters UltraV 100UVC are adhesive dots that are placed on the surface to be irradiated with UVC light (the yellow surface of the dot must be facing the UVC lamp).

If the DOT is irradiated with sufficient UVC light it changes color, the chromatic scale referred to the different UVC dose levels is shown below

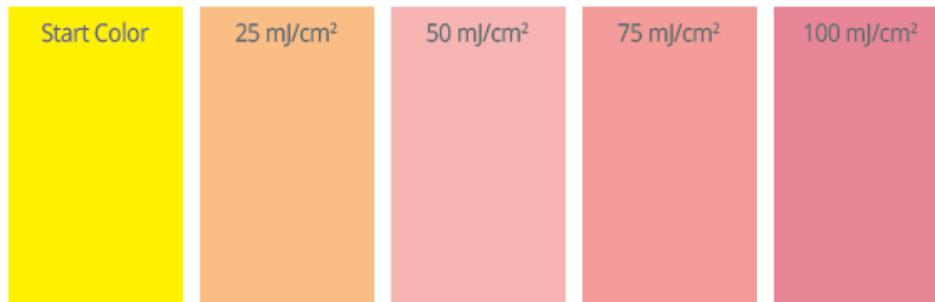


FIG. 2

The DOT is placed on the surface to be sanitized, with the yellow side facing the lamp.

If the DOT turns dark pink after treatment, the surface has been irradiated with a dose  $> 100\text{ mJ} / \text{cm}^2$ , therefore with a sanitization level greater than or equal to 99% (ref TAB. A).

Once sanitization is complete, the DOT can be applied to the slip as indicated below:

FIG. Dose  $> 100\text{ mJ}(\text{cm}^2)$



In this way it is possible to declare to have subjected the surfaces to UVC treatment with a dose of UVC like that indicated by the color of the DOTS

Notes:

- the color of the UltraV 100UVC dosimeter remains unchanged for 20 hours after exposure
- the UltraV 100UVC dosimeter product is intended as a visual reference of the UVC dose and is not a substitute for microbiological analysis to verify the real level of decontamination