



Łódź, 18-02-2021

Certificate of Analysis Nr K/026/01/2021 (1/1)

**Subject of analysis:** LumeeLamp TripleForce RX - A, radiator power UV-C 36W  
(an area of 30 m<sup>2</sup>), (air humidity min. 40-50%)  
State of the subject: correct

**Customer:** Inelektra Sp. z o. o  
87-100 Toruń, ul. Szeroka 10/12

The device for testing was delivered by the Customer: 27-01-2021  
The tests began: 02-02-2021  
The tests finished: 08-02-2021

Type of analysis	Method	Results		
Microbial parameters				
Testing of the level of air pollution during the operation of the lamp in a room of 30 m <sup>2</sup>	Own methodology using a microbiological air sampler MAS-100 ECO™ Manual MAS-100 Eco™	Air humidity %	*[jtk/1 m <sup>3</sup> ]	Reduction level of microorganisms
- total viable count of microorganisms at time 0		41	166	-
- total viable count of microorganisms after 2 hours		45	33	R <sub>2h</sub> = 80,12%
- total viable count of microorganism after 6 hours		46	28	R <sub>6h</sub> = 83,13 %
- total viable count microorganisms after 20 hours		45	8	R <sub>20h</sub> = 95,18%
- number of yeasts and molds at time 0		41	34	-
- number of yeasts and molds after 2 hours		45	14	R <sub>2h</sub> = 58,82%
- number of yeasts and molds after 6 hours		46	7	R <sub>6h</sub> = 79,41%
- number of yeasts and molds after 20 hours		45	3	R <sub>20h</sub> = 91,18%

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

Authorized: *Beata Paziak-Domańska*  
PRACOWNIA MIKROBIOLOGII  
dr Beata Paziak-Domańska  
St. Specjalista

Accepted:  
KIEROWNIK PRACOWNI ANALIZ  
FIZYKOCHEMICZNYCH I SENSORCZNYCH  
*mgr inż. Andrzej Oleś*  
KL/II



INSTYTUT BIOTECHNOLOGII  
PRZEMYSŁU ROLNO-SPOŻYWCZEGO  
im. prof. Wacława Dąbrowskiego  
PAŃSTWOWY INSTYTUT BADAWCZY

ZAKŁAD JAKOŚCI ŻYWNOŚCI  
Al. Marszałka J. Piłsudskiego 84  
92-202 Łódź  
Tel. (42)636 92 11, 674-64-14  
e-mail: zj@ibprs.pl

Instytut Biotechnologii Przemysłu Rolno-Spożywczego  
im. prof. Wacława Dąbrowskiego-Państwowy Instytut Badawczy

ZAKŁAD JAKOŚCI ŻYWNOŚCI  
92-202 Łódź, Al. Marszałka J. Piłsudskiego 84  
tel. (42) 674 64 14, (42) 636 92 11  
e-mail: zj@ibprs.pl, <https://www.ibprs.pl>  
NIP 525-000-82-64 REGON 000053835 KRS 0000126823

## Assessment of air disinfection efficacy by LumeeLamp TripleForce RX - A, radiator power UV-C 36W

### The aim and scope of the research

The aim of the study was to determine the effectiveness of air disinfection by **LumeeLamp TripleForce RX - A, radiator power UV-C 36W** (an area of 30 m<sup>2</sup>), (air humidity min. 40-50%) (Certificate of Analysis K/026/01/2021) 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 30 m<sup>2</sup> and height 2,90 m.

### Test procedure

The studies were conducted in accordance with its methodology developed at the Laboratory and the manufacturer's manual MAS-100 ECO<sup>TM</sup> (Microbiological Air Sampler) in a room with an area of 30 m<sup>2</sup> and air humidity min. 40-50%. 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<sup>TM</sup>. Each time the device took 1000 liters of air through a perforated plate (suction time about 9 minutes). 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<sup>3</sup> of air was determined, taking into account the correction of the Feller's statistical correction table.

PRACOWNIA MIKROBIOLOGII  
dr Beata Paziak-Domańska  
St. Specjalista

*B. Paziak-Domańska*