

Ozone Sterilizer

GH-01

INSTRUCTION MANUAL



Dear customer,

Thank you for purchasing our ozonator, which with a single solution that enables disinfecting and sanitizing air, drinking water, food and other things.

The pollution is one of the biggest problems of our time and affects both civilizations more advanced and more backward ones, as the former often tend to speed up production and neglect the quality of the product and emissions. The second, on the other hand, inevitably pose to the first point, the feed requires more that hygiene supply.

The globalization of markets today require double controls much more accurate than in the past, however this and the aspect that is often neglected in the transport of goods from country to country.

Another feature of our society and the cult of beauty that even in the food focuses on foods that are better although they are not always the best

On the twentieth anniversary of our company, we are proud to offer you a high quality product that has multiple applications, all applications made to the well-being of the person.



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- DEVELOPMENT & RESEARCH THEORY

- ✘ THE OXYGEN MACHINE TAKES THE AIR AS THE MATERIAL TO PRODUCE OZONE BY CREATING HIGH FREQUENCY ELECTRICITY POWER VOLTAGE FOR STERILIZATION AND DISINFECTION

- ✘ OZONE CHARACTERISTIC



Ozone is a colorless gas made up of three oxygen atoms (O₃) It occurs naturally in small (trace) amounts in the upper atmosphere (the stratosphere). Ozone protects life on Earth from the Sun's ultraviolet (UV) radiation. In the lower atmosphere (the troposphere) near the Earth's surface, ozone is created by chemical reactions between air pollutants from vehicle exhaust, gasoline vapors, and other emissions. Ozone is also found in the stratosphere, at 15/20 miles in altitude and that altitude plays a highly beneficial role to life. In fact, it shields the sun's ultraviolet radiation harmful to living cells. It has an oxidation function. Ozone can kill bacteria quickly in water or air when its concentration gets to some degree. To be a disinfectant and germicide, it is well known by the public. There are 0.01-0.04 ppm ozone in natural air, which does not make bacteria and mildew propagate singularly, and keep the balance of natural air.

IT IS A VOLATILE GAS THAT CAN NOT BE STORED AND MUST BE PRODUCED AT TIME OF USE

※ OZONE FUNCTIONS

● KILL ANIMALCULE

① To bacteria vegetative:

A O₃ has good killing function to golden grape coccus bacilli, Escherichia coliform, green pus bacilli in air, and good killing function for golden bacilli of grape coccus, Escherichia coliform, pseudomonas aeruginosa which attach surface of many subject.

B O₃ can kill golden grape coccus bacilli, Escherichia coliform, and choleraic vibrio in phosphate buffer

C put O₃ into moving water. it can kill coliform completely.

② To bacteria gemma

Can completely kill Bacillus subtilis var. niger spores, but its killing effect in air is not good as the killing function to bacteria vegetative. Keep O₃ get into the moving water of a well, the killing rate of Bacillus subtilis var. niger spores attain 99.999%.

③ To virus

A O₃ can destroy HbsAb 99.999% above, destroy hepatitis A virus (HAV) 100% in seconds or minutes. O₃ can inactive influenza virus in air. In water, O₃ can kill completely poliomyelitis virus I (PVI)

B Ozone water can kill Simian Rotavirus (SA11) and human rotavirus II

C if the concentration of O₃ in serum reaches 4mg/L, ozone can kill HIV with titer of 10⁶CD50/ml

④ To fungus

O₃ or O₃ solution kill aspergillus versicolor, paecilomyces and Alternaria rot 100%

⑤ To protozoans

Studies indicate that ozone can kill protozoans and its eggs. its killing rate reach to 99.9%

FACTORS EFFECT THE ANIMALCULE KILLING FUNCTION

THE KILLING FUNCTIONS OF O₃ MAINLY BASE ON CONCENTRATION, TEMPERATURE. PH AND ORGANISMS. AS FOR THE TIME. IT IS A LITTLE EFFECT TO THE KILLING FUNCTION

1 The virus killing function of O₃ for some virus is proportional to the increase of O₃ density and temperatures, the chemical reaction and temperatures affect a little.

2 Ozone sterilization in 30-32°C is better than in 20-22°C and 10-12°C.

3. When killing HAV and escherichia coliform, sterilization function will get down with the increase of temperatures, the speed of killing virus in 10°C is faster than in 20°C.

4. The PH of water has some effect to O₃, but it is seldom used in practical.

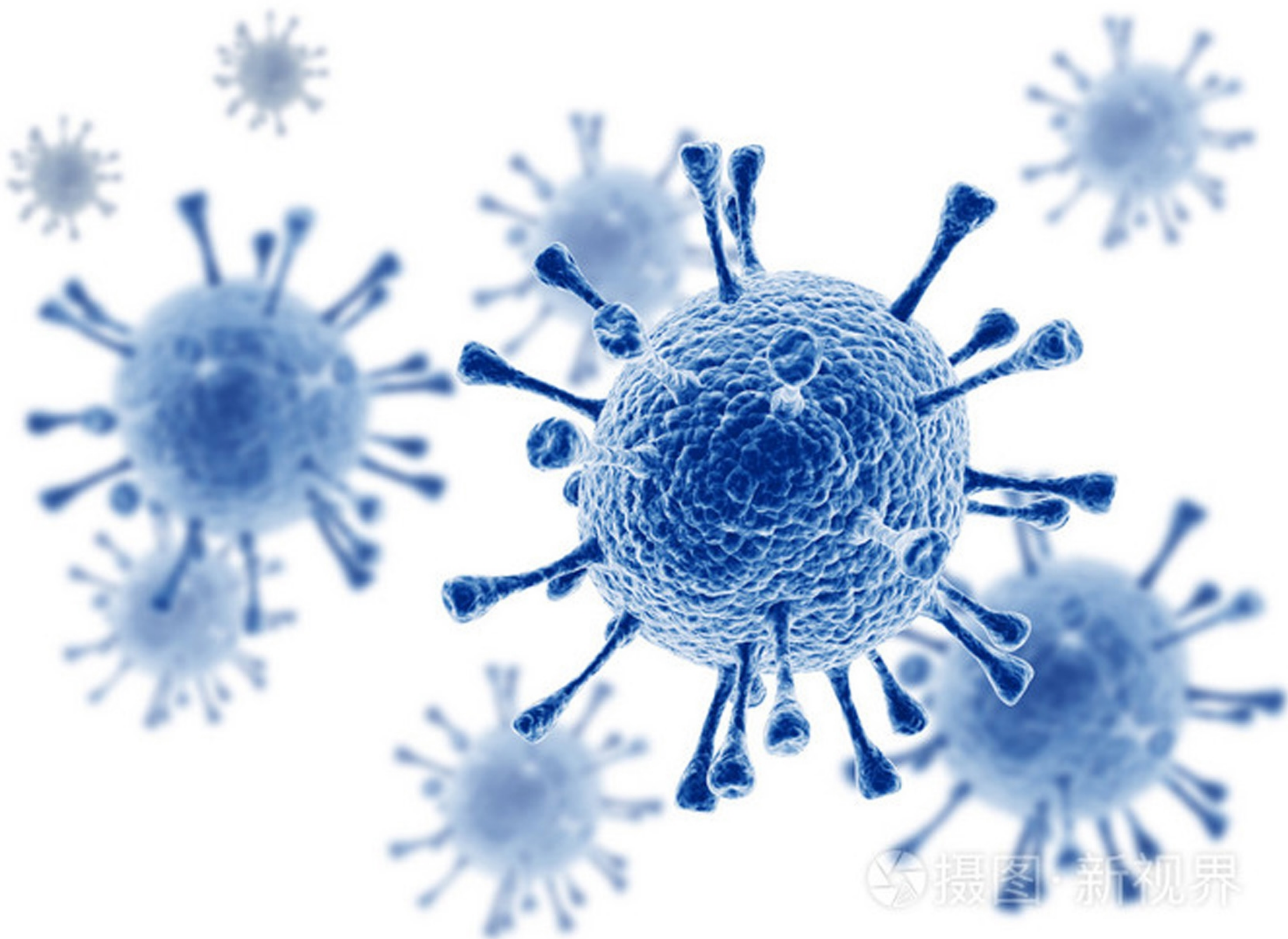
5. Organisms have much effects to the animalcule killing.

ANIMALCULE KILLING PRINCIPLE

1.O₃ reacts with sensitive amino acid residues, which can destroy proteins directly.

2.During the reaction, O₃ can release the RNA from bacteriophage (phage), bacteriophage were fractured into fragments during the Yb plating.

3.O₃ make double bond reaction with the ball lipid of bacterial cell, then penetrate the internal mycelium, react with lipoprotein and lipopolysaccharide, change the penetration of cell, which make cells dissolve and die.



OZONE APPLICATION

OZONE CAN BE APPLIED FOR WATER PURIFICATION, CHEMICAL OXIDATION, FOOD, MEDICAL FIELD, ETC

① water purification

ozone has the high speed killing bacteria, virus and animalcule. It can completely remove organic compounds or other polluted compounds. Excellent effect of deodorization, gout elimination and decolor. Reduce turbidity value in water, remove the organisms such as iron, manganese etc Chloride disinfection is usually used in water works. But ozone disinfection is higher speed and effect. United States and Japan are developing ozone disinfection for running water. Because after chloride disinfection in water, it will produce chloroform, CHBr_2Cl and THM. Which will make cancers to human body. But the O_3 disinfection will not produce second polluted compounds.

② Chemical oxidation

The characteristics of ozone make a important function of purifying gas, such as the odor of processing animal fur, rubber factory, polluted gas from chemical factories. Ozone also can oxidize and decompose chemicals like mustard gas, sarine. It has catalytic action to pesticide compestions. Ozone can oxidize or decompose some pesticide residues.

③ Food field

Ozone can be used for disinfection in cold storage, workshop air purification, fresh-keeping for vegetables, fruits, mineral water freshment, and tableware sterilization.

④ Medical application (omited)

APPLICATION IN FAMILY

Food & Tableware

| APPLICATION TARGET | WORKING TIME | FUNCTION |
|---|--------------|---|
| Degrade pesticide of vegetable, fruit | 10-20minutes | degrade the residues of pesticide or chemicals, kill the bacterialvirus of vegetables and no change its taste, apply to all kinds of fruits or eating raw vegetables |
| disinfection for tableware,teaware | 10 minutes | disinfect the daily used tableware, teaware for healthy life all applied to food service industry (restaurant, hotel, etc |
| remove savor of fish, seafood, meet bean products | 5-10minutes | soak meet, fish, seafood in ozone water for washing, remove the savor smell and keep the special taste, wash beans to postpone the fresh time |
| purify water | 10min/10kgs | discompose organic matter, germs and viruses, instantly purify water for boiling and cooking, can make better taste |
| fresh-keeping for food vegetable | 5-10minutes | wash fruits, vegetables in ozone water,more fresh-time, prevent them rot and fade away |
| Fridge odor | 10minutes | to drive out the odor of fridge or prevent the odor diffuse |

APPLICATION IN FAMILY

※ Household life

| APPLICATION TARGET | WORKING TIME | FUNCTION |
|---|---------------|---|
| <u>living room</u> ,bedroom | 10 minutes | remove smoking smell, dust, discompose harmful matters kill dust mites, keep room inside clean, fresh |
| bathroom,toilet kitchen | 10 minutes | Improve or drive out the odor of toilet,bad smell of cooking, fish savor odor.bad smell of cooking, fish savor odor. |
| pets, rubbish | 10 minutes | Can't bear the <u>pets'odor</u> , ozone improve the smell dustbins cause mosquitoes, fly, cockroaches, ozone hold them |
| clothe cabinet shoes cabinet | 10 minutes | can remove the odors of sports ware, leather ware prevent fungal infection |
| <u>new furnitures</u> decorated room | 10-30 minutes | discompose the harmful gas from the new <u>furnitures</u> or new decorated walls, ceiling boards, floor etc |

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● HEALTH CARE

| APPLICATION TARGET | WORKING TIME | FUNCTION |
|-------------------------------------|---------------|--|
| wash hands, feet | 10-30 minutes | wash hands or feet by ozone water to prevent bacteria infection Prevent to infect mange or other skin disease |
| wash bleach clothes sterilization | 20 minutes | wash clothes in ozone water, kill bacteria, remove odor, bleach stains keep original color |
| Disinfect baby ware | 10 minutes | Wash and disinfect feeding bottle, eating tools, toys |
| Disinfect tooth ware dental devices | 5-10 minutes | rinse mouth, brush teeth by ozone water, which can kill bacteria deodorize mouth smell, smoking smell, prevent related diseases |
| Skin care | 10-20 minutes | wash face by ozone water, clear bacteria and dirt completely helpful to skin breathing function, promote metabolism. drive out the residues of makeup, firm pores, make skin smooth and tender |

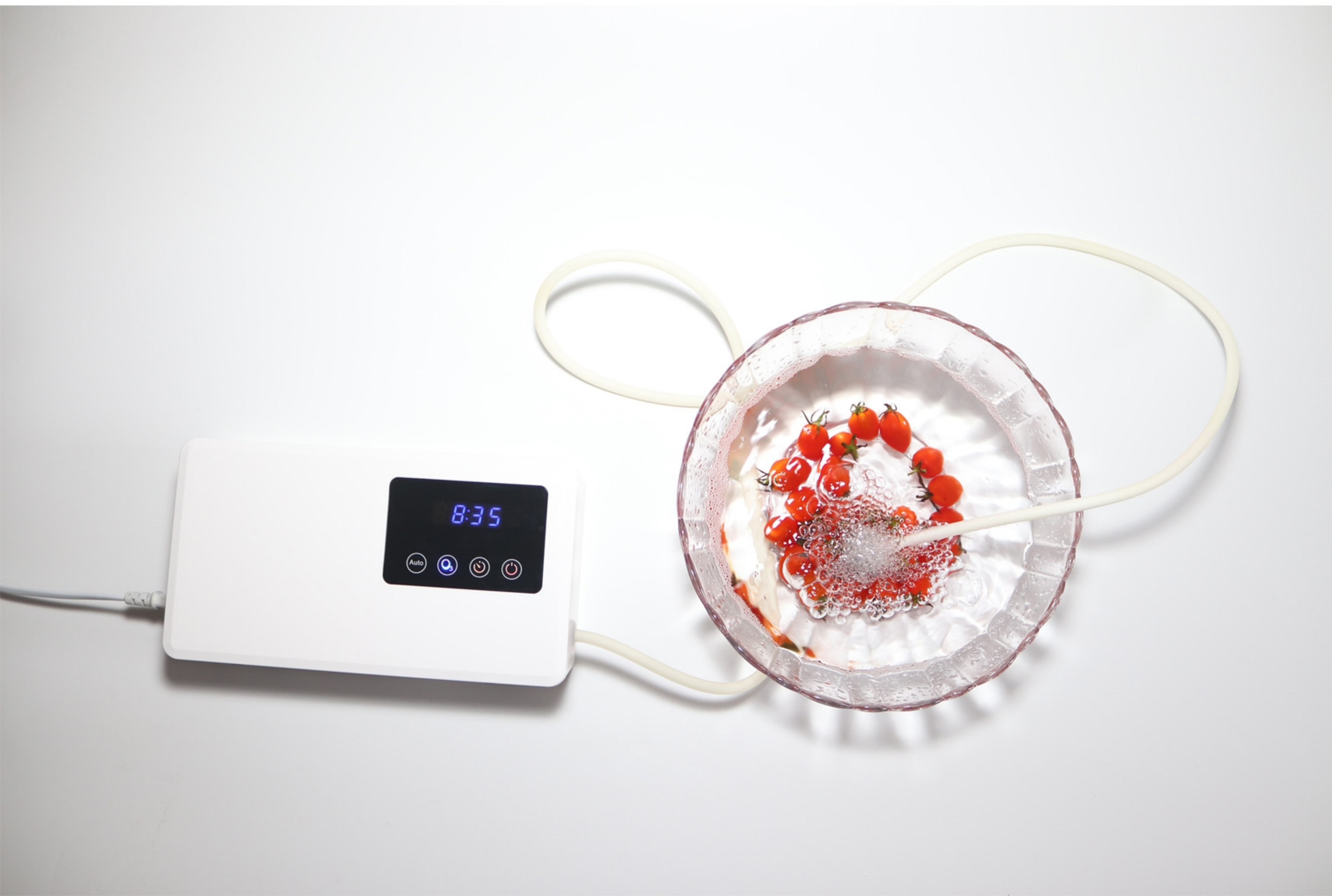
OPERATION INSTRUCTION

TECHNICAL PARAMETER

| | | | |
|--------------|------------------|----------------|--------------------------|
| Model number | GH-01 | Ozone output | 500mg/h |
| Machine size | 23 × 6.5 × 13cm | Net weight | 0.7kg |
| Power supply | AC220V+10%/50Hz | Consumed power | 15W |
| Gas flow/min | 4.5-5.5L/minutes | Working time | 5,10,15,20,25,30 minutes |

THE PACKAGE CONTAINS

| | | |
|---------------------|-------|------|
| Main machine | ----- | 1pcs |
| Pipe | ----- | 2pcs |
| Aeration stones | ----- | 2pcs |
| Remote control | ----- | 1pcs |
| Power cable | ----- | 1pcs |
| Plastic board | ----- | 1pcs |
| Instruction manuals | ----- | 1pcs |
| Glue | ----- | 1pcs |
| Packing box | ----- | 1pcs |



OPERATION INSTRUCTIONS

Step1: Plug in the power cord, connect the machine to the power outlet.

the red light will blink in correspondence button , the machine is powered

Step2: Connect the pipe end with ozone air outlet correctly

Connect the pipe end with aeration stone correctly. To let the O₃ go out, put the aeration stone on the bottom of the volume which you will use.

(don't link the aeration stone for air purification)

Step3: Turn on/off the appliance by pressing down the button .

Turn on machine, the red light will bright, display will light up indicating the time **00:00**.

Turn off machine, the red light will blink.

Notice: if machine no any operation more than 3 minutes, it will turn off automatically, the red light will blink.

Step4: Choose working time 5, 10, 15, 20, 25, 30 minutes by pressing down button .

Choose working time, the yellow light will bright, the yellow light is dark without time set.

Step5: Short press button  start / stop ozone operation.

Ozone start working, the blue light will bright, display will begin the countdown.

Notice: without time set, the O₃ can't start working.

During O₃ working, choose working time or start AUTO air purification is not workable.

Step5: Short press button  start / stop ozone AUTO air purification.

AUTO air purification start working, the green light will bright, display will begin the countdown.

AUTO mode (ozone work for 30 minutes, stop 1 hour for cooling, it will continue next round ozone work for 30 minutes, stop 1 hour for cooling, AUTO Air purification mode will finish automatically after 5 times same working process.)

For the voice model, long press button  for five seconds to turn on/off the voice.

If you intend to hang the appliance to the wall, you must use the our special plastic board and good quality glue.

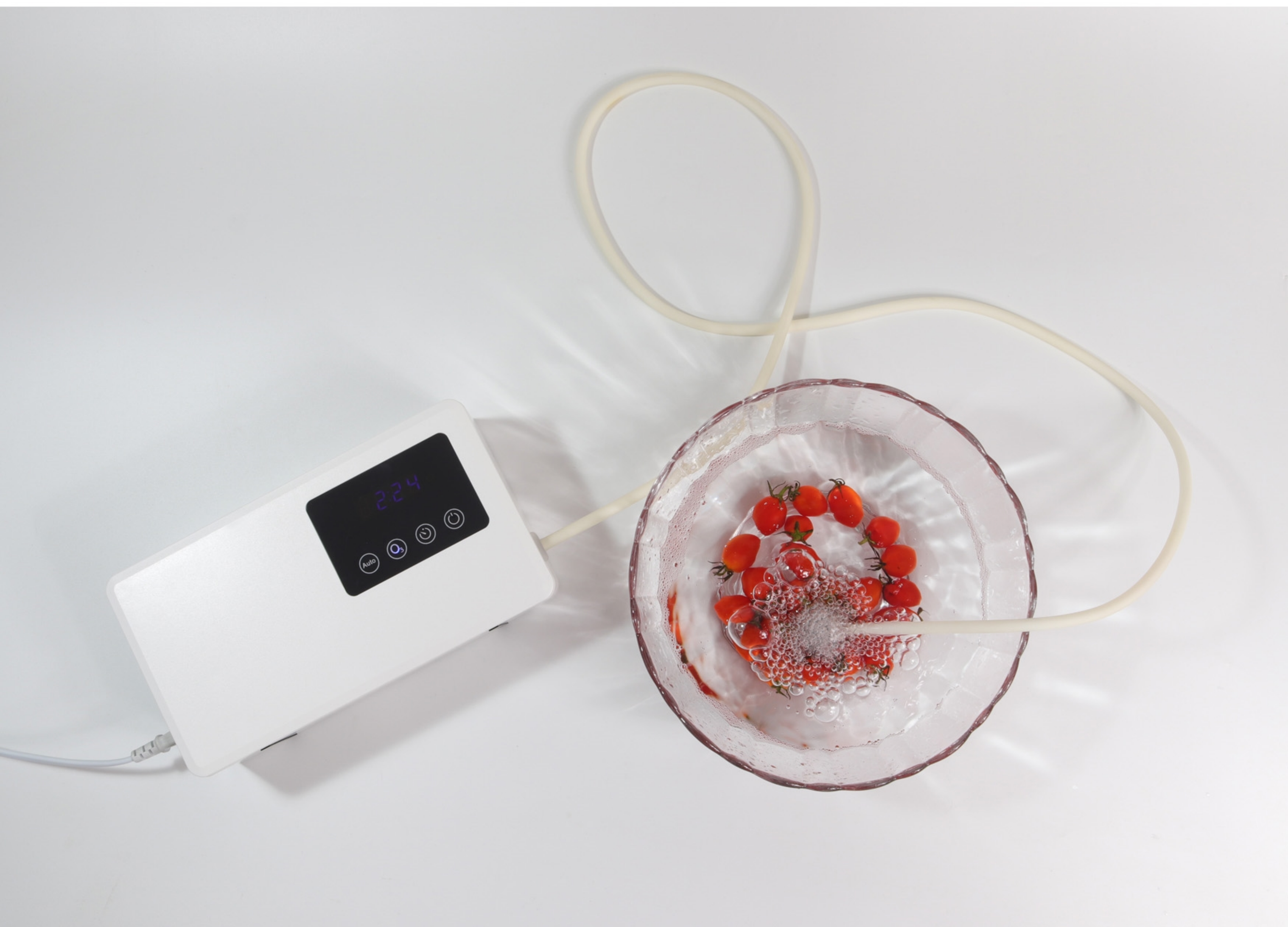
Notice: put the glue on the plastic board, remove the Double Sided Adhesive Tape, stick the plastic board on the wall (make sure the wall is dry) wait until 48 hours , after that you can put machine on the wall by connecting it to the plastic board.




Information on the remote control


Use the remote control to remove the insulation

To replace the batteries in the remote control, press the tab and simultaneously extract the tray as shown in the figure
Insert the new batteries observing the correct polarity



TURN ON/ OFF THE DEVICE

Short pressing button , turn on the machine, and the display shows the numbers in blue.

To turn off the unit, short press the button  .


SET THE WORKING TIME OF THE MACHINE

By repeatedly pressing the button  you can set the working time 5, 10, 15, 20, 25, 30 minutes.

START/STOP O3 OPERATION

Short pressing button  start /stop O3 operation.

START/STOP OZONE AUTO AIR PURIFICATION

Short pressing button  start /stop AUTO air purification.



APPLICATION SECURITY

Attention to security

- ① For water treatment, the machine must be higher position than the water to avoid the water back flow to the machine.
- ② To desired ozone output and use life, don't operate the machine in too high temperature(42C above), or too much cooking oil fume, high humidity environment
- ③ Handle with care, don't block the gas outlet, avoid to affect air circulation and convection.
- ④ When using for sterilization/disinfection, odor removal, don't let eyes and respiratory touch the ozone outlet.
- ⑤ Air purification in isolated room, people should leave the room, get in the room after the machine is turned off 30-40 minutes.
- ⑥ If indoor no air circulation, don't use the ozone generator too long time. To avoid the concentration of ozone too high, open the window, let the fresh air get into indoor
- ⑦ The safe value of ozone is 0.001-0.1 ppm, the value equals the ozone percentage in nature. Air purification indoor by ozone, people better go outdoor. Human body (respiratory) can't expose long time in air with ozone density over 0.1ppm.
- ⑧ It is normal phenomenon that the gas outlet pipe become white or yellow color because of oxidation
- ⑨ When killing virus in water, put aeration stone at the deepest, when purifying water, the best depth for solubility and treatment is 20-40CM
- ⑩ Turn off the power when fixing

Attention to operation

1. Don't open the frame for fixing or maintaining when the machine working, for there is high voltage inside.
2. Any damage of power wire or plugs, please turn to qualified maintenance engineers for change.
3. For cleaning frame, turn off the power firstly, then wipe it by soft fabrics.
4. No rain moistened or water spilled for avoiding a fire or electric shock. Don't put the machine in high temperature or high humidity environment.
5. To yourself safety, don't disassemble the machine for fixing or maintenance.

※ Problem solution:

- 1 When operating the machine correctly, if the ozone output goes down rapidly or no ozone output, please check whether the outlet pipe is broken or folded, whether the aeration stone is blocked.
- 2 When operating the machine correctly, gases go out from the pipe but no ozone smell, please turn to the manufacturer or qualified person.
- 3 When operation the machine correctly, the working light doesn't work, please check your power wire or plugs whether they connect well. If still doesn't work, try to change another socket. Turn to qualified person if you don't make it.

