

Subject of analysis: EVSUN LED 6000K Triple Lamp Set with Biocidal Function *

State of the subject: correct

* data provided by the Customer

Customer: EVS sp. z o.o.

15-732 Białystok, ul. Choroszczyńska 30 lok 4

The device for testing was delivered by the Customer: 29-11-2024

The tests began: 09-12-2024

The tests finished: 15-12-2024

Type of analysis	Analytical method	Results	
Microbial parameters			
Testing of the level of air pollution during the operation of the biocidal set of lamp in a room of 9 m ²	Own methodology** using a microbiological air sampler MAS-100 ECO™ Manual MAS-100 ECO™	[cfu/m3]	Microbial reduction
- Total Viable Count at time 0		226	-
- Total Viable Count after 5 min		213	R _{5min} = 5.76 %
-Total Viable Count after 60 min		148	R _{60min} = 34.52 %
- Total Viable Count after 6 h		104	R _{6h} = 53.99 %
- Total Viable Count after 24 h		17	R _{24h} = 92.48 %
-Total Yeast and Mold Counts at time 0		97	-
-Total Yeast and Mold Counts after 5 min		93	R _{5min} = 4.13 %
-Total Yeast and Mold Counts after 60 min		78	R _{60min} = 19.59 %
-Total Yeast and Mold Counts after 6 h		48	R _{6h} = 50.52 %
-Total Yeast and Mold Counts after 24 h		14	R _{24h} = 85.57 %

** detailed description of the test performance described in Appendix No. 1

Authorized:

Pracownia Mikrobiologii

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Accepted:
z-ca KIEROWNIKA ZAKŁADU
JAKOŚCI ŻYWNOŚCI

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The End of Certificate of Analysis

Appendix No. 1 to Certificate of Analysis No. K/508/01/2024

Evaluation of the biocidal effectiveness of the EVSUN LED 6000K Triple Lamp Set with Biocidal Function

Objective and Scope of the Study

The aim of the study was to determine the effectiveness of air disinfection using the EVSUN LED 6000K Triple Lamp Set device (Certificate of Analysis No. K/508/01/2024) based on the evaluation of the total microbial count, as well as mold and yeast levels representing natural air contamination. This was conducted using the aspiration method after 5 and 60 minutes, as well as after 6 and 24 hours of operation of the set, in a room with an area of 9 m² and a height of 2.9 m.

Method of the Study

The study was conducted following a proprietary methodology and the instructions of the MAS-100 ECO™ (Microbiological Air Sampler). The EVSUN LED 6000K Triple Lamp Set with a biocidal function was mounted on the ceiling of a 9 m² room (Photo 1). Before turning on the lamps, the total microbial count and mold and yeast levels in the air within the room were measured. The lamps were then activated, and the aforementioned tests for total microbial count as well as mold and yeast levels were conducted after 5 and 60 minutes, as well as after 6 and 24 hours of operation of the set. The tests were performed using the aspiration method. Each time, the air sampler was placed on a flat surface at a height of 1 meter from the floor, directed upwards, and collected 1000 liters of air through a perforated plate (sampling time approximately 9 minutes). The air stream containing particles was directed onto the surface of PCA or YGC agar in standard Petri dishes. After completing the air sampling cycle, the Petri dishes were incubated at 30°C and 25°C for 72 hours and 5 days, respectively. The grown colonies were then counted, and the number of microorganisms per 1 m³ of air was calculated, taking into account Feller's statistical conversion table correction.



Photo 1. The tested lamp set, installed on the ceiling, used to assess the reduction of microbiological air contamination

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