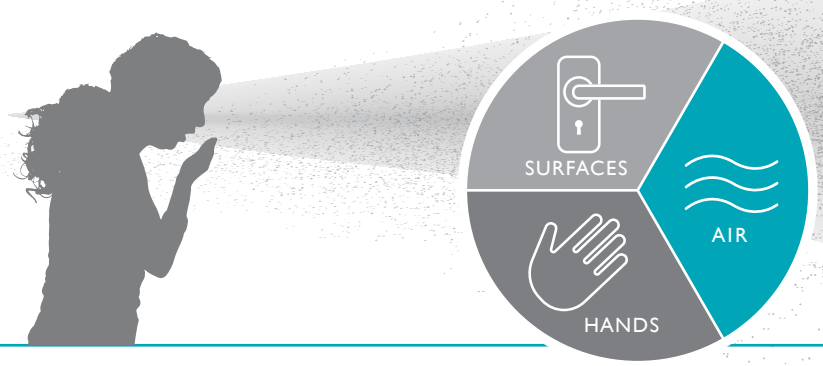
NOVAERUS

You Can't Dis-infect the Air. We Can.

Cleaner Air Means **Cleaner Hands** and **Surfaces**

Hand hygiene and surface disinfection have long been the international gold standard for infection control in healthcare environments. But as our hospitals become more crowded, infections become harder to treat, and costs become unmanageable, traditional protocols need reinforcement. Novaerus air dis-infection technology closes the loop in infection control.



Novaerus **DBD Plasma**

Novaerus ultra-low energy patented plasma technology has been tested and proven to deactivate airborne bacteria and viruses, neutralize VOCs and reduce particulate such as mould spores, dust mites, pollen, and dander.

Novaerus technology is unmatched for its efficacy, safety, ease of use, and affordability.

- Novaerus technology cleans the air 24/7. The portable air dis-infection units are ideal for continuous infection control, odour mitigation and indoor air quality maintenance.
- Novaerus plasma is powerful, yet gentle. With no harmful by-products, it is safe for continued use around vulnerable patients and staff, treating the air in real life conditions.
- Novaerus portable units are low-energy, low-maintenance and plug into any outlet. With no installation costs, the units can be easily moved by staff to the point of care.
- Novaerus technology augments your surface and hand hygiene protocols. The units help to reduce infection by destroying pathogens in the air.

Independently **Tested**

TYPE	NAME	REDUCTION	TIME	SPACE	MODEL
VIRUSES	Measles[1]	99.87%	20-30 min	28.5m^3	NV1050
	Influenza A	99.9%	10-20 min	28.5m^3	NV1050
	Norovirus[2]	99.99%	5 hours	16m^3	NV800
BACTERIA	Tuberculosis[3]	97%	30 min	30m^3	NV1050
	MRSA[4]	99.94%	15 min	30m^3	NV1050
	Clostridium difficile spores	99.9%	40 min	28.5m^3	NV1050
	Escherichia coli	71.80%	5 min	2.3m^3	NV200
	Bacillus subtilis	86.50%	6 hours	16m^3	NV800
MOULD SPORES	*Aspergillus niger*	99.99%	30 min	16m^3	NV1050
	Aspergillus niger	98.85%	4 hours	16m^3	NV800
VOCs	Nitrogen Dioxide	99.49%	7.2 min	16m^3	NV1050
	Formaldehyde	99.68%	1.1 min	16m^3	NV1050
	Toluene	99%	9.1 min	19.72m^3	NV1050
PARTICULATE	PM 1	99%	6.33 min	19.72m^3	NV10750
	PM 2.5	99%	6.26 min	19.72m^3	NV1050

Testing Partners

- Aerosol Research & Engineering Laboratories, USA
- Microsearch Laboratories, UK
- Microbac Laboratories, USA
- NASA Ames Research Center, USA
- Airmid Healthgroup, Ireland
- Camfil Laboratories, Sweden
- Indoor Biotechnologies, UK
- Avomeen Analytical Services, USA
- Univeristy of Huddersfield, UK
- Qualiflife Diagnostics, India

[1] Tested on Human parainfluenza type 3 (HPIV3), a commonly used surrogate for Measles. (2019 – To assess the impact of an air purifier on Human parainfluenza virus Type 3, Airmid Healthgroup)

[2] Tested on MS2 Bacteriophage, a commonly used surrogate for Norovirus (2005 - Survival of viruses on fresh produce, using MS2 as a surrogate for Norovirus, Dawson DJ et al.)

[3] Tested on *Mycobacterium smegmatis*, a commonly used surrogate for *Mycobacterium tuberculosis* (2007 - Evaluation of *Mycobacterium smegmatis* as a possible surrogate screen for selecting molecules active against multi-drug resistant *Mycobacterium tuberculosis*, Chaturvedi V et al.).

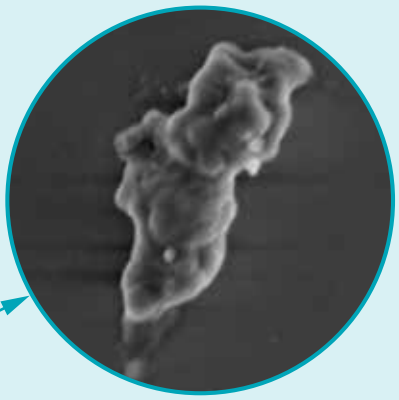
[4] Tested on *Staphylococcus epidermidis*, a commonly used surrogate for MRSA. (2011 – Aerosol survival of *Staphylococcus epidermidis*, Thompson KA et al.)

Escherichia coli (E. coli) **Deactivation**

Laboratory Name: NASA Ames Research Center
Laboratory Location: Moffett Field, Mountain View, CA
Date: February 2016
Device Tested: NV200
Space Treated: 18 ft^3

> *The bacteria underwent physical distortion to varying degrees, resulting in deformation of the bacterial structure. The bacterial reculture experiments confirm inactivation of airborne E. coli upon treating with DBD.*
>
> – *NASA Ames Research Center*

Healthy *E. coli* Bacteria
prior to exposure



E. coli bacteria after .002 seconds
of exposure to Novaerus plasma[1]

[1] Morphological and chemical changes of aerosolized *E. coli* treated with a dielectric barrier discharge. NASA Ames Research Center

Protect and **Defend** Your Patients and Staff

Protect

The Protect 200 and Protect 800 have been designed for continuous air dis-infection and odour control in small and medium indoor spaces. The Novaerus Protect range use patented filter-free ultra-low energy plasma technology with a two-speed or single-speed fan. Both units can be wall-mounted or placed on a countertop and plug into any outlet. The Protect 800 can also be mounted on one of two specially designed stands for optimal air flow.

Applications

- Operating Theatres
- Nurses Station
- Examination Room
- Common Areas
- Reception Desk
- Bathrooms
- Supply Rooms
- Offices
- Patient Rooms
- Ambulances
- Dental Clinics

Defend

The Defend 1050 has been designed for rapid remediation in large spaces and situations with high risk of infection. The Novaerus Defend 1050 uses patented ultra-low energy plasma technology combined with a triple-stage Camfil® filter system to provide a combined solution for air dis-infection and particle removal. This free-standing unit can be wheeled easily to point of care and plugs into any outlet.

Applications

- Operating Theatres
- Intensive Care Units
- Emergency Rooms
- In Vitro Fertilization Labs
- Patient Wards
- Construction Projects
- Child Care / Schools
- Senior Living Facilities
- Burn Units
- Hematology Units

About Novaerus

Novaerus is part of WellAir, an Irish company on a mission to reduce indoor airborne pollutants to create living, working, and healing spaces that foster rather than detract from human health, productivity and wellbeing.

WellAir and its brands, Novaerus and Plasma Air, can be found installed in hundreds of hospitals, senior living facilities, schools, casinos, railway stations, residences, and industrial facilities in more than 40 countries around the world.

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UL 867 & UL1995 Intertek-Certified
Classified as plenum rated per UL 2043

NV-AAA-IRL-003