

TADIRAN AIROW 3™ Scientific Booklet

Test Subject	Tested Species / Methods	Test Facility	Results
Bacteria	Streptococcus pyogenes (Strep A)	Innovative Bioanalysis	100%
COVID-19 virus	SARS-CoV-2	Innovative Bioanalysis	99.93%
Virus	RNA Virus MS2 Bacteriophage	Aerosol Research and Engineering Laboratories	99.994%
Bacteria	Staphylococcus Epidermidis	Aerosol Research and Engineering Laboratories	99.994%
Mold	Penicillium Citrinum	Kitasato Research Center for Environmental Science	99.4%
Hydrogen Peroxide	OSHA 1019	LCS Laboratory	<1 ppm
Ozone	UL 2998	Intertek	<5 ppb

TADIRAN AIROW 3™ REDUCED STREPTOCOCCUS PYOGENES (Strep A) BACTERIA CONCENTRATION LEVEL BY **100% WITHIN 120 MIN.**

We tested TADIRAN AIROW 3 against Streptococcus pyogenes bacteria, it was found to reduce the aerosol of Streptococcus pyogenes in 36 cubic meter test chamber, by 100% within 120 min. The test was conducted in US-based internationally recognized laboratory Innovative Bioanalysis, which is BSL3 accredited.

Did you know

The most common symptoms of group A strep infection include high fever with a sore throat, scarlet fever, headache, nausea, vomiting, and abdominal pain.

In some cases, post-infection autoimmune reactions can be developed. Invasive group A strep infection, most commonly characterized by bacteremia and cellulitis, is associated with a high mortality rate of 8-23%.

Since Dec 2022 there is a sudden rise in group A strep infections in the UK and European countries, in some places even 5X time more. Similar observations were monitored in US and in Israel.

With the removal of restrictions after the pandemic, susceptible people, including children, are suddenly experiencing a bout of exposure, thus developing infections faster. This could be a reason for the group A strep infection surge.

[Read the Article 1 →](#)

[Read the Article 2 →](#)

TADIRAN AIROW 3™ REDUCED DETECTED SARS-COV-2 AEROSOL LEVELS BY **99.93% in 1 hour**

TADIRAN AIROW 3 device was tested in the US-based internationally recognized laboratory Innovative Bioanalysis, which is BSL3 accredited. TADIRAN AIROW 3 reduced the amount of aerosolized SARS-CoV-2 in 16 cubic meter test chamber, after 60 min only 0.07% of the virus was detected

Did you know

Trained scent dogs are able to detect people infected with COVID-19

"Sniffer dogs" may be able to use their highly developed sense of smell to single out people infected with COVID-19, regardless of whether they have symptoms, according to a triple-blind randomized validation trial and real-life observations. The experiment was conducted at the Helsinki-Vantaa International Airport: the dogs sniffed skin swabs from 303 incoming passengers also tested for COVID-19 using polymerase chain reaction (PCR) from September 2020 to April 2021 and the obtained results demonstrated an accuracy greater than 90%. [1]

[Read the Article 3 →](#)

TADIRAN AIROW 3™ REDUCED DETECTED MS2 LEVELS BY **99.994% in 1 hour**

We tested TADIRAN AIROW 3 against MS2 an RNA virus used as SARS-CoV-2 surrogate.

TADIRAN AIROW reduced MS2 levels in one cubic meter chamber. After 60 minutes, only 0.006% of the virus was detected inside. The test was conducted in the FDA-cleared Aerosol Research and Engineering laboratories located in the USA.

Did you know

In 1976, the MS2-genome was the first genome to be completely sequenced. This was accomplished by Walter Fiers and his team, building upon their earlier milestone in 1972 of the first gene to be completely sequenced, the MS2 coat protein. The MS2 genome is one of the smallest known, consisting of 3569 nucleotides of single-stranded RNA, and it encodes just four proteins.[2, 3]

[Read the Article 4 →](#)

[Read the Article 5 →](#)

TADIRAN AIROW 3™ REDUCED METHICILLIN RESISTANT STAPHYLOCOCCUS EPIDERMIDIS BY **99.994% in 1 hour.**

In FDA-cleared Aerosol Research and Engineering Laboratory, TADIRAN AIROW 3 was tested against Staphylococcus Epidermidis bacteria. After 60 minutes, only 0.006% of the bacteria was detected in one cubic meter chamber.

Did you know

Staphylococcus Epidermidis bacteria is used as a simulator for the much more dangerous, disease-causing bacteria called Staphylococcus aureus. S. aureus can cause a range of illnesses, from minor skin infections, such as cellulitis, folliculitis, carbuncles, and abscesses, to life-threatening diseases such as pneumonia, meningitis, osteomyelitis, endocarditis, toxic shock syndrome, bacteremia, and sepsis. It is still one of the five most common causes of hospital-acquired infections and is often the cause of wound infections following surgery. Each year, around 500,000 patients in hospitals in the United States contract a staphylococcal infection, chiefly by S. aureus.[4] Up to 50,000 deaths, each year in the United States are linked to S. aureus infections.[5]

[Read the Article 6 →](#)

[Read the Article 7 →](#)

TADIRAN AIROW 3 PASSED THE TEST WITH FLYING COLORS. AFTER 180 MINUTES ONLY **0.6%** OF THE FUNGUS WAS DETECTED IN 25 CUBIC METER CHAMBER.⁴

In one of the most trusted lab in Japan, TADIRAN AIROW 3 was tested and found to reduce levels of *Penicillium Citrinum* by **99.4% in 3 hours in 25 cubic meter chamber**.

Did you know

Blue mold, the most common indoor fungi ⁽¹⁾. When present in large quantities, Blue Mold releases high levels of spores into the air (from 1000-10,000 spores/m³) ⁽²⁾. Exposure to Blue Mold spores is associated with a range of respiratory problems- increased risk of asthma and respiratory diseases.

How fungi appears in our indoor air?

Mold fungi may be present in indoor air due to various factors, including the introduction of spores from outdoor air, fruits and vegetables, plants, and soil. The spores can travel through the air and settle in suitable locations, where they can grow and colonize if conditions such as adequate moisture and organic matter are present. As the colonies mature, they can release additional spores into the air, contributing to airborne spore concentrations. Inhalation of mold aerosols may pose health risks, including exacerbation of asthma, allergies, respiratory conditions, and chronic fatigue, particularly in instances where the concentration of mold is high.

[Read the Article 4 →](#)

1. Indoor mould exposure, asthma and rhinitis: findings from systematic reviews and recent longitudinal studies. Denis Caillaud, Benedicte Leynaert, Marion Keirsbulck, Rachel Nadif on behalf of the mould ANSES working group European Respiratory Review 2018 27: 170137; DOI: 10.1183/16000617.0137-2017
2. Shelton BG, Kirkland KH, Flanders WD, Morris GK. Profiles of airborne fungi in buildings and outdoor environments in the United States. Appl Environ Microbiol. 2002;68(4):1743-1753.

TADIRAN AIROW 3™ WAS FOUND TO MEET THE OCCUPATIONAL EXPOSURE LIMIT OF HYDROGEN PEROXIDE AS DEFINED BY **OSHA (less than 1ppm for 8 hours)**

The test conducted in agreement with OSHA analytical method 1019, measured hydrogen peroxide in the air during the operation of the TADIRAN AIROW 3 device for 8 hours. Detected concentrations of the Hydrogen Peroxide were significantly less than the occupational (Industrial) exposure limit of 1 ppm as defined in Canada (2019, Occupational Exposure Limits for Ontario Workplaces, Regulation 833) as well as in the USA (2019, OSHA PEL, OSHA Annotated Table Z-1). TADIRAN AIROW 3 was rigorously tested to meet the highest standards.

Did you know

Hydrogen Peroxide is one of the most powerful nonselective wide range biocide known to man. Hydrogen Peroxide is created as part of many natural processes, for example, Hydrogen peroxide is produced by immune cells in the human body to kill microorganisms and they use catalase also to reduce damage to the human cell making the hydrogen peroxide. In the human body, hydrogen peroxide is also produced primarily in three places: lung, gut, and thyroid gland.

TADIRAN AIROW 3 IS OZONE VERIFIED, UL 2998 COMPLIANT, TESTED BY TUV AND INTERTEK, AND EMITS **less than 0.005 PPM Ozone.**

Did you know

Over the last 30 years, building occupants have become increasingly aware of and interested in the indoor air quality of their homes, schools, offices and other spaces. This mindset shift has generated a growing interest in air cleaning devices using various methods of operation, such as filtration, ionisation or ultraviolet light as part of standalone units or incorporated into the HVAC system. Demand for such products has increased dramatically with the onset of the COVID-19 pandemic.

However, some technologies used in air cleaning devices have the potential to create ozone. Ozone is a highly reactive gas that can be a powerful respiratory irritant on its own and can react with other compounds in air to form harmful byproducts, according to the US EPA. Therefore, minimizing ozone concentrations in indoor spaces is crucial, especially during times of occupancy.

Verify, if your air purifier is Ozone emission tested.