

zIVF-AIRe 100C CLEAN AIR™ for use in IVF Laboratories

As technology has advanced, the necessity to filter air has become even more important.

Ultraviolet light technology combined with Photo-Catalytic-Oxidation is an important and unique feature of this air purification/filtration system



No matter how well you maintain your laboratory, your work area can be filled with air pollutants, dust particles, mold spores, dander, pollen, dust mites, cleaning chemicals, volatile organic compounds (VOCs), chemically active compounds (CACs), carbon monoxide, viruses, and bacteria.

Add to this the chemical irritants lurking about . . . in carpets from the front office, behind the walls, from off-gassing in plastic materials, in the cleansers and waxes used to keep your laboratories and work surfaces clean. All these have a direct influence on your results. The key to effective air filtration of damaging volatile organic compounds is in the Photo Catalytic Oxidation Chamber. The chemical compounds become highly reactive when exposed to a specific wavelength of ultraviolet light. The photocatalyst attracts pollutants and converts them into benign compounds such as water (H₂O) and carbon dioxide (CO₂).

The zIVF-AIRe 100C CLEAN AIR™ Air Filtration / Purification System significantly reduces:

- Bacteria & Viruses
- Mold
- Fungus
- Cleaning Chemicals
- Paint
- Solvents
- Ozone & Smog
- Nitrous Oxide
- Hair Spray
- Perfume
- Pesticides
- Alcohols
- Ammonia
- Chlorinated Solvents
- Carbon Monoxide

Over 50 other chemicals were decomposed significantly with the zIVF-AIRe 100C CLEAN AIR™ Air Filtration / Purification System

STEP ONE - Absorbs toxic chemicals and gases

The FRONT POSITION Activated Carbon Filter with specially formulated gas absorption media (including zeolite and potassium permanganate) absorbs automobile exhaust fumes, organic hydrocarbons, formaldehyde from particle boards used in construction, paint, solvents, chlorine, cleaning chemicals, volatile organic compounds (VOCs), chemically active compounds (CACs) and other harmful agents.



STEP TWO - Hospital Grade HEPA Filter removes micro-particles

A Back-Position Hospital Grade HEPA Filter individually tested by the supplier and certified to remove particles of 0.3 µm with not less than 99.97% efficiency by an approved aerosol. Pollen, mold, fungal spores, dust mites, and bacteria are examples of micro particles.

STEP THREE - Photo-Catalytic-Oxidation destroys toxic chemicals and eliminates odours

The Photo-Catalytic-Oxidation converts malign toxic compounds (even carbon monoxide and nitrous oxide) into benign constituents such as H₂O and CO₂. The catalyst is such that it does not wear out or lose its effectiveness as a result of its actions.

STEP FOUR - Ultraviolet Light

Ultraviolet light attacks the molecular structure of viruses and bacteria, which are too small to be filtered out by the HEPA filter, thus rendering them harmless. Ultraviolet light converts VOCs and CACs into H₂O and CO₂. Ultraviolet light technology combined with Photo-Catalytic-Oxidation is an important and unique feature of this air purification / filtration system.

Electronic Sensors

Electronic sensors monitor air quality and automatically increase the performance of the air purification system to compensate for periods of unusually high chemical activity, and increased human activity.

Warning lights alert staff to the presence of toxic chemicals and fumes well before they reach dangerous levels or become detectable to the human senses. In the absence of high activity, the air purification system can switch into a sleep mode and "wakes up" as soon as it detects activity



Photo-Catalytic Purification cleans air down to the last molecule

The key to Photo-Catalytic-Oxidation is the titanium dioxide in the photo-catalytic chamber*, where it becomes highly reactive when exposed to a specific wavelength of ultraviolet light. In the presence of organic pollutants, such as solvents, alcohols, carbon monoxide, dyes, and fuel oils, the activated photo-catalyst attacks the chemical bonds of the pollutants, converting the toxic compounds into benign constituents such as H₂O and CO₂.

The UV lamp used in the zIVF-AIRe 100C CLEAN AIR™ Air Filtration/Purification System has an output in the 254-nanometer wavelength range. This wavelength destroys bacteria and viruses and does NOT produce ozone.

Ozone is not detected in any measurable quantity at the exit grill of an operating zIVF-AIRe 100C CLEAN AIR™ Air Filtration / Purification system.

UV light is not reflected by most surfaces but absorbed and thus cannot exit through the outlet grill of the zIVF-AIRe 100C CLEAN AIR™ air purification system. The "blue" visible light seen when the unit is operating is characteristic for the UVC lamp, and is not an indication of UV radiation emission.

Feature Summary of the zIVF-AIRe 100C CLEAN AIR™ Air -Filtration/Purification System

- Air Purification is effective up to 2,000 square feet / 185m² and it only costs a few pence a day to operate full time, 24 hours a day.
- The FRONT POSITION Activated Carbon Filter, (ACF) a specially formulated mixture of proprietary compounds selected to absorb all VOCs and CACs in the IVF laboratory environment. The specially formulated gas absorption media (including zeolite and potassium permanganate) absorbs automobile exhaust fumes, organic hydrocarbons, formaldehyde from particle boards used in construction, paint, solvents, chlorine, cleaning chemicals, volatile organic compounds (VOCs), chemically active compounds (CACs) and other harmful agents.

- The zIVF-AIRe 100C CLEAN AIR™ has a back-position Hospital Grade HEPA Filter individually tested by the supplier and certified to remove particles of 0.3 micrometers with not less than 99.97% efficiency by an approved aerosol.
- Electronic Sensors monitor air quality and automatically increase or decrease the performance of the air purification system.

zIVF-AIRe 100C CLEAN AIR™ Air Filtration / Purification System Description

- Air outlet grill with safety lock
- Air inlet grill with safety lock
- High output UV lamp destroys germs
- Photo-catalytic oxidiser
- High efficiency, low noise, reversed curved, motorised impeller w/sealed ball bearings
- High impact abs plastic with no off-gassing
- Activated carbon filter
- Hospital grade HEPA filter
- Computerised electronic controls
- Infra-red motion detector
- Toxic chemical sensor to monitor air quality

zIVF-AIRe 100C CLEAN AIR™ Air Filtration / Purification System Technical Specifications

Dimensions:	21.5"w X 18"h X 8"d (55cm X 46cm X 20cm)
Weight:	23 lbs. (10.43 kg)
Max Air Flow:	265 cfm /7.5 m ³ per minute
Max Watts:	110 watts
Voltage:	120v - 60hz /220v - 50hz
Blower:	Reversed - curved motorized impeller
Catalyst:	Metal oxides
U.V. Range:	254 nm (produces no ozone)
Particle Filter:	0.3 micron HEPA
Gas Absorption:	Activated carbon media
Application:	2,000 sq. feet max./185 sq. metres
Service:	U.V. Lamps -1 year, Filters - 6 months
Warranty:	2 year limited warranty on all components excluding light and filters