Ozonated Water Generator

WASH AWAY BACTERIA AND VIRUSES ON CONTACT

What is Ozonated Water?
Ozonated water is the world’s most powerful oxidant capable of killing all common food pathogens, such as E. coli, Shigella, Salmonella, Staphylococcus, listeria and all microorganisms. It is very effective and completely safe and is now widely used for sanitation and for superior disinfection purposes. Effective because it kills 99.99% of all bacteria and viruses in just 5secs. It is tested and certified by SGS, the world’s leading inspection authority; by Campden BRI for food safety & hygiene and Soil Association Organic of UK. Safe because after disinfection, ozone (O3) becomes oxygen (O2). It leaves no residues, by products, taste nor odour. It has full FDA approval for direct food contact application.

What does ozonated water do?

For Hand Disinfection
Every one of us has countless of unseen bacteria on our hands, which we gather and spread with each job we do. Our hands continually pick up germs from the things we touch, such as other people, pets, raw food and surface contacts. If we then touch our nose, eyes, or mouth, our food, or a cut or wound, these germs can get inside our body and make us ill. Because these bacteria can reproduce every 20 minutes, hand disinfection is crucial to prevent food borne diseases, cross contamination and other diseases.

You will need to disinfect your hand more frequently than others if you are handling food & beverages, coming into contact with the public or touching contaminated surfaces. For eg,

a. Food handlers in Hotels, Restaurants, Catering, Food Courts.
b. Healthcare providers looking after babies, elderly, patients, pets
c. Patients who coughs or sneezes,
d. Children in nursery, day care or kindergartens, for lowering the risk of HFM Disease.
e. Cleaners for toilets, for collection of soiled dishes;
f. Foot reflexologist for hygienic purpose
g. Workers in animal farms, seafood outlets; meat product outlets or poultry outlets.

As contaminants can be transferred directly between individuals and via the surfaces touched, effective ozonation disinfection is important in preventing the transfer of infections. It is completely safe for all skin types since it does not contain any chemicals, unlike the majority of other chemical disinfectants.

For your food

Many of us do not realize that fresh produce may become contaminated at any point from the farm right to our dining table. Your fresh fruit and vegetables typically contain pesticide residues and bacteria. Vegetables that are consumed raw are a particular concern. Washing can decrease but not eliminate contamination. Fresh-cut products such as shredded lettuce, sliced tomatoes, salad mixes, shredded cabbage, cut melon, etc. will be free of contamination, when rinsed with ozonated water (O3). A real peace of mind for the Food Handlers.
Fish and meat that is placed in temperatures above 4 deg C encourages bacteria multiplication. With proper ozone sanitization, all unseen bacteria and virus will be eliminated. Your product will have a longer lifespan, as it helps preserve quality, freshness and nutritional value. As fish & meat are highly perishable food, it helps prevent deteriorating, thus effectively reducing spoilage and improving profitability. Bacteria present on the surface and in the guts of dead fish multiply rapidly and will be killed instantly. Washing of fresh oyster and fresh cockles, salads and other seafood cold dish, like sushi would remove any food poisoning bacteria and viruses, prior to serving.

It is important to maintain a high standard of hygiene so that germs are not easily spread in the work area, waste area, display area, and on the seafood product. The ozonated water is a miracle to prevent any outbreak of disease. Eliminate all bacteria and germs instantly and at the same time clear all foul odors present on floors, in toilets, drains and start creating a clean, odourless, hygienic and a healthy environment.

**For your kitchen, its equipment & avoiding cross-contamination**

Cross contamination in food is one of the common causes of foodborne illness. Micro-organisms originated from many sources can contaminate food including safely cooked, ready-to-eat food during the food preparation and storage processes. Preventing cross-contamination can help to eliminate the incidence of foodborne illness.

'Bugs' and 'germs' are the common names for the harmful organisms - such as bacteria and viruses - that cause food poisoning. Because we can only see them through a microscope, they are also called microbes or micro-organisms. They can get into our food at any point in the food chain - from the time it is produced to the moment it is put on our table for consumption. If they are allowed to survive and multiply in food, they can cause illness when that food is eaten. Food-poisoning bacteria multiply fast, but to do so they need moisture, food, warmth and time. They multiply best between 5°C and 60°C. One germ can multiply to more than 4 million in just 8 hours under the right conditions. Food poisoning micro-organisms can be dangerous and call kill – although this is rare. They are very hard to detect since they do not usually affect the taste, appearance or smell of food.

The common routes of cross-contamination are:

**Food to Food**

Raw perishable food can contain harmful bacteria. For instance, raw meats contain a large number of naturally occurring bacteria such as Salmonella, Listeria and Campylobacter, which cause foodborne illness. Hence, harmful bacteria can be transferred from raw to cooked or ready-to-eat food. For example: Meat drippings from raw meat placed on the top shelf of the refrigerator may drip onto ready-to-eat food that is placed on a lower shelf or Placing improperly packed raw food next to ready-to-eat or cooked food in the refrigerator.

**Equipment to Food**

Bacteria are able to multiply in cracks and crevices found in equipment. If kitchen equipment and utensils are improperly cleaned, the bacteria can be transferred to another food. For example: Use of the same knife and cutting board for cutting different types of food such as raw food (meat, poultry and seafood), followed by ready-to-eat food (e.g. salads) without thorough washing of the knife and cutting boards.

**Work Surfaces to Food**

Work surfaces such as kitchen table tops may contain bacteria as a result of contact with dirty equipment, raw food and people. It may potentially incite bacterial growth, resulting in food poisoning and other such maladies related to consuming food that has been contaminated. This would spell trouble for your business. If the surface is not cleaned thoroughly, the bacteria would contaminate any food that is in contact with the surface. For example: Cartons that are stored on the floor would contaminate the surfaces if next placed on the table tops.

**People to Food**

People can be a source of cross-contamination to food. This is because harmful bacteria live in and on our bodies, especially on and around our faces, hands and on our clothing. As they are usually present in small numbers, they do not make us sick. If these bacteria are transferred from our bodies or clothes to food and allow to multiply, the food can become unsafe. For eg: Touching of raw meats and followed by slicing of cooked hams without washing hands between tasks or Inadequate hand washing and poor personal hygiene of food handlers, like after emptying rubbish bins, after touching pets or after using the toilet, would have contamination of food by faecal bacteria.

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**SGS Test to Show Biolux Ozonated Water’s Effectiveness On Disinfection and Pesticide Removal**

<table>
<thead>
<tr>
<th>Disinfection effect</th>
<th>S. aureus</th>
<th>E. coli</th>
<th>Salmonella spp</th>
<th>P. aeruginosa</th>
<th>C. albicans</th>
<th>E. coli (heat-resistant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ppm</td>
<td>CFU/ml</td>
<td>CFU/ml</td>
<td>CFU/ml</td>
<td>CFU/ml</td>
<td>CFU/ml</td>
<td>CFU/ml</td>
</tr>
<tr>
<td>5 seconds</td>
<td>1.5x10⁰</td>
<td>6x10⁰</td>
<td>1.3x10⁰</td>
<td>4.5x10⁰</td>
<td>1.3x10⁰</td>
<td>1.3x10⁰</td>
</tr>
<tr>
<td>15 seconds</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
</tbody>
</table>

**Pesticide residues removal**

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>Methylparathion</th>
<th>Glyphtone</th>
<th>Rictol</th>
</tr>
</thead>
<tbody>
<tr>
<td>ppm</td>
<td>0.012</td>
<td>0.009</td>
<td>0.019</td>
</tr>
</tbody>
</table>

*Source: Sanitary and Environmental Health (SEH) was established in 1998 and is the largest institution of disinfection, testing and certification in the world. It has been well-recognized for its effectiveness in the field for almost 20 years. The SGS group is the leader and innovator of inspection, testing and certification service and is the accredited highest standard of professional, quality and honesty.*
For the commercial kitchen owners, ozonated water offers a top-notch disinfection and sanitation solution for any business involving food – handling, preparation and/or serving. By installing an ozonated water generator, it will help sanitize cutting boards, knives, gloves, utensils, equipment, containers and all work surfaces. It will help eliminate bacteria on all contact surfaces of sorting, grading, processing and packaging equipment & disinfect tools for cutting, slicing, shredding, etc. Bear in mind that cleaning and disinfecting are not the same thing. Cleaning means using detergent and water to remove dirt or residues that you can see and some of the germs, whereas disinfecting means actually destroying the germs. Although surfaces of work top or food product may look clean, they can carry many harmful bacteria.

Protect and safeguard your establishment from bacteria entering through food, your employees and other unfathomable sources. Ozone is the answer to increasing all levels of food safety and hygiene. Create a clean, sterile work environment in your kitchen by simply wiping it down with ozonated water, and eliminate all odours and bacteria in one fell swoop.

**For your toilets**

Dirty toilets spread germs & infectious disease. You can tell if the toilet is dirty even before you enter one - its very strong foul odors of uric acids and residues. The common causes of a dirty toilets are due to: not flushing toilets, not flushing urinal bowl, used toilet paper on the ground, spoilt facilities, stuffy & damp environment, urinal stains on toilet seat covers and on urinal partitions. All of these factors are good breeding ground for bacteria.

One cannot deny that toilets are an important part of living. After what is consumed, nutrients are absorbed and unwanted substances are passed out. These wastes are harmful and poisonous and can be used as agents in disease spreading. A user stepping into a dirty public toilet, he or she would just quickly relieve themselves as quickly as possible & move out of the toilet immediately. They have no part in keeping the toilets clean when the toilet is already dirty.

**How ozonated water (O3) will help sanitise your toilets.**

Washing or wiping with ozonated water will disinfect and kill the millions of unseen bacteria in all contaminated surfaces in the toilet. All it takes is a quick rinse or a wipe down with ozonated water and all bacteria, viruses and unpleasant odours will be eliminated instantly. It is a miracle to prevent any bacterial outbreaks.

How does it compare to other chemical disinfectants?

Unlike modern disinfectants, which contain poisonous components such as chlorine, acids, or other biocides that can potentially affect long-term health, ozone is natural, rinse-free, residue-free, and offers greater disinfection while decomposing chemicals and pesticides at the same time. It is 3000 times more powerful than chlorine in its disinfectant property (1ppm of ozone = 3,000ppm of chlorine) and yet there are no harmful chemical residues or by products. Your cleaner will not have to face the risk of harmful contact with chemical disinfectants. And, save on purchases of these items. Time saved in upkeeping the hygiene and sanitation of your toilets will translate and improve your business productivity.

Apart from disinfecting your hand, there are many other usages of ozonated water too. Like washing your face; Soaking your leg to rid of odour and fungal; Oral rinses; Cleaning of wounds, soaking your laundry, bathing your dog, clearing feases & urine odours, washing of toilets, washing of floors, washing of drains, sterilising of equipments, toys, bottles, teats, teething rings, etc.... Unlimited Application!! Help prevent Hand-Foot-Mouth diseases; It is so powerful and effective that few container loads of larger ozone machines have gone to the battlefield to fight the Ebola epidemic in Africa now.
**How does it operate**

The Biosure Ozonated Machine is very simple to operate, requiring only tap water supply and electricity. The unit will connect directly to the water line entering your establishment. Upon activation, an electrode will split the water molecules – this generates Ozone or O₃. From that point on, the tap delivers ozonated water instantly, on a continuous basis. There’s no need for any refill or regular purchase of parts. The unit consumes minimal power, with tap water as its only necessary source of input. Yet its usage is unlimited and yields many benefits.

**OZONATED WATER GENERATOR**

It is compact in size; have very low noise operation; tap water is the only required input and it generates high concentration of ozonated water.

It is easy to install, simple to operate, no regular purchase, no refill and no maintenance required.

Provides instant and continuous Ozonated Water with no warm up or cool down time

HACCP complaint; OSHA compliant

Unless your hands or your plates have stains of grease, oil or fat, you will still need soap/detergent to remove them first and then to rinse them under running ozonated water. Ozonated water does not remove oil or grease.

It has 40 world-wide patents in US, Japan, EU & China.

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**Model : CSS**

- Dim : W 300 x D 165 x H 400 (mm)
- Power : 45w
- Net Wt : 7.5kg
- Output : 120litres/hr (1 to 8 ppm)
  - 300litres/hr (0.5 to 6 ppm)
- Voltage : 200-240v/1ph/50Hz
- Casing Material : ABS

**Approved by:**

- Soil Association-UK
- SGS-Swiss
- FDA Certified ATS Lab-USA
- Ministry of Health and Welfare-Taiwan
- Ministry of Health-Japan
- Ministry of Health-China

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OZONE: The merciless destroyer of Bacteria

Bacteria is the cause of illnesses, decays and bad odours. It is everywhere but it can’t be seen. On door knobs, lift buttons, hand rails, on your hands, your clothing, exposed food, kitchen floor, utensils, cutting boards, in toilets, drains, on all surfaces!

Washing with tap water only removes visible dirt, some of the germs. It will not get rid of all the harmful bacteria and germs which will make you sick. Water DOES NOT eliminate bacteria.

The only effective defense is now available in Ozone which will kill all food-borne pathogens instantly. 99.9% of all bacteria and viruses will be eliminated when in contact with Ozonated water!! Yes, that’s almost everything. Not only is Ozone effective against bacteria & viruses, it is also kind to the environment. Unlike disinfectant & chemicals which are harmful for the environment, Ozone is totally environmental friendly. It becomes oxygen!

Read on for the Extraordinary Benefits Of Ozone:

- Ozone has full FDA and USDA approval for direct-food contact applications
- Ozone kills all bacteria & food-borne pathogens instantly, stops decay
- Ozone kills bacteria 3,000 times faster than chlorine while eliminating all odours
- Ozone kills common food pathogens: E-coli, Listeria, Shigella, Salmonella, Hepatitis-A.
- Ozone adds 1-4 more days of shelf life for perishable foods
- Ozone saves you thousands of dollars from the wasteful disposal of decayed foods
- Ozone is the world’s most powerful killer agent of micro-organism
- Ozone is completely safe and after disinfection, ozone “O3” reverts back to oxygen “O2”
- Ozone is the most environmental friendly disinfection green technology available
- Ozone disinfects your hands crucial in preventing food borne diseases
- Ozone eliminates contamination for freshly-cut vegetables, seafood or meat
- Ozone prevents cross-contamination either through handling, equipment or work surfaces
- Ozone eliminates the use of conventional sanitizers
- Ozone saves on your regular purchase of disinfectants and unfriendly toxic chemicals
- Ozone is much safer for employees than conventional chemicals, safe for all skin types
- Ozone helps create a clean odourless, hygienic and a healthy environment

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