

WE CURE AIR™



**POTOK® TECHNOLOGY:
INNOVATION IN AIR DECONTAMINATION**

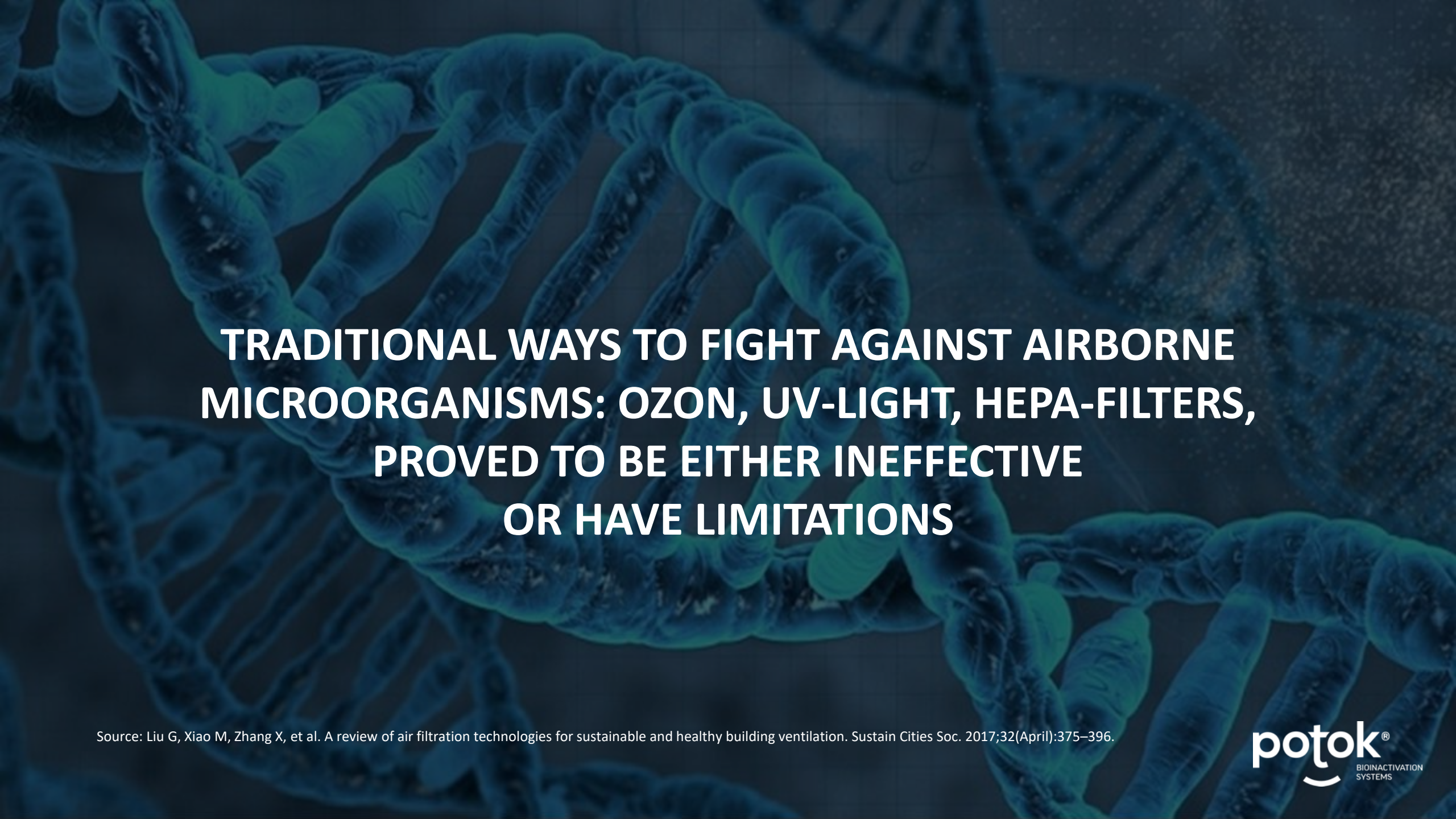
potok®
BIOINACTIVATION
SYSTEMS

A top-down view of a clear petri dish containing a dark agar surface. Numerous microbial colonies of various sizes and colors (white, yellow, orange, and grey) are scattered across the surface, representing mold, bacteria, and viruses.

**MAIN PROBLEMS OF AIR CONTAMINATION:
MOLD, BACTERIA, VIRUSES**

90% OF COMMON INFECTIONS ARE SPREAD BY AIR*

Source: World Health Organization*



**TRADITIONAL WAYS TO FIGHT AGAINST AIRBORNE
MICROORGANISMS: OZON, UV-LIGHT, HEPA-FILTERS,
PROVED TO BE EITHER INEFFECTIVE
OR HAVE LIMITATIONS**

Source: Liu G, Xiao M, Zhang X, et al. A review of air filtration technologies for sustainable and healthy building ventilation. Sustain Cities Soc. 2017;32(April):375–396.

OZON - HEPA – UV - POTOK COMPARISON

	OZON	UV	HEPA	POTOK
99,9% PHYSICAL AIR-BORNE MICROORGANISMS DESTRUCTION	V after several hours	V up to an hour	X	V One pass***
NONSELECTIVITY	X	X	V	V
SAFETY: FUNCTIONING IN THE PRESENCE OF PEOPLE	X	X	V*	V
THE EFFICIENCY DOES NOT DEPEND ON HUMIDITY	V	X	X	V
NO EXPENDABLES NEEDED	V	X	X	V
ENERGY SAVING	X	X 1500-2000 W**	X	V 10 W**

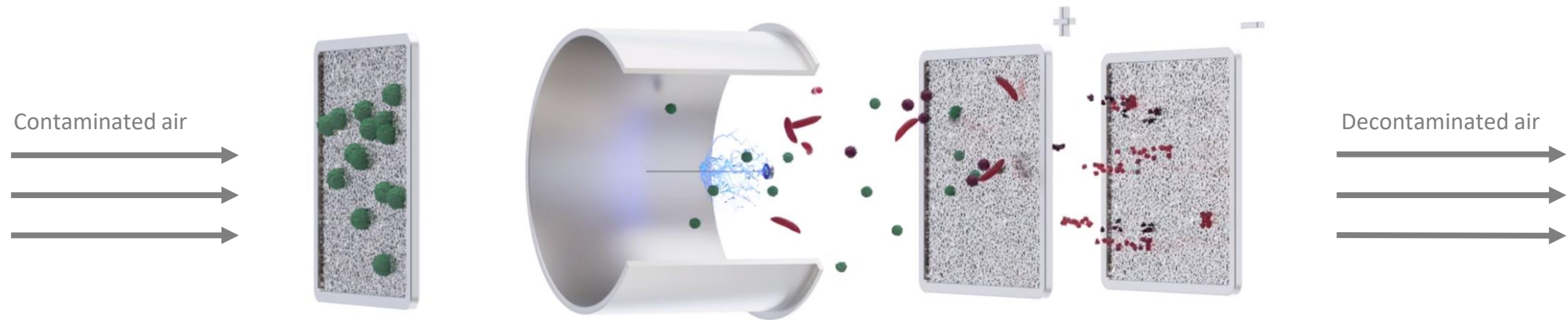
* In case of its regular renewal every 3-6 months

** Power consumption per 1000 m³/h

*** Destroying 99,995% airborne microorganisms (including viruses and molds) in one pass through POTOK equipment

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POTOK UNIQUE* TECHNOLOGY IS BASED ON A PHYSICAL METHOD OF DESTROYING ALL AIRBORNE MICROORGANISMS



The Potok technology is used to decontaminate air by exposing microbial cells or viruses' secondary and tertiary structure of proteins to constant electric fields of a given orientation and tension. The value of the electric field is designed to destroy (not just filtrate) any microorganisms and viruses, regardless of the type (incl. mold and yeast)

* The technology is internationally patented. For example, USA patent publication number is US20110209621 (Grant Number: 08673068, https://patentscope.wipo.int/search/en/detail.jsf?docId=US73335653&tab=NATIONALBIBLIO&_cid=P22-K21RBV-36389-1)

POTOK TECHNOLOGY IS EFFICIENT AGAINST CORONAVIRUSES INCLUDING COVID-19

RESEARCH INSTITUTE OF INFLUENZA (RUSSIA):

The air decontamination technology used in air decontamination unit POTOK is non-selective. The impact of this unit on microorganisms does not depend on their structure and degree of resistance to disinfectants.

In view of the above, it may be considered appropriate, to recommend the appliance of the air decontamination unit POTOK for inactivation (destruction) of all types of airborne microorganisms, including:

- viruses, including Influenzavirus, Grippus avium, Coronaviridae, etc.
- bacteria, including sanitary representative microorganisms of the intestines (Escherichia coli, Enterococcus spp., Proteus mirabilis, Pseudomonas aeruginosa, etc.) and the upper respiratory tract (Staphylococcus spp., Streptococcus spp., Etc.),
- mold fungi and yeast, including Aspergillus niger, Mucor ramosissimus, Saccharomyces cerevisiae, etc.

OUR TECHNOLOGY KILLS ALL TYPES OF AIRBORNE MICROORGANISMS AND VIRUSES

Effectiveness of inactivating microorganisms: at least 99,99%*

Nonselectivity: destruction of all types of microorganisms and viruses, including antibiotic-resistant strains

Safety: functioning in the presence of people

Automatic control over inactivation effectiveness

Durability: service life of the equipment is 10 years

No expendables needed

Energy saving: consumption is similar to that of an LED light bulb

Environmentally friendly: no chemicals are used for inactivation, equipment does not require special disposal

* According to figures provided by Scriabin Institute of Biochemistry and Physiology of Microorganisms (Russia)

POTOK TECHNOLOGY SCIENTIFIC RECOGNITION

HARVARD SCHOOL OF PUBLIC HEALTH (USA)

- Bacillus subtilis spores
- Serratia marcescens
- Aspergillus niger
- Pseudomonas aeruginosa
- Staphylococcus aureus

CONFORMITY LABORATORIES (KOREA)

- E.coli ATCC 25922

EAST BAVARIAN TECHNICAL UNIVERSITY OF APPLIED SCIENCES AMBERG-WEIDEN (GERMANY)

Studies have shown that the Potok air decontamination system reduces bacterial contamination of the air in an operating room to 5 CFU/m³. This means that Potok can meet the specifications for ventilation systems in operating rooms in accordance with the Swedish Standardization Institute (SIS-TS 39: 2012 2016).

NATIONAL INSTITUTE OF PUBLIC HEALTH (HUNGARY)

Based on the results of the tests the POTOK air decontamination equipment effectively reduces the concentration of small aerosol particles and the total number of bacteria and molds in the indoor air during normal use.

RESEARCH INSTITUTE OF INFLUENZA (RUSSIA)

- bacteria (Escherichia coli, Enterococcus spp., Proteus mirabilis, Pseudomonas aeruginosa, Staphylococcus spp., Streptococcus spp., etc.), including their antibiotic-resistant strains;
- mold fungi and yeasts, including Aspergillus niger, Mucor ramosissimus, Saccharomyces cerevisiae, etc.;
- viruses, including Influenzavirus, Grippus avium, **Coronaviridae**, etc.

STATE INSTITUTE OF TUBERCULOSIS (RUSSIA)

- Mycobacterium bovis bcg
- Staphylococcus epidermidis
- Klebsiella species
- Pseudomonas species
- Bacillus species

INSTITUTE OF VIROLOGY NAMED AFTER IVANOVSKIY (RUSSIA)

- Influenza virus

INSTITUTE OF EPIDEMIOLOGY AND MICROBIOLOGY NAMED AFTER GAMALEY (RUSSIA)

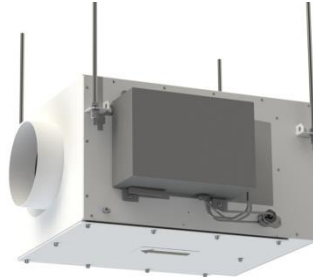
- Legionella pneumophila
- Staphylococcus aureus wood 46

POTOK EQUIPMENT RANGE



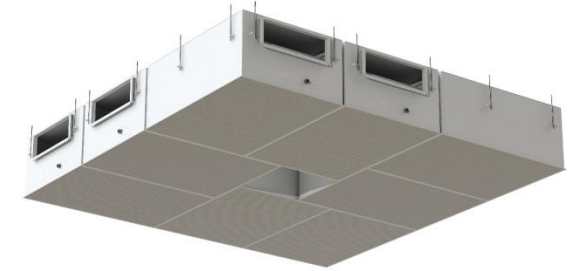
STANDALONE UNITS

create local clean zones in healthcare, food industry and school facilities, home or office spaces



INDUCT MOUNT UNITS

to create clean rooms or local zones induct mount units are integrated into the gap of the ventilation channel in the nearest possible place (behind the suspended ceiling, in technical rooms etc.)



LAMINAR FLOW UNITS

are designed to discharge the unidirectional airflow at a speed from 0.24 to 0.3 m/s into the working area of clean rooms (for example, to surgical table zone)

Air flow rate (capacity), m ³ /h	up to 120 - 900	From 90 to 6500	From 90 to 6500
Power consumption (max), W	10 - 200	10 per 1000 m ³ /h	10 per 1000 m ³ /h

POTOK TECHNOLOGY CAN BE SCALED AND USED NOT ONLY AS THE HEART OF AN AIR DECONTAMINATING DEVICE UNTO ITSELF, BUT ALSO AS ADVANCED FEATURE OF INDUSTRIAL EQUIPMENT OR DOMESTIC APPLIANCE

WE CURE AIR™



POTOK® TECHNOLOGY: INNOVATION IN AIR DECONTAMINATION FOR INDOOR SPACES

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