



Ozone Technology

FACT SHEET

What is ozone?

Generated from sunlight, ultraviolet rays and lightning, ozone is often referred to as nature's disinfectant. In fact, many people notice that ozone has a distinctive sweet odor, similar to the smell after a summer rainstorm likely because lightning is one way ozone is produced in nature. Ozone is nature's way of controlling bacteria growth within our environment. Ozone has been proven to have a much higher disinfection potential compared to all other disinfectants available for use today. It can effectively kill viruses, bacteria, fungi, and parasites, including those causing food spoilage or human diseases.

What is the chemical make up of ozone?

A molecule of "normal" oxygen is comprised of two atoms of oxygen bonded together (O₂). Ozone (O₃) is created by adding a third oxygen atom to the oxygen molecule. As the newly formed ozone molecule is used up, (either by attacking impurities or through normal degradation), it is changed back to normal oxygen, leaving no harmful by-products in your water. Ozone has been proven to have a much higher disinfection potential compared to all other disinfectants available for use today. Ozone is completely natural and occurs in the environment every day.

Is using ozone technology safe?

Yes. Unlike other water treatment processes, oxidation is a natural, chemical-free process that produces zero wastewater and leaves behind oxygen molecules like the ones in the air we breathe. Thousands of cities worldwide including London, Moscow, Paris, Singapore, Los Angeles, and Milwaukee, to name a few, have been using ozone water treatment systems for many years. Most top water bottling companies also rely heavily on ozone technology to disinfect bottles and provide clean, safe water for consumers.

How is ozone different from chemical treatments?

Ozone destroys microorganisms instantly and effectively without leaving harmful residue in treated food or processing water. Therefore, ozone is safer and environmentally friendlier than most other antimicrobials. For example, ozone kills bacteria 3,125 times faster than chlorine.

Where can ozone water treatment be used most effectively?

Ozone treatment can be used for a wide variety of applications. Commercial uses of ozone include purification of drinking water, sterilization of medical instruments and devices, decontamination of fresh produce, and food preservation. Ozone also is useful in removing odors, and not just in drinking water).



How is using ozone with a carbon filter system effective?

Carbon filters can be used very effectively with ozone generators. Carbon filters remove large particles such as lead, copper and other sediments from turbid water. Ozone gas is injected into the filtered water, naturally killing bacteria to produce the purest form of water. This water can be used for many applications such as decontamination of produce, countertops and other surfaces, baby bottles, and of course for drinking.

How are ozone treatment systems different from other methods?

Ozone is most effective in killing bacteria and disinfecting than any other method including reverse osmosis, ultraviolet light, and regular filtration. Ozone treatment systems are also much simpler to use than other methods, and in most cases, do not require multiple pieces of equipment. Portable systems provide the versatility to install in different and varying locations where water purification and disinfection may be needed.

The Hydrological Cycle

