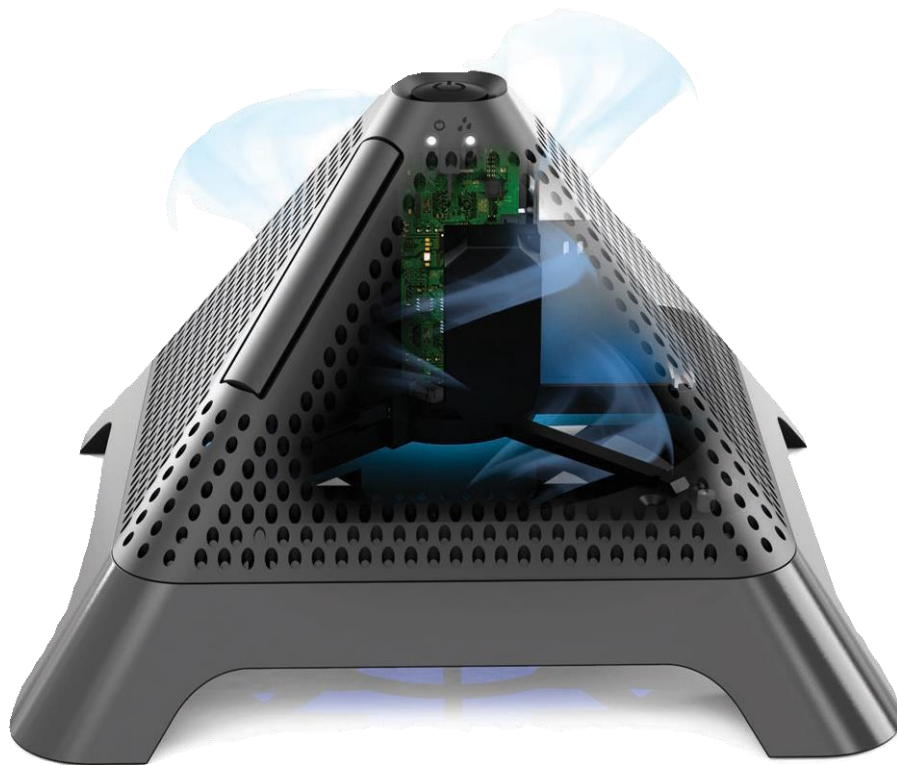


airora[®]

A Breath of Fresh Air

The Indoor Air & Surface Sanitiser



*A revolution in indoor air quality, surface hygiene
and protection from
viruses, bacteria, moulds, allergens and odours*

www.airora.com



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TECHNOLOGY BREAKTHROUGH

AFTER 15 YEARS OF
RESEARCH, DESIGN & DEVELOPMENT,
**AIRORA WILL CHANGE
THE WAY WE LIVE!**



*The Airora Hydroxyl Diffuser is NOT a traditional air Purifier,
it is much, much more!*



ABOUT US

Developing Airora's completely revolutionary Hydroxyl Cascade technology into a range of effective, elegant and convenient products has been a long and challenging journey. But after more than 15 years of rigorous research and meticulous development we are incredibly excited to achieve our dream of bringing Airora's powerful air and surface cleansing technology to people and organisations worldwide.

Like the complex process that allows plants to absorb carbon dioxide from our atmosphere, there is another natural chemical reaction in the great outdoors, that is the removal of contamination and the creation of clean fresh air.

That natural chemical reaction is the continuous production of abundant **hydroxyl radicals** (often just called hydroxyls) which continuously destroys pollutants, germs, allergens and odours from our outdoor air and surfaces.

Hydroxyls are nature's detergent, and they are essential to life here on earth. Sadly, they are not generally abundant indoors where we spend some 90% of our time. That lack of indoor hydroxyls means that we are constantly exposed to the build-up of VOC's and pollutants, the growth and spread of bacteria, moulds, odours and allergens and, as Coronavirus has made us all too aware, the transmission of viruses.

Welcome to the Airora story, where our **patented hydroxyl cascade technology** finally brings nature's missing decontamination agent indoors.

Many, many times more effective than traditional air purifier technologies, Airora's results are remarkable. Only Airora safely and continuously destroys or neutralises all types of germs, allergens and odours and most other irritants and harmful pollutants throughout indoor air and surfaces.

Generated continuously, Airora's hydroxyl cascade reacts in real time to new contaminants such as sneezes or germs from dirty hands, rapidly making them harmless.

Airora comes with a free App which conveniently monitors your environment and multiple Airora units across your Wi-Fi network.

Airora's unique technology is a revolutionary advance in indoor air quality, surface hygiene and the reduction of virus and germ transmission.

MEET THE INVENTORS



Lorraine Baldry OBE

Lorraine is a highly experienced business leader whose career spans an extensive range of companies and growth transitions, from start-ups to IPOs and M&A. Her initial background was in IT, including running her own company. She has deep industry-specific knowledge of Engineering, Technology, Health Care and Financial Services. She is currently Chairman of Ccm Technologies and Inventa Partners and a Non-Executive Director of Angel Trains. She has recently been Chairman of Sellafield Limited, Schroder Real Estate Investment Trust and London & Continental Railways and previously CEO of Chesterton International plc, COO at Prudential Corporation, a Senior Advisor to Morgan Stanley and MD of Regus. Lorraine was awarded the OBE in the Queen's Jubilee Honours.



Alan Mole

Alan's expertise in advanced oxidation and anti-microbial technologies, coupled with his exceptional creativity, has led to him being awarded multiple international patents. His vast experience spans both the public and private sectors, in roles ranging from researcher to entrepreneur, CEO and Chairman. Prior to joining the Airora team he was Founder and CEO of Restec Laboratories Limited, Newtec Laboratories Limited, Promanade Ltd and Technical Director of Red Deer Herbs Ltd. Alan's specialist knowledge is exceptionally broad, including Microbiology, Biochemistry, Pathology, Parasitology, Laboratory Management and more.

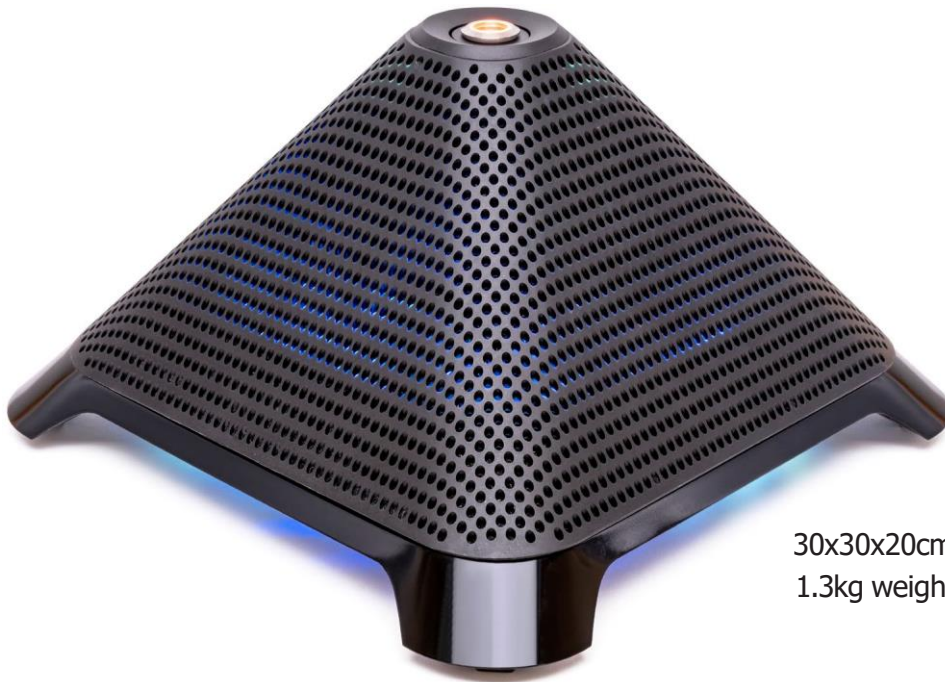


Dr Martin Wyatt

Martin's extensive business and technical experience has included everything from start-up businesses to floatations, M&A and the leadership of charities, research bodies and publicly quoted companies. Originally qualified as both an engineer and computer scientist, Martin was awarded a Phd in 1973. Previously he led the BRE group of research and consulting companies, which include world leading expertise on air quality science, and was a Director of WSP Group plc, Chief Executive of Associated British Consultants plc, and an Advisory Director of BT Redcare. Martin was Founder and CEO of The Intelligent Document Company Limited and ICAD Enterprises Limited.

THE AIRORA PYRAMID

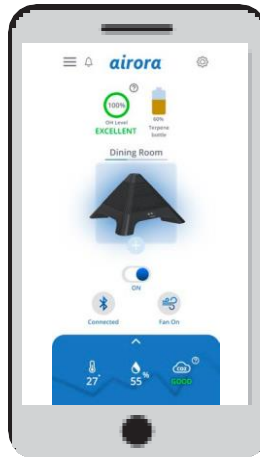
A revolution in indoor air quality, surface hygiene and protection from viruses, bacteria, moulds, allergens and odours



30x30x20cm
1.3kg weight

- ✓ Airora Pyramid treats 80m³ (approx 36m²).
- ✓ Initial purchase includes terpene cannister (3 months life span at 24/7 use).
- ✓ Easy to install replacement terpene canisters – less than 20c/day!
- ✓ Multiple units can be used for larger coverage areas.
- ✓ Low energy running cost - 30W approx 40c/day.
- ✓ No HEPA filter to be replaced.

THE MOBILE APP



The free Wi-Fi-enabled Airora mobile app puts actionable information about your indoor air quality right at your fingertips.

MONITOR YOUR AIRORA DEVICES, WHEREVER YOU ARE

Whether you have one Airora product or 50, you can monitor the status and performance of all Airora devices throughout your Wi-Fi network:

- ✓ Check On / Off status.
- ✓ Within 30 minutes of switching on an Airora device, see when it reaches its max. effectiveness.
- ✓ Receive notification when it is time to order and then replace terpene cartridges.
- ✓ Name each device (e.g., by location) for easy management of multiple devices.

OPTIMISE YOUR COMFORT

Access hourly data on your indoor air quality over the last 24 hours, so you can take action to improve your ventilation and optimise your 'fresh air feeling'.

- ✓ Review the carbon dioxide (CO2 level) and compare performance against ideal levels of CO2.
- ✓ Monitor humidity levels.
- ✓ Monitor room temperature.

The Airora mobile app is available as a free download with the Airora Pyramid and forthcoming Airora Wall/ Floor range. Airora indoor products can be used with or without the mobile app.

FOR EVERYONE EVERYWHERE

We ALL benefit from safer, cleaner indoor air

- ✓ Residential Homes
- ✓ Serviced Apartments
- ✓ Reception Areas
- ✓ Healthcare
- ✓ Office & Retail
- ✓ Restaurants / Cafés
- ✓ Aged Care
- ✓ Schools/ Universities
- ✓ Student Housing
- ✓ Shops / Airports
- ✓ Movie Cinemas / Theatres
- ✓ Hotels / Clubs / Pubs
- ✓ Public Libraries
- ✓ Gyms / Studios
- ✓ Places of Worship

DID YOU KNOW?

Indoor air is typically five times more polluted than outdoor air!

Given today's many environmental challenges, for example more than 80 per cent of people in urban areas are exposed to pollution levels exceeding safety guidelines, we must look after each other more than ever. The Airora Hydroxyl Diffuser will help you protect your loved ones, especially the young and elderly, from Covid-19 and other infections, allergens and pollution.

For many, the development of asthma as a disease starts at home with allergen exposure. Asthma symptoms are often worse indoors owing to common indoor pollutants.

The principal mode by which people get COVID-19 is through exposure to airborne droplets carrying infectious virus.

Breathing VOCs can irritate the eyes, nose and throat, cause breathing difficulties and nausea, and damage the central nervous system as well as other organs.



AIRORA HYDROXYL DIFFUSERS



HEPA FILTER AIR PURIFIERS

FEATURE	AIRORA TECHNOLOGY	HEPA FILTER
Works safely 24/7 with people present	✓	✓
Destroys all types of harmful viruses, bacteria & mould	✓	
Creates an active person to person infection barrier	✓	
Removes all types of Odours throughout a room	✓	
Whisper Quiet (bedroom friendly) and low energy	✓	
Sterilises all the air and exposed surfaces in an indoor space, not just the air that passes through the device	✓	

Only Airora destroys or neutralises all types of germs, allergens and odours and most other irritants and harmful pollutants throughout entire indoor spaces.

Airora's technology:

- ✓ Is independently proven to kill ALL types of harmful bacteria, viruses and vegetative moulds, both in the air and on surfaces.
- ✓ Has been measured killing 99.9999% of airborne virus in less than 5 minutes.
- ✓ Removes ALL types of odours.
- ✓ Is 1000+ times more effective than any type of filter.
- ✓ Destroys or neutralises most other irritants and harmful pollutants.
- ✓ Bedroom friendly, makes less than 10% of the noise of a typical HEPA filter.
- ✓ Uses less than 20% of the electricity that a typical HEPA filter does.

Airora is the future of clean, safe indoor air

WHAT ARE HYDROXYLS

Hydroxyls are small, short lived, oxidant (a powerful decontaminating agent) molecules (OH) which are abundant outdoors and are harmless to all living things.

When hydroxyls are created, they immediately attack and destroy contaminants in the air and on surfaces. These reactions happen within seconds and break down both tiny structures (such as viruses and bacteria) and larger molecules (such as VOCs), so well that hydroxyls are often called 'Nature's Detergent'— a term first coined by Nobel Prize winning chemist Paul J. Crutzen.

Hydroxyls are continuously produced in abundance in the lower atmosphere by multiple processes, including by the breakdown of aromatic oils secreted into the air by plants everywhere.

In outdoor fresh air, hydroxyls are everywhere. During daylight hours there are on average millions in each cubic centimetre (trillions in each cubic metre) of outdoor air.

But the conditions that produce these powerful decontaminating agents in the earth's atmosphere are mostly absent indoors.

Because there are relatively few hydroxyls indoors, no matter how hard and often you clean, bacteria and viruses constantly build up in the air and on surfaces, allergens remain active, and odours persist. However, our scientists have developed a way to reproduce the natural air chemistry of hydroxyls... indoors!

Airora's technology gently blows a mix of natural atmospheric components, such as trace amounts of oils extracted from plants and flowers, into the room. The patented process creates a natural self-sustaining supply of hydroxyls — a Hydroxyl Cascade — which spreads in seconds throughout the entire space, and into every corner, without any need for air movement (by what scientists call 'molecular diffusion').

Just like in the Great Outdoors, the Hydroxyl Cascade continuously destroys air- and surface-borne pollutants on contact (and simultaneously reduces any excess ozone in the room).

All of UK, EU and US regulatory authorities have recognised hydroxyl radicals as a safe cleansing agent.

THE HYDROXYL ADVANTAGE

- 1** Only Airora provides 24/7 whole-room to whole-building protection from **all types of germs, allergens and odours and most other irritants and harmful pollutants**.
- 2** Based on research reported by the UK Government's Scientific Advisory Group for Emergencies (SAGE) and others, Airora is 1000+ times more effective, and far faster, than any traditional filter in reducing harmful airborne **viruses, bacteria and moulds** throughout a room
- 3** Airora's technology decontaminates all the air and exposed surfaces in a room and can typically **kill 99.9999% of germs** in the air, throughout a room, in minutes.
- 4** Only Airora sanitises all the exposed surfaces in a room, not just the air.
- 5** Airora kills **ALL the types of viruses and bacteria (including Coronavirus)** that harm people.
- 6** Airora neutralises **ALL** common types of allergens.
- 7** Airora breaks down and removes **ALL** common lung irritants and other pollutants.
- 8** Airora removes ALL types of odours.
- 9** No other air cleaning technology can safely and continuously remove any of **germs, allergens, irritants, pollution or odours** throughout an entire room, with people present, let alone achieve all simultaneously.
- 10** Airora kills airborne **germs in real time**, so quickly that it can even stop another's sneeze from infecting you.
- 11** Unlike filters, Airora doesn't have to try to suck all the air quickly and forcibly in the room through a filter, consequently Airora is compact, lightweight, whisper quiet and requires little energy to operate.
- 12** Airora is intrinsically safe, it simply reproduces, indoors, what keeps the air clean and safe in 'the great outdoors'.
- 13** All of UK, EU and US regulatory authorities have recognised hydroxyl radicals as a safe cleansing agent.

THE 'OPEN AIR FACTOR'

The recognition that outdoor air has germicidal properties was widely exploited during the late 19th and early 20th centuries in the treatment of tuberculosis, where patients underwent 'open-air therapy' to help them heal. It was further exploited by military surgeons during the First World War who used the same open-air technique to disinfect and heal severe wounds and by doctors to treat influenza patients during the 1918-19 pandemic.

During the 1960s and 1970s these germicidal properties were briefly re-visited by UK biodefense scientists at Porton Down who conducted experiments proving that open air has a potent germicidal effect. However, not knowing the origin of the effect, they simply called it the 'Open Air Factor' or OAF. The Porton Down scientists did demonstrate that OAF effect occurred outside but didn't occur inside unless ventilation rates were very high indeed. However, they ultimately failed to identify the active agent, as at that time test technique were insufficient.

When this research ended in the 1970s, interest in the OAF again fell away except amongst a small group of scientists, including the inventor of hydroxyl cascade technology, who were determined to unravel the mystery.

In the years that followed, while hydroxyl radicals were recognised as one possible source of the germicidal effect, others contended that, given typical concentrations they were statistically unlikely to react with harmful viruses, bacteria and moulds in sufficient numbers to be the OAF germicide.

However, by the turn of the 20th century, by persistently focussing on advances at the intersection of atmospheric chemistry, microbiology and aerobiology the inventor of hydroxyl cascade technology concluded that OAF wasn't just hydroxyls in general, but rather a particular subset of hydroxyl radicals that are created in a particular way, such that they became a powerful targeted germicide.

One significant source of hydroxyls is the natural 24-hour outdoor reaction of ozone with aromatic essential oils emitted from plants. The defining feature of this source is that the underlying cascade reaction condenses, and has a strong propensity to occur on surfaces, including the surfaces of particles such as harmful viruses, bacteria and moulds. It is hydroxyls created from this condensing reaction, at the very surface of viruses, bacteria and moulds, which make them such a powerful germicide.

Fortunately, humans, animals, and plants have evolved over millennia to co-exist with hydroxyls and their reaction by-products. Atmospheric hydroxyls cannot enter the blood stream or tissues within the body, because skin and mucosal membranes have evolved to provide a protective barrier.

PERFORMANCE ASSURED BY ACCREDITED INDEPENDENT LABORATORIES



Airora founders have been closely involved throughout the 15-year development journey. Between them they have extensive scientific, engineering, environmental and business expertise. This journey has also involved the expert and professional capabilities of multiple, internationally renowned, independent and accredited research and testing organisations including....



THE UK BUILDING
RESEARCH
ESTABLISHMENT



FDA APPROVED
LABORATORY, NEW
YORK STATE



THE UNIVERSITY
OF LEEDS



THE UK HEALTH
PROTECTION AGENCY



THE UK HEALTH &
SAFETY LABORATORY



CARDIFF METROPOLITAN
UNIVERSITY



uOttawa
THE UNIVERSITY OF
OTTAWA



THE UNIVERSITY
OF YORK

INTERNATIONAL AWARDS



AIRORA PYRAMID has been awarded the prestigious **GOOD DESIGN AWARD** by the Chicago Athenaeum Museum of Architecture & Design and the European Centre for Architecture Art Design & Urban Studies.

AIRORA have also won the **BIOTECH DEVELOPMENT FIRM OF THE YEAR AWARD** by Corporate LiveWire.



*Continuous protection from infection and pollution -
independently tested by world leading accredited laboratories*

TERPENE REPLACEMENT BOTTLE

PREPARING THE TERPENE BOTTLE FOR INSERTION

- 1 Remove the foil cover from the bottles cap.
- 2 Insert the wick.
- 3 Leave 1cm of wick exposed.
- 4 Align the diffuser with the bottle.
- 5 Let the diffuser press the wick down as it is fitted.
- 6 Turn the diffuser clockwise to lock in place, then leave the bottle for 15 minutes for the wick to soak up the linalool.



ACCESSING & FITTING THE TERPENE BOTTLE

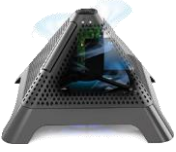





- 1 Turn the cover cap anti-clockwise and lift the cap away from the body to reveal the terpene bottle & diffuser. If there is an old bottle present lift it out.
- 2 Insert new bottle, aligning the 'nose' on the diffuser with the pin contacts on the side of the terpene bottle socket. Re-fit the cap. Align the cap when slightly rotated and turn clockwise to lock in position.

 ANY TERPENE BOTTLE ASSEMBLY THAT IS REMOVED CAN BE SAFELY DISPOSED OF IN YOUR HOUSEHOLD WASTE

ECONOMIC & SOCIAL BENEFITS

AIRORA COULD HELP DELIVER A NUMBER OF COST BENEFITS, REDUCING AUSTRALIAN HEALTH (AND AGED CARE) COSTS AND HELP PEOPLE GET BACK TO WORK FASTER

INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES
 <p>AIRORA HYDROXYL DIFFUSER DEVICES</p>	<p>Viruses and bacteria present in the air and on surfaces in hospitals are neutralised, reducing the transmission and impact of HCAI's.</p> <p><i>(Health Care Associated Infections)</i></p>	<ul style="list-style-type: none"> ✓ Improved patient experience ✓ Improved patient safety ✓ Fewer HCAI deaths ✓ Improved patient outcomes & costs ✓ Reduced ward closures ✓ Reduced A&E department closures ✓ Reduced length of stay ✓ Reduced litigation costs associated with HCAI's ✓ Reduced staff absences ✓ Patient back into employment quicker ✓ R&D in AU for the AIRORA device ✓ Export from AU 	 <p>Patient Benefits</p>  <p>Australian Healthcare & wider public cost benefits</p>  <p>Wider economic benefits</p>

For information on Australian Commission of Safety and Quality in Health Care

[CLICK HERE](#)

KEY TOPICS & VIDEO LINKS

This catalogue provides an overview of Airora's amazing Airora Hydroxyl Diffuser Technology.
For further details, technical specification, features and data see our website:

[CLICK HERE](#)

[NATURE TO THE RESCUE: THE SCIENCE OF HYDROXYL DIFFUSERS](#) – Science Journal Article

[CLICK HERE](#)

[OPEN AIR FACTOR: A NATURAL FORM OF INFECTION CONTROL](#) – Cureus Journal Article

[CLICK HERE](#)

[HEALTHY INDOOR AIR OUR FUNDAMENTAL NEED](#) - Medical Journal of Australia

[CLICK HERE](#)

[HEALTH COST BENEFITS ANALYSIS](#) – External report

[CLICK HERE](#)

[HEALTHCARE ASSOCIATED INFECTIONS](#)– Australian Commission

[CLICK HERE](#)

[IMAGINED BY NASA](#) – Video - 1 minute 23 seconds

[CLICK HERE](#)

[HYDROXYLS NATURES DETERGENT](#) – Video - 1 minute 45 seconds

[CLICK HERE](#)

[AIRORA OVERVIEW](#) – Video - 2 minutes 9 seconds

[CLICK HERE](#)



The Airoora Open Air Factor

KILLS INFLUENZA VIRUS

(indoors in the air & on surfaces)*

*Independently tested by
Campden BRI &
Public Health England



halsto



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