



**FOOD QUALITY FACILITY**

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Łódź, 13-01-2021

**Test report No. K/462/01/2020**

**Test object:** Flow lamp device - Exterya series 1 95/110W 170 m<sup>3</sup>/h  
Condition of test object: normal

**Customer: Exterya sp. z o.o.**  
**02-634 Warszawa**  
**ul. Raclawicka 114**

The object for testing was collected and delivered by the customer: 07-01-2021  
The tests started: 13-01-2021  
The tests ended: 17-12-2020

Type of marking / feature	Analytical method	Results	
<b>Microbiological parameters</b>			
Testing the level of air pollution during lamp operation in a 24 m <sup>2</sup> room	In-house methodology using a microbiological MAS-100 ECO™ microbiological air sampler  MAS-100 Eco™ Instruction	*[jtk/1 m <sup>3</sup> ]	Reduction of microorganisms
- total microbial count at time 0		<b>238</b>	-
- total microbial count after 2 hours.		<b>26</b>	R <sub>2h</sub> = 89,08%
- total microbial count after 6 hours.		<b>12</b>	R <sub>6h</sub> = 94,96%
- total microbial count after 20 hours		<b>6</b>	R <sub>20h</sub> = 97,48%
- mould and yeast count at time 0		<b>169</b>	-
- mould and yeast count after 2 hours.		<b>21</b>	R <sub>2h</sub> = 87,57%
- mould and yeast count after 6 hours		<b>12</b>	R <sub>6h</sub> = 92,90 %
- mould and yeast count after 20 hours		<b>5</b>	R <sub>20h</sub> = 97,04 %

\* The results are the mean number of microorganisms from two measurements

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*dr inż. Anna Szosland-Faltny*  
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**Evaluation of air disinfection efficiency using Exterya 1 95/110W 170m<sup>3</sup>/h flow lamp**

**Aim and scope of the test**

The aim of the study was to determine the effectiveness of air disinfection using a **flow lamp - Exterya series 1 95/110W 170 m<sup>3</sup>/h** (Research Report K/462/01/2020) on the basis of testing the total number of microorganisms and the number of moulds and yeasts by aspiration method after 2, 6 and 20 hours of lamp operation in a room with an area of 24 m<sup>2</sup> and a height of 2.90 m.

**Method of testing**

The research was carried out according to MAS-100 ECO™ (Microbiological Air Sampler) own methodology and manual in a room of 24 m<sup>2</sup>. Before switching on the lamp, the total number of microorganisms and the number of moulds and yeasts in the air filling the room were tested. The degree of air contamination was measured at a distance of about 2 metres from the lamp after 2, 6 and 20 hours of operation. The tests were performed using the aspiration method with the MAS-100 ECO™ microbiological air sampler, drawing 1000 litres of air through a perforated plate. The air stream containing the particles was directed onto the surface of PCA or YGC agar in a standard Petri scale pan. After completion of the air sampling cycle, the dishes were incubated at 30°C for 72h or at 25°C for 5 days, and then the colonies grown were counted and the numbers of microorganisms in 1 m<sup>3</sup> of air were determined, taking into account corrections of the statistical Feller conversion table.

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Łódź, 13-01-2021

Test report No. K/462/02/2020

Test object: Flow lamp device - Exterya series 1 55/60W 170 m<sup>3</sup>/h  
Condition of test object: normal

Customer: Exterya sp. z o.o.  
02-634 Warszawa  
ul. Raclawicka 114

The object for testing was collected and delivered by the customer: 17-12-2020  
The tests started: 29-12-2020  
The tests ended: 04-01-2021

Type of marking / feature	Analytical method	Results	
<b>Microbiological parameters</b>			
Testing the level of air pollution during lamp operation in a 24 m <sup>2</sup> room	In-house methodology using MAS-100 ECO™ microbiological air sampler  MAS-100 Eco™ Instruction	*[jtk/1 m <sup>3</sup> ]	Reduction of microorganisms
- total microbial count at time 0		187	-
- total microbial count after 2 hours		21	R <sub>2h</sub> = 88,77%
- total microbial count after 6 hours		15	R <sub>6h</sub> = 91,98 %
- total microbial count after 20 hours		9	R <sub>20h</sub> = 95,19%
- mould and yeast count at time 0		141	-
- mould and yeast count after 2 hours		19	R <sub>2h</sub> = 86,52%
- mould and yeast count after 6 hours		15	R <sub>6h</sub> = 89,36 %
- mould and yeast count after 20 hours		7	R <sub>20h</sub> = 95,04 %

\* The results are the mean number of microorganisms from two measurements

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The test results refer only to the test sample. The test report may not be reproduced otherwise than in full without the written consent of the Laboratory. The Client is entitled to lodge a complaint in writing within 14 days from the date of delivery of the Test Report.

wyniki badania odnoszą się wyłącznie do próbki z badanej. Sprawozdanie z badania bez pisemnej zgody Laboratorium nie może być powielane inaczej jak w całości. Klient ma prawo złożyć reklamację; na piśmie w terminie 14 dni licząc od daty doręczenia Sprawozdania z badan.



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**Evaluation of air disinfection efficiency using flow lamp - Exterya series 1 55/60W 170 m<sup>3</sup>/h**

**Aim and scope of the test**

The aim of the study was to determine the effectiveness of air disinfection by means of a **flow lamp - Exterya series 1 55/60W 170 m<sup>3</sup>/h** (Research report K./462/02/2020) on the basis of testing the total number of microorganisms as well as the number of moulds and yeasts by aspiration method after 2, 6 and 20 hours of lamp operation in a room with an area of 24 m<sup>2</sup> and a height of 2.90 m.

**Method of testing**

The research was carried out according to MAS-100 ECO™ (Microbiological Air Sampler) own methodology and manual in a room of 24 m<sup>2</sup>. Before switching on the lamp, the total number of microorganisms and the number of moulds and yeasts in the air filling the room were tested. The degree of air contamination was measured at a distance of about 2 metres from the lamp after 2, 6 and 20 hours of operation. The tests were performed using the aspiration method with the MAS-100 ECO™ microbiological air sampler, drawing 1000 litres of air through a perforated plate. The air stream containing the particles was directed onto the surface of PCA or YGC agar in a standard Petri scale pan. After completion of the air sampling cycle, the dishes were incubated at 30°C for 72h or at 25°C for 5 days, and then the colonies grown were counted and the numbers of microorganisms in 1 m<sup>3</sup> of air were determined, taking into account corrections of the statistical Feller conversion table.

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Łódź, 13-01-2021

Test report No. K/462/03/2020

Test object: Flow lamp device - Exterya series 4 55/60W 120 m<sup>3</sup>/h  
Condition of test object: normal

Customer: Exterya sp. z o.o.  
02-634 Warszawa  
ul. Raclawicka 114

The object for testing was collected and delivered by the customer: 17-12-2020  
The tests started: 29-12-2020  
The tests ended: 04-01-2021

Type of marking / feature	Analytical method	Results	
<b>Parametry mikrobiologiczne</b>			
Testing the level of air pollution during lamp operation in a 24 m <sup>2</sup> room	Own methodology using MAS-100ECO™ microbiological air sampler  MAS-100 Eco™ Instruction	*[jtk/1 m <sup>3</sup> ]	Reduction of microorganisms
- total microbial count at time 0		98	-
- total microbial count after 2 hours		13	R <sub>2h</sub> = 86,73%
- total microbial count after 6 hours		10	R <sub>6h</sub> = 89,80%
- total microbial count after 20 hours		5	R <sub>20h</sub> = 94,90%
- mould and yeast count at time 0		177	-
- mold and yeast count after 2 hours		29	R <sub>2h</sub> = 83,62%
- mold and yeast count after 6 hours		20	R <sub>6h</sub> = 88,70 %
- mold and yeast count after 20 hours		9	R <sub>20h</sub> = 94,92 %

\* The results are the mean number of microorganisms from two measurements

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**Evaluation of air disinfection efficiency using flow lamp - Exterya series 4 55/60W 120m<sup>3</sup>/h**

### Aim and scope of the test

The aim of the study was to determine the effectiveness of air disinfection by means of a **flow lamp - Exterya series 4 55/60W 120 m<sup>3</sup>/h** (Research Report K/462/03/2020) on the basis of examination of the total number of microorganisms as well as the number of moulds and yeasts by aspiration method after 2, 6 and 20 hours of lamp operation in a room with an area of 24 m<sup>2</sup> and a height of 2.90 m.

### Method of testing

The research was carried out according to MAS-100 ECO™ (Microbiological Air Sampler) own methodology and manual in a room of 24 m<sup>2</sup>. Before switching on the lamp, the total number of microorganisms and the number of moulds and yeasts in the air filling the room were tested. The degree of air contamination was measured at a distance of about 2 metres from the lamp after 2, 6 and 20 hours of operation. The tests were performed using the aspiration method with the MAS-100 ECO™ microbiological air sampler, drawing 1000 litres of air through a perforated plate. The air stream containing the particles was directed onto the surface of PCA or YGC agar in a standard Petri scale pan. After completion of the air sampling cycle, the dishes were incubated at 30°C for 72h or at 25°C for 5 days, and then the colonies grown were counted and the numbers of microorganisms in 1 m<sup>3</sup> of air were determined, taking into account corrections of the statistical Feller conversion table.

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