igrox®

Test Report

No. 1-25820 Date: 8/25/2020

Applicant :	ILMAS S.p.a.
Address :	Via Vittorio Veneto 23b, 20010, Bernate Ticino (MI), Italy
Product code:	SANIX1, SANIX2, SANIX1B, SANIX2B
Manufacturer:	ILMAS S.p.a.
Address:	Via Vittorio Veneto 23b, 20010, Bernate Ticino (MI), Italy
Date:	8/25/2020

Executive Summary	
Sanitization of air contaminated by bacteria aerosol	
TEST	**CONCLUSION**
Exposure to nebulized aerosol contaminated by *E.Coli*	Reduced or absent bacterial load in treated air

*** For more detailed information please refer to the following pages***

Tested by: Ph.D. Ortolani Francesca

MATERIALS

- Liquid growth medium for *E.coli* culture
- 90 mm Petri dishes with solid medium for *E.coli* colonies growth
- *E.coli* sample
- Nebulizer
- SANIX system sample

METHODS

Prepare liquid growth medium for *E.coli*, inoculate it and let the bacteria grow for 36 h.

Prepare Petri dishes with agar medium for the growth of *E.coli* colonies.

Place a sample Petri dish close to the treated air expulsion area of the SANIX system.

Using a nebulizer, spray 3 ml of inoculated liquid medium, placing the nebulizer at a distance of 70 cm and aligned with the suction area of the SANIX system.

Take care to use a physical shield that avoids contamination of the Petri dish by nebulized aerosol not processed by the SANIX system.

As a control, spray 3 ml of inoculated liquid medium directly onto a Petri dish at the same distance and alignment.

Then seal and keep both the sample and control agar dishes at room temperature for 48 hours to allow for any growth of bacterial colonies.

DISCUSSION

The aim of this experiment is to verify the effectiveness of SANIX system in sanitizing air contaminated by bacteria in aerosols.

The SANIX system sucks in air, the airflow is exposed to UVC radiation (wavelength 275 nm). Subsequently, the treated air is emitted into the environment.

We want to check that the air treated by SANIX system has a minimal or absent bacterial load.

For this purpose, we prepared a liquid medium inoculated with *E.coli* which was nebulized to simulate a contaminated aerosol. The SANIX system was exposed to the contaminated aerosol and the treated airflow was directed towards a Petri dish containing agar medium. As a control, the same amount of aerosol, at the same distance and alignment, was sprayed directly onto a Petri dish without interposing the SANIX system.

After 48 h, the growth and quantity of any bacterial colonies were observed.

E.coli was used as a study model due to its ease of use and because its response to UVC radiation is comparable to that of Sars-CoV-2.

CONCLUSIONS

After 36 h of incubation it was possible to observe the different number of bacterial colonies grown on the control and sample Petri dishes.

As showed in figure 1 there is an evident reduction or total absence of bacterial colonies present in the samples compared to the control.

This indicates that, in the presence of aerosols with bacterial contamination, the air processed by the SANIX system has a reduced or absent bacterial load.

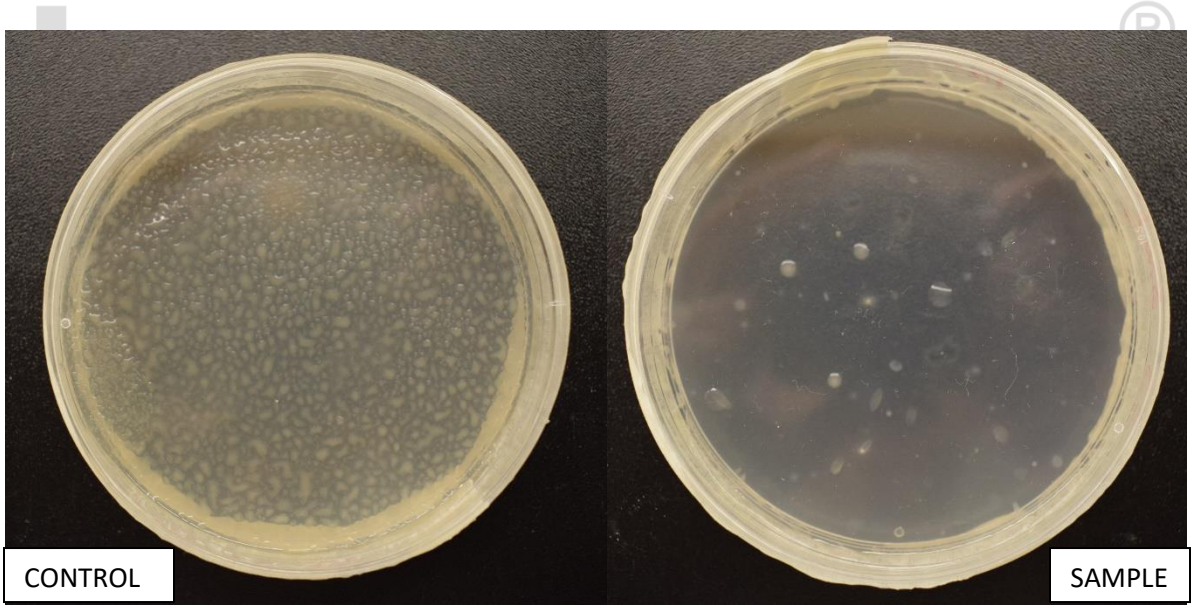

Figure 1 – Control Petri dish (on the left) and sample Petri dish (on the right) after 36 h incubation.