INSTYTUT BIOTECHNOLOGII
PRZEMYSŁU ROLNO-SPOŻYWCZEGO
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KL/1 1/1 Lodz, 26-11-2020

Certificate of Analysis No K/401/02/2020

Subject of analysis: **UV-C STERILON AIR 144W**
State of the object correct

Customer: **Lena Lighting S.A**
63-000 Środa Wlkp., ul. Kórnicka 52

The device for testing was delivered by the Customer: 29-10-2020
The tests began: 12-11-2020
The tests finished: 18-11-2020

Type of analysis	Method	Results	
Microbial parameters			
Testing of the level of air pollution during the operation of the lamp in a room of 25 m^2	Own methodology using a microbiological air sampler MAS-100 ECO™ Instruction MAS-100 Eco™	*[cfu/1 m^3]	Reduction level of microorganisms
- total viable count of microorganisms at time 0		**278**	-
- total viable count of microorganisms after 2 hours		**31.5**	R_{2h} = 88.67%
- total viable count of microorganism after 6 hours		**28**	R_{6h} = 89.93 %
- total viable count microorganisms after 20 hours		**8**	R_{20h} = 97.12%
- number of yeasts and molds and yeasts at time 0		**108.5**	-
- number of yeasts and molds and yeasts after 2 hours		**26.5**	R_{2h} = 75.58%
- number of yeasts and molds and yeasts after 6 hours		**22**	R_{6h} = 79.72 %
- number of yeasts and molds and yeasts after 20 hours		**7.5**	R_{20h} = 93.09 %

* The results are the average number of microorganisms from two measurements

Authorized:
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Assessment of antimicrobial efficacy of air disinfection with UV-C STERILON AIR 144W

Aim and scope of the study

The aim of the study was to determine the effectiveness of air disinfection with UV-C STERILON AIR 144W (Certificate of Analysis K/401/02/2020) on the basis of the total viable count of microorganisms and number of molds and yeasts examination using aspiration method after 2, 6 and 20 hours flow UVC lamp working in a room with an area of 25 m^2 .

Experimental procedure

The studies were conducted in accordance with its own methodology developed at the Laboratory and the manufacturer's manual MAS-100 ECO™ (Microbiological Air Sampler) in a room with an area of 25 m^2. Before turning on the lamp, the total viable count of microorganisms and the number of mold and yeast in the room air were examined (at 0 time). The flow UVC lamp was placed in the center of the room and the air pollution was measured 2 meters from the device after 2, 6 and 20 hours of operation. The tests were carried out using the aspiration method using the microbiological air sampler MAS-100 ECO™. Each time the device was placed on a flat surface, at a height of about 1 m from the floor, and took 1000 liters of air through a perforated plate. The air stream containing particles was directed to the PCA or YGC agar surface in a standard Petri dish. After completing the air sampling cycle, the Petri dishes were incubated at 30°C for 72h or 25°C for 5 days, then the colonies grown were counted and the number of microorganisms in 1 m^3 of air was determined, taking into account the correction of the Feller's statistical correction table.

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