Air, vital element

Quality of life and air

Air is one of the essential elements for humans, along with water.

To survive, humans need oxygen. We breathe air every day, and the air around us must be clean.

The issue of air pollution

More than 80% of people living in urban areas are exposed to dangerous levels of air pollution.

Millions of people suffer from respiratory and cardiovascular diseases caused by air pollution.

Pollutants and allergens

Pollen allergy has a significant clinical impact. In recent decades, the prevalence of pollen-induced respiratory allergic reactions has increased.

The prevalence of pollen allergy is currently estimated at 40%. Allergen exposure is a critical environmental determinant of asthma, and this includes air pollution.

Air pollution is everywhere

Air pollution comes from many sources, but the main one is human activity, affecting indoor and outdoor air quality.

So many things in our immediate environment can produce pollutants.

The effects of air pollutants on humans

Air pollutants usually act mainly on the respiratory tract.

They can enter the human body through several entry routes, such as the skin, mouth and lungs. Gaseous pollutants can penetrate deeply into the respiratory system and be absorbed by the body's wet tissues on their way. The consequence is a change in the pH of physiological fluids, leading to irritation.

Organic solvents can be easily absorbed by the blood, which transports them quickly through the entire body. The likelihood of contaminants entering the human body depends mainly on particle size.

Larger particles remain in the nose or are swallowed, but smaller particles can enter the lungs. Smaller particles absorb more toxic material, which they can carry deeper into the body.

All kinds of chemicals can contaminate home air, and this pollution can be harmful to our health. Such pollutants can come from household equipment, such as carpets, curtains, etc. They can promote the entry of toxic substances into the air.

They can promote the entry of harmful particles into indoor air, such as carcinogens. Indoor air can also be contaminated by microorganisms, which cause all kinds of rashes and allergies. Such pollutants can accumulate in the indoor air.

Water, vital element

Every living being needs water

We can live for weeks without eating, but only a few days without water.

Water performs countless functions in our bodies: it lubricates, is the building material of cells, regulates body temperature, transports nutrients and eliminates harmful substances.

The lives of plants, animals, and, of course, humans depend on a specific availability of water, which is essential for the many vital functions to take place regularly.

In the human organism, water is the medium in which many chemical reactions occur, in some cases acting as a catalyst, in others taking part in the chemical reaction itself.

Crucially, water plays a role in digestive processes, where it intervenes in hydrolysis reactions to break down complex molecules ingested with food into simpler, assimilable ones.

Water in human body

Water plays a significant role in the human organism, as it is necessary to maintain vital functions.

Thanks to its unique chemical and physical properties, water is involved in almost all the human body functions, which is why its presence is kept virtually constant. When it is in short supply, the thirst mechanism kicks in, while excess water is quickly expelled through urine or increased sweating. Our organism tolerates Our bodies can only handle minor variations in total water content, so while fasting can be continued for a few weeks, we can only go a few days without drinking.

What defines water quality

Quality can be defined as compliance with a reference, with a standard to which a given product must conform. In the specific case of water intended for human consumption, the standard is represented by Legislative Decree 31/2001 (Implementation of Directive 98/83/EC), which must be met by water to be defined as drinkable.

This decree states that the characteristics of water are defined by the fulfilment of 54 parameters: 2 "microbiological", 28 "chemical" (undesirable and toxic elements, for which imperative concentration limits are set), 21 "indicators" (aspects for which recommended values should not be exceeded) and 3 "radioactivity". Therefore, from a legislative point of view, water is considered good quality if it satisfies health and hygiene standards agreed at the Community level.

These parameters concern the microbiological and chemical-physical aspects: good drinking water must be safe, i.e. it must not contain micro-organisms or substances that can harm human health.

Organoleptic water parameters

For the consumer, the water quality is something else again. The water to be drunk must be 'good', pleasant, without extraneous tastes and odours.

And this is precisely the main criticism of tap water. The taste of chlorine coming from our taps, while on the one hand signifying microbiological purity, on the other, represents the main reason for refusal for many citizens who opt to buy bottled water or a domestic drinking water treatment plant.

But the operator cannot always guarantee the impeccable organoleptic quality of

the water delivered to the tap for several reasons.

Firstly, because the responsibility Firstly, because the responsibility of the aqueduct ends at the meter, and from that point onwards there can be various reasons for alterations in quality, such as the presence of tanks, centralised treatment plants, old pipes, etc.

For this reason, the law stipulates specific parameters of a non-sanitary nature. In particular, those concerning organoleptic characteristics, i.e. smell, taste, colour and turbidity, must be "acceptable to consumers and without abnormal variations".

The notion of water purity

Nowadays, the definition of water quality cannot be limited to compliance with hygiene parameters alone. Still, it also involves the environmental impact and the mission to improve organoleptic parameters, which are the yardstick for the final consumer.

There is no such thing as the absolute best water, as water requirements are a function of the different physiological needs of each of us.

There are, however, some waters that are better than others. Indeed, water is of higher quality if it has the lowest environmental impact and is close to the familiar concept of "purity" in addition to satisfying health parameters. "Purity water" is a concept that the end consumer associates with the absence of any foreign substance capable of being perceived organoleptically.

Ozone: an excellent ally for our health

What is ozone?

Ozone is a naturally occurring gas in the stratosphere, and, as we all know, it is our natural protection against harmful UV rays.

It has a bluish colour and a characteristic odour in high concentrations - the same smell that sometimes accompanies thunderstorms - due to the ozone produced by lightning discharges.

Ozone can be generated artificially by a process called the 'corona effect'. It consists of an electric current that flows between a conductor with a high electrical potential and a surrounding neutral fluid, usually air - from oxygen naturally present in the atmosphere, using an Ozonator machine.

Christian Friedrich Schonben discovered its high oxidising power in 1840. Today, ozone helps to solve many aspects of air and water pollution. Its use is becoming increasingly widespread, given its range of action: from the most professional environments (hospitals, food industry, communities, etc.) to the more domestic ones we know (homes, offices, cars, etc.).

Natural and eco-friendly

Ozone is a natural gas consisting of 3 oxygen atoms (molecular formula O3).

It has highly bactericidal, acaricidal, fungicidal and virus inactivating properties. The transfer of one oxygen atom expresses these properties. At the end of its sanitising action, it transforms into normal oxygen without leaving residues of any kind.

It disinfects without the need for chemical additives and detergents, using its natural oxidising power. An effective sanitiser and deodoriser. 100% ecological and economical.

How it works

The use of ozone generates a process of oxidation of the air in the treatment environment.

In just a few minutes, this process attacks and breaks down (literally destroys) the cellular components of any bacteria,

viruses, mould, mites, and tiny pests in the environment.

Present odours are neutralised through ozonolysis and oxidative decomposition (breaking the bonds within odour molecules in the air, surfaces, and porous materials).

Water is also purified and sanitised. As a gas, ozone penetrates everywhere: in the porosity of walls and floors, in wardrobes, in the deepest layers of sofas, upholstery and mattresses.

Sanitisation is total. Once the work is complete, all that is needed is to air the treated environment, and the oxygen molecules take the place of the ozone molecules. No residue, just a clean smell.

Benefits

The advantages of sanitising with ozone are:
› extreme effectiveness;
› rapidity;
› simplicity of use;
› wide range of applications;
› absence of residues.

Another advantage over standard air purifiers is that it does not need filters or spare parts: everything it needs to work is included in the package. Plug it into an electrical outlet.

The most effective natural disinfectant

Ozone is the most effective natural disinfectant currently known. It quickly reaches the most hidden spots, removing up to 99.98% of impurities.

Moreover, thanks to its high oxidising and sanitising power, it can inactivate any pathogen, virus, mould, fungus, and allergens in a short time (varying from a few seconds to a handful of minutes) well as eliminating odours, even persistent ones.

Ozone is also highly effective in treating water, purifying any biological, chemical or mineral contaminants without altering its taste.

It quickly sterilised food and drinks containers. Ozone also reduces the possible presence of chlorine, agricultural pesticides and metals such as iron and manganese.

Ozone treated water can be used, for example, to:
› sanitise and preserve fruit, vegetables and food for longer;
› drinking, you and your pets;
› washing your face, hair or body;
› treat dermatological conditions, clean and sanitising wounds;
› sanitising dabs and sponges in the kitchen and bathroom

Powerful and safe

Ozone is the most effective disinfectant agent against allergens and pathogens in air and water, even compared to chemical detergents.

It spreads throughout the environment, penetrating deep into fabrics and reaching even the most hidden places where bacteria and allergens lurk.

Approved and certified

The Italian Ministry of Health, with protocol No. 24482 of 31 July 1996, recognised the use of ozone in the air and water treatment as a natural remedy for the sterilisation of environments contaminated by bacteria, viruses, spores, mould and mites.

The CNSA* has also recognised ozone as a "disinfecting and disinfectant agent in air and water treatment".

CNSA: National Committee for Food Safety is a technical advisory body operating within the Ministry of Health. It provides technical and scientific advice to administrations dealing with risk management, food safety and scientific opinions. The use of ozone is also regulated, for food purposes, by Directive 2003/40/EC of the EFSA Commission of 16 May 2003.

Ozono properties

It neutralises bacteria, fights infection and inactivates viruses.

Ozone sanitises, oxygenates and regenerates the air we breathe and disinfects the water we use, all thanks to its properties.It is a powerful ally in the fight against allergies, asthma and infections because it reduces the microbial load in the air and on surfaces. It eliminates 99% of bacteria, moulds, fungi, yeasts, pollen, mites and inactivates viruses.

Areas of use

Ozone is the best means created by nature to clean the environment.

These particular devices help us to rest more easily, eliminate fatigue, suffer minor discomfort and perform better in well-being. Having an ozone generator is the best investment for you and your family.

It is indispensable to use ozone generators in all places where there is a gathering of people, where bacterial load and odours related to or generated by human activities are exceptionally high.

Ozonizers: ozone sanitizers

This proposal stems from the conscious need to live our lives more hygienically.

Today we all need to be more careful about sterilising the objects we use and sanitising the environments where we live. An Ozonator is a device capable of eliminating foul odours and purifying the air in a room by emitting a certain quantity of ozone.

However, the substance in high concentrations can be toxic, so it is advisable to evaluate the advisability of the purchase based on some crucial parameters. Firstly, the size of the room to be cleaned and secondly, the type of use of the space. Removing unpleasant odours does not require the same effectiveness as slowing down the production of mould in very humid areas, so a suitable device will be the one able to respond precisely to your needs.

Sanitising capacity

This proposal stems from the conscious need to live our lives more hygienically. Choosing to equip your home with an ozone generator depends primarily on your needs.

Unhealthy habits, such as smoking in the home or not ventilating the rooms enough daily, can affect the air quality in the house and make it sick.

Let's consider those particular cases in which the same environment is lived in by a large community, with an inevitable continuous exchange of viruses and bacteria. The need to equip oneself with an appliance capable of decontaminating the air goes well beyond the price you have to pay to improve air quality.

Our Ozonators are ideal for sanitising domestic and/or professional environments and sterilising against bacteria, viruses and mites.