

上海喜运环保科技有限公司介绍

Shanghai Xiyun Ozonetek Co., Ltd

www.usefulozone.com



Located in Shanghai, China, Shanghai Xiyun is a high-tech enterprise integrating R&D, production, sales and service, specializing in electrolysis ozone water generator and electrolysis ozone water application products for 14 years.

The products are widely used in household cleaning and deodorization, antibacterial hygiene treatment and personal hygiene cleaning care. Commercially and industrially, they are used in a variety of fields such as sewage odor purification, secondary water supply sterilization, swimming pool water treatment, food processing, chip electronics, agriculture and animal husbandry, soil purification, and household appliances.

Xiyun electrolysis ozone water technology principle

Owns self-developed electrolysis ozone water technology

There are 42 patents for inventions

The main principle is to change the molecular structure of water through electrolysis of tap water, under the action of catalytic elements of anode, to transform ordinary tap water into ozone water with strong oxidizing and antiseptic sterilization function. This kind of ozonated water can be widely used in cleaning, disinfection and health care and other application scenarios.

Add a healthy and comfortable experience to life





Product Name: Electrolytic Oxidative Ion Water Machine

Item No: AQUA-ECO-2T

Input Voltage: AC100-160V or AC200-260V

Power Consumption: 1.8KW

Operating Temperature Range: 8–45°C

Inlet Size: 1.5 inches Outlet Size: 1/2 inch

Water Treatment Capacity: 2 Tons per Hour (2T/H)

Operating Water Temperature Range: 10–42°C

Lifespan: 3000 hours (with automatic electrode cleaning function)

Maximum Water Pressure: 0.4 MPa

Device Weight: 92 kg Device Dimensions: 60 cm × 43 cm × 125 cm

Electrolytic Output Substances: O₃ (Ozone), H₂O₂ (Hydrogen Peroxide), HClO (Hypochlorous Acid), ClO₂ (Chlorine Dioxide), H (Atomic Hydrogen), O (Atomic Oxygen)

Antibacterial Efficacy: Greater than 99%

Water Quality Requirements:

Must meet municipal tap water standards

TDS: 60–600 PPM PH: 6.5–7.3

Maximum Hardness: 500 mg/L Maximum TOC: 4 gm/L

Item No: AQUA-ECO -2T



- High level of automation
- Automatically detects and diagnoses faults
- Automatic electrode cleaning



Working Principle of the Electrolytic Oxidizing Ionized Water Device:

Through Xiyun's high-efficiency electrodes, a fascinating electrochemical process occurs. When tap water flows through the Xiyun electrolytic cell under the influence of direct current, it undergoes a remarkable transformation, generating ozone, hydrogen, hydrogen peroxide, active hypochlorous acid, and a series of reactive elements produced by electrolysis. At the same time, under the influence of the electric potential field, a rich stream of micro-nano bubble water is formed. These reactive oxygen species possess strong oxidative properties, enabling powerful antibacterial, sterilizing, and deodorizing effects, as well as participation in various chemical reactions.



A large number of nano-sized microbubbles adhere to stains on the fabric. When they collectively collapse, the energy released effectively breaks down the stains, significantly enhancing the cleaning performance. This is why less detergent is needed to achieve greater stain removal power.

Cavitation Effect



Detailed Explanation: Under the electrolytic environment created by Xiyun's high-efficiency catalytic electrodes, key elements naturally present in tap water—such as hydrogen, oxygen, chlorine, and calcium and magnesium ions—are decomposed. Driven by a strong electric potential field, these covalent elements undergo a remarkable recombination process, generating a variety of reactive substances including ozone (O_3), molecular hydrogen (H_2), hypochlorous acid ($HClO$), hydrogen peroxide (H_2O_2), atomic oxygen (O), hydroxyl radicals ($\bullet OH$), and hydroxide ions (OH^-).

Simultaneously, under the influence of the electric field, water molecules are also electrolyzed and combine with dissolved oxygen to form a large volume of micro-nano bubble water. These reactive substances become densely adsorbed on the surfaces of the micro-nano bubbles, merging to create what is known as electrolytic oxidizing ionized water. Among these oxidizing agents, ozone is the dominant species, accounting for over 60% based on design calculations.

- At the anode (positive electrode), water molecules lose electrons and produce oxygen gas. At the cathode (negative electrode), water molecules gain electrons to produce hydrogen gas.

- Other Possible By-products: Since tap water also contains various minerals and trace elements—such as calcium ions (Ca^{2+}) and magnesium ions (Mg^{2+})—these substances may participate in additional reactions during the electrolysis process. For example, as hydrogen ions are reduced to hydrogen gas at the cathode, the concentration of hydroxide ions (OH^-) increases locally. These hydroxide ions can combine with calcium and magnesium ions to form precipitates or scale deposits, such as calcium carbonate or magnesium hydroxide, which may accumulate on the cathode surface. To address this, Xiyun's Electrolytic Oxidizing Ionized Water Machine is equipped with an automatic electrode cleaning function, effectively reducing scale buildup and ensuring long-term stable performance.

FEATURES

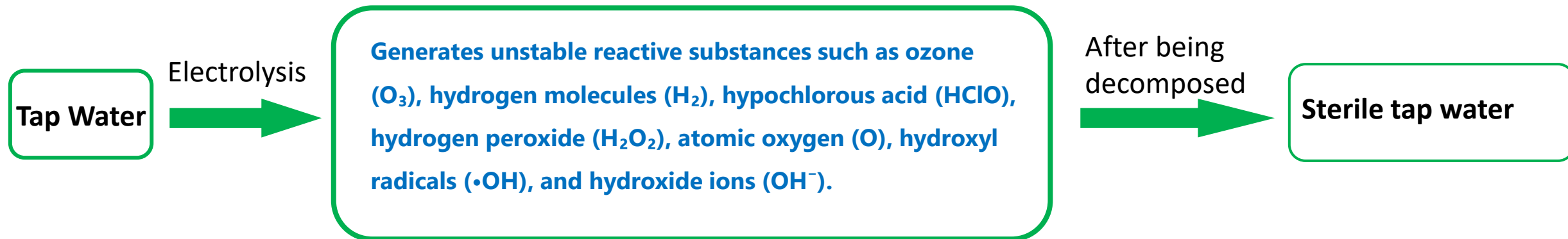
1. Active oxygen substances such as ozone (O_3), atomic oxygen (O), hydrogen peroxide (H_2O_2), hypochlorous acid ($HClO$), and hydroxyl radicals ($\bullet OH$) possess strong oxidizing properties.
→ They provide antibacterial effects, deodorization, and disinfection.
2. Reducing substances such as molecular hydrogen (H_2) and hydroxide ions (OH^-) have antioxidant properties.
→ They promote cell repair and are often praised as "Vitamin Water" for their revitalizing effects.
3. Rich in micro-nano bubble water, which enhances cleaning efficiency through the cavitation effect and provides an abundant supply of oxygen.
→ It delivers deep cleaning power and supports oxygenation of surfaces.



This water is so good, but we don't know what to call it yet. Everyone, please help us come up with a name!"

A key feature is that during bubble collapse, a powerful burst of energy is released, generating high-velocity fluid movement. This effectively dislodges dirt and stains from surfaces and delivers outstanding antibacterial and cleaning performance.

Ozone water is a natural, broad-spectrum antimicrobial solution.



Ozone and reactive oxygen species decompose into ordinary oxygen and water, leaving no secondary pollution.

The process is safe, non-toxic, and environmentally friendly.

SGS
Pass The Test

Antibacterial &
Antimicrobial
Inhibition Test

- Legionella pneumophila Sterilization rate > 99.98%
- Candida albicans Sterilization rate > 99.95%
- Escherichia coli (E. coli) Sterilization rate > 99.91%
- Staphylococcus aureus Sterilization rate > 99.95%

Acute Systemic Toxicity Test

Standard Referenced: ISO 10993-11:2017

Conclusion: Under the conditions of this test, the test sample did not cause any acute systemic toxic reaction in mice. The sample is considered to have no acute systemic toxicity.

Skin Irritation Test

Standard Referenced: Technical Specifications for Disinfection (2002 Edition)

Conclusion: Under the conditions of this test, the test sample caused no irritation in a single intact skin exposure test on rabbits, and no other toxic effects were observed. The test results are in compliance with the standard.



Product Features:

1. High-Efficiency Oxidation and Disinfection

Generates strong oxidizing substances such as ozone (O_3), atomic oxygen (O), hydrogen peroxide (H_2O_2), hypochlorous acid ($HClO$), and hydroxyl radicals ($\bullet OH$), providing antibacterial, antimicrobial, and deodorizing effects to support hygiene control.

2. Environmentally Friendly & Safe

Uses only tap water as raw material, with no need for added chemical disinfectants. After use, it decomposes into water and oxygen, leaving no residue or pollution, meeting food safety and environmental protection standards.

3. Powerful Cleaning Ability

Employs micro-nano bubble water technology based on the cavitation effect, enabling deep penetration and strong flushing of dirt. Enhances cleaning effectiveness on slaughterhouse equipment, knives, floors, production lines, and more.

4. Freshness Preservation & Reduction Repair

Produces active substances such as molecular hydrogen (H_2) and hydroxide ions (OH^-) with antioxidant and cell repair properties. Helps maintain the freshness of food materials and reduces oxidative deterioration.

5. High Capacity & Wide Applicability

Generates up to 2 tons of oxidizing ionized water per hour to meet large-scale disinfection and cleaning demands. Suitable for equipment cleaning, meat processing, air disinfection, personnel sterilization, and various other applications.

6. Intelligent Control System Integrated

Equipped with an intelligent control system that quickly detects and resolves faults, ensuring stable and reliable operation of the equipment.

Fields of Application



1. Rinsing of food and beverage packaging bottles, and cleaning and sterilization of packaging bottles and processing equipment in biotechnology and related industries.



2. Sterilization, cleaning, deodorization, pesticide residue reduction, and freshness preservation of vegetables, fruits, meat, and seafood products in public canteens of schools, military units, government offices, hotels, and factories.



Fields of Application

3. Sterilization of aquaculture water in fish and seafood farms to prevent and control aquatic diseases.



Note: For freshwater use only.
Not suitable for seawater applications



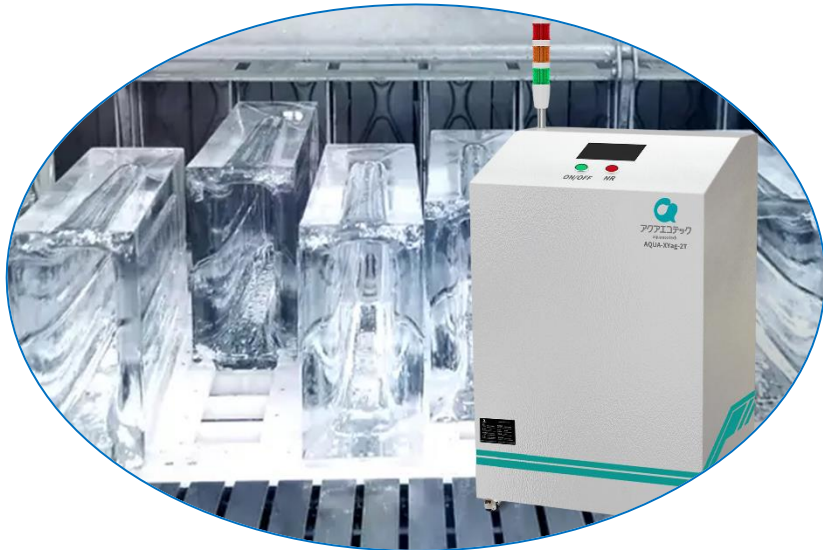
4. Water purification, sterilization, deodorization, and inhibition of microbial growth in swimming pools (commercial or small home pools), aquarium pipes, water features, and recirculating water tanks.



Fields of Application

5. Sterilization of packaging materials, as well as cleaning, sterilization, and deodorization of personal items and clothing.

Provides the washing machine with environmentally friendly and highly effective antibacterial cleaning water, addressing clothing sterilization, deodorization, and cleaning, while also helping to keep the inner drum and water pipes clean and resistant to bacterial growth.



6. Using advanced oxidized water for ice making, where the ice contains antimicrobial agents that provide antibacterial, deodorizing, and freshness-preserving effects.



Fields of Application

7. Livestock farms and poultry hatcheries for chickens, ducks, and geese, including their equipment and tools.



8. Irrigation water for agricultural cultivation, helping to reduce the growth of harmful bacteria and inhibit environments that promote bacterial reproduction. It also reduces the need for pesticides while providing more oxygen to plants, supporting healthier growth. This is especially beneficial for greenhouse and indoor cultivation, as well as for watering seedling trays and containers—particularly for flower seedlings.



Application on slaughtering and packaging assembly lines



◆ **Why does the Xiyun electrolytic generator have water quality requirements?**

Xiyun uses a diaphragm-free electrolytic catalytic technology. The water quality, especially its conductivity, significantly affects the catalytic efficiency. If the water conductivity does not reach a certain level, it will impair the effectiveness of the electrolysis process.

◆ **Why shouldn't other substances be added to the water?**

In Xiyun's electrolytic water technology, tap water serves as the medium for generating reactive substances. Adding other elements or chemicals to the water can lead to the formation of uncontrolled by-products during electrolysis. These by-products may be harmful or may damage the electrodes. Therefore, additives should be avoided unless specified for certain special applications.

Thanks!

Cooperation is a kind of fate, success is a kind of enjoyment, sincere cooperation, achievement of the future!

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