



Cleansui

Alkaline Water Ionizer from World leaders

Greeting for the Day.

We thank you very much for inviting us to quote for world leader's Alkaline Water Ionizer, Cleansui from the stable of the Japanese Conglomerate Mitsubishi Corporation, Japan.

Mitsubishi Corporation, Japan, since 1934 has a global turnover of 590 Billion Yen, having under its umbrella 1400 companies, operating in 90 countries.

Mitsubishi has been in high end, cutting edge water treatment technologies since 1984 with the brand name Cleansui.

Why, you cannot afford to take any risk on the quality of a Water ionizer

pH is the index indicating the degree of alkalinity or acidity. The pH value is expressed by a figure from 0 to 14 indicating the concentration of hydrogen ion (H⁺) in the water.

Values near pH7 are neutral, and as the values become closer to 14, they become more strongly alkaline. On the other hand, as the values become closer to 0, they become more strongly acidic.

In general, "oxidation" refers to the reaction of a substance with oxygen, and "reduction" refers to the reduction of oxygen of an oxidized substance.

Oxidation reduction potential(ORP) is an index of the ratio of oxidized substances and reduced substances in a solution, and is indicated in units of mV (millivolts) or V (volts). Alkaline water must have minerals which are considered alkaline and negative oxidation-reduction potential (ORP).

Alkaline water has a higher pH level than that of plain tap water, so proponents say that it can neutralize acid in your bloodstream.

Alkaline water can help prevent diseases, such as cancer and heart disease. Water Ionizer, being a critical medical equipment, if it doesn't produce alkalinity to levels of accuracy, there are dangers to the health of a person.

Benefits of an Alkaline Ionized Water apparatus.

As per the Ministry of Health, Labour and Welfare Notification, Japan, alkaline ionized water is used to improve gastrointestinal problems (chronic diarrhea, indigestion, abnormal fermentation in intestines, acid control, and acid indigestion), treat Cancer, hypertension, cholesterol, atopic dermatitis, diabetes, dental issues.

It is used as a 6th nutrient, for sports medicine and makes food tastes yummy as it improves taste in cooking.

Acidic water, which can also be produced is used (for other than drinking) for facial treatment, as it has an astringent effect.

Alkaline Ionized water purifier is composed of Three main parts:

1. **EUC 2000 Water filter** – To remove impurities from water by integrated four

levels of continuous filtration,

2. **Water Electrolysis unit** – To split the water molecules into hydrogen and oxygen gas through application of electricity

3. **Water faucet cluster with integrated control** – prevents unnecessary water flow.

UNIQUENESS OF MITSUBISHI CHEMICAL CLEANSUI

From the stable of world leaders Mitsubishi Cleansui

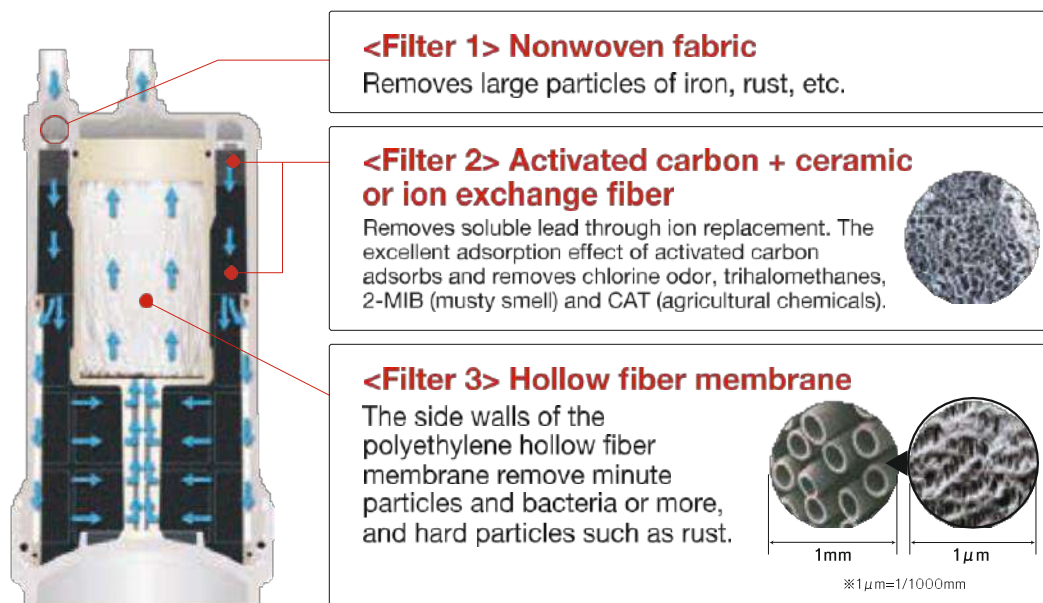
Alkaline ionizer is approved as a Medical apparatus under the directives of the Pharmaceutical Affairs Law, Japan.

Cleansui is a fool proof medical apparatus, which delivers wellness for human life.

No short cuts, 100% safety with Zero risks.

It goes through a vigorous and systematic in- built checks and balances, to provide consistent quality as per medical standards.

Unique Triple Filtration system in cleansui



--- A Four level thorough rigorous process.

Process 1-No Woven mesh layer: which filter coarse, removes dirt and impurities in water

Process 2- Ion exchange fiber layer: which removes dissolved lead mixed with water.

Process 3 – Activated carbon layer: Removes toxic impurities, plant drugs, odd smell, chlorine and impurities like chloroform, Trichloroethylene, Bromoform.

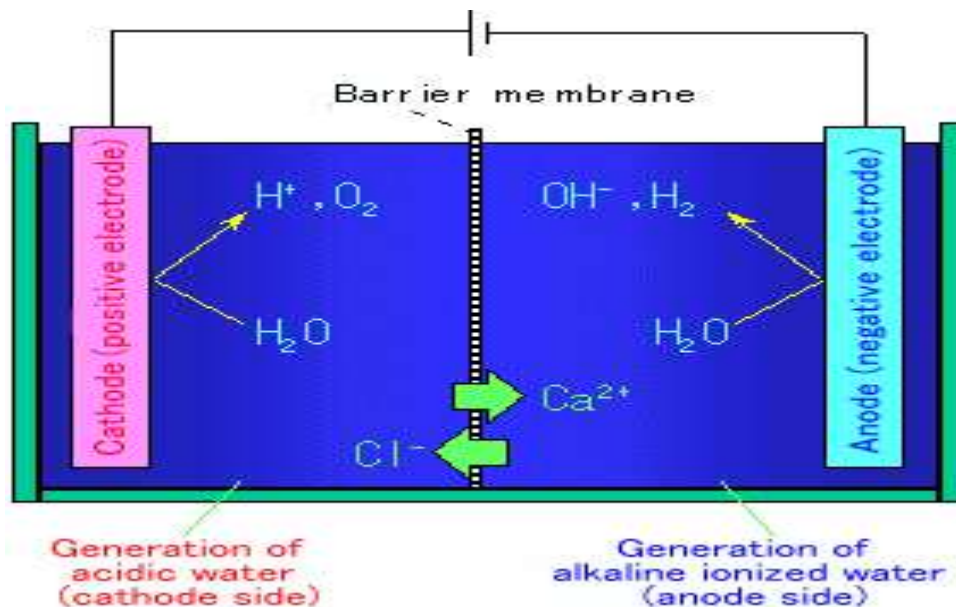
Process 4- Hallow-fiber Membrane: water absorbed from the outside of the tube wall of the hallow fibers including millions of filter holes with size of 0.01 -0.1 micron from the inside. Impurities larger than 0.1micrometres such as algae, microorganisms, bacteria, rust, and heavy metals in the water will be filtered out, leaving only clean and beneficial water

Result of Bacterial removal test conducted by Toho University

Species of Bacteria		E.coli	Serratia	Salmonella typhi	Vibrio Cholera	Shigella
Plate count(CFU/ml)	Before Filtering	5.4×10^5	7.2×10^5	3.5×10^5	8.5×10^5	6.2×10^5
	After Filtering	0	0	0	0	0

Besides, the entire system is configured in an unpressurised line and hence there are no leakage.

ELECTROLYSIS PROCESS.

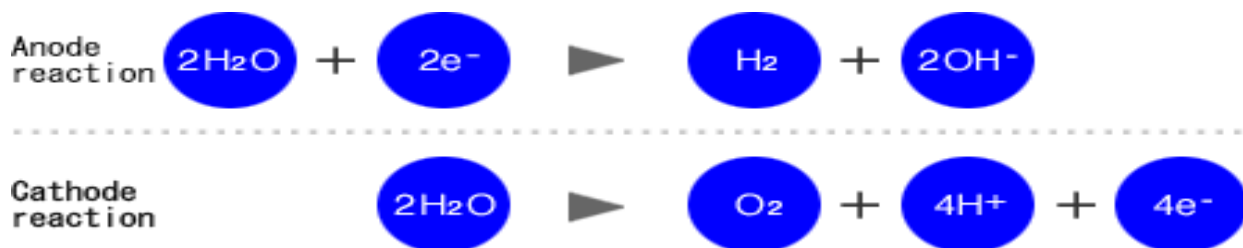


A water ionizer works by separating the carbonate from tap water. The alkaline minerals and the acidic carbonate ion are discharged in separate streams of water. By separating the alkaline elements from the acidic elements in tap water, a water ionizer enables you to get the benefit of the alkaline minerals in your water like calcium and magnesium.

These alkaline minerals, once freed of the carbonate result in increased antioxidant potential and acid fighting alkalinity. Generally, an electrolytic tank is shown in the figure above, with a barrier ion exchange membrane separating it into two sections,

with electrodes which become positive and negative poles installed respectively in each section.

The barrier membrane allows the passage of the various ions in the water, but prevents the free passage of the water itself. Alkaline ionized water and acidic water can be generated continuously as the water passes between both electrodes



Raw water containing calcium ions is put into the electrolysis tank. When a direct voltage is applied, direct current flows and the positive ions (M^+) such as calcium ions, magnesium ions, potassium ions, sodium ions, etc. are attracted to the anode

the negative ions (X^-) such as chloride ions, carbonate ions, sulphate ions, nitrate ions, etc. are attracted to the cathode.

In other words, hydroxide ions (OH^-), positive ions, and hydrogen (H_2) become more numerous on the anode side, and alkaline ionized water with high pH is generated, while on the cathode side, hydrogen ions (H^+), negative ions, dissolved oxygen (O_2), etc. become more numerous, and (slightly) acidic water with low pH is generated.

For water to be alkaline, it must also have generated substances which are considered alkaline and negative Oxidation-Reduction Potential (ORP). ORP means that water has the ability to act as an antioxidant. The ORP in Alkaline water should be about -400 mv

Table provides details of pH, ORP & generated substances for Alkaline & Acidic water.

	pH	ORP	+ ions	- ions	Generated substances
Alkaline water	9 to 10	Decreased (Reduction potential)	Increased	Decreased	Hydrogen; Calcium hydroxide
Acidic Water	4 to 6	Increased (Oxidation potential)	Decreased	Increased	Oxygen; Chlorine

The aggregation of several water molecules due to hydrogen bonding is generally termed a “water molecule small sized cluster”. ionized water means water with smaller hydrogen and oxygen molecules and hence called Micro-clustered



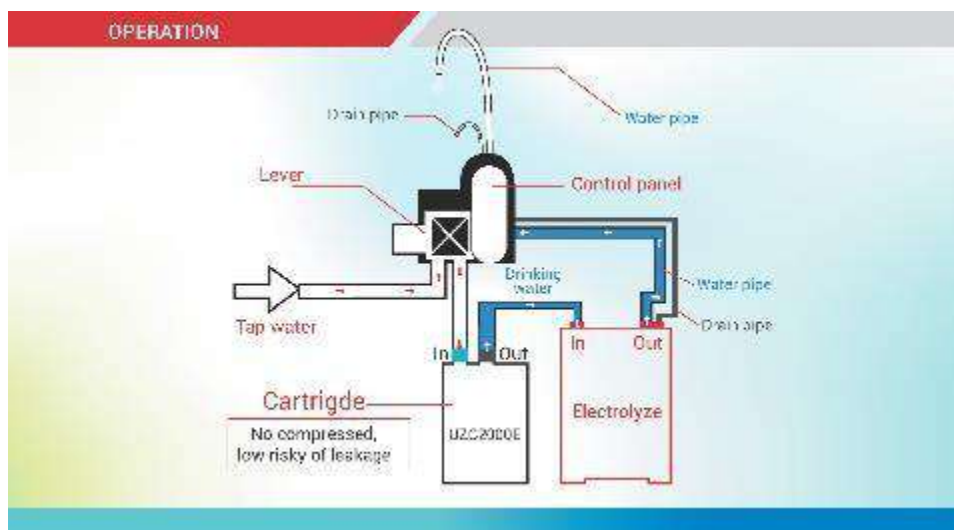
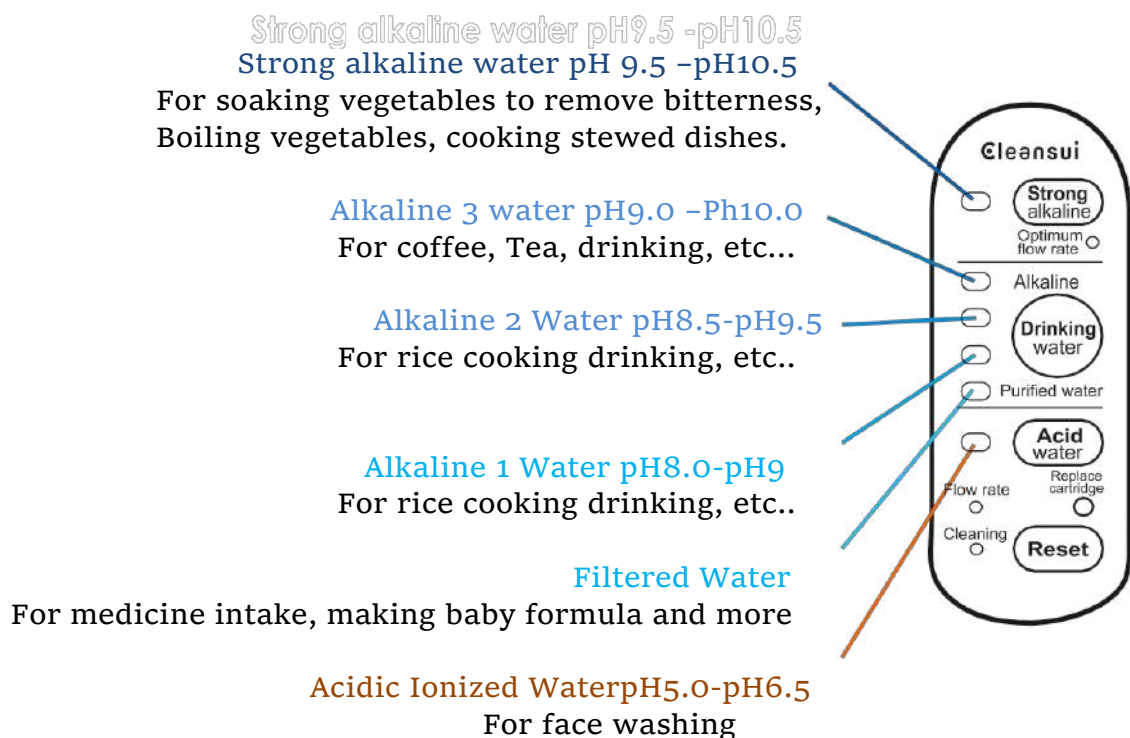
However, this clustered status is considered to be repeatedly generated with an extremely short life-span (pico second: One trillionth of a second) .and no method for measuring the size of the water clusters is currently available.

IS IT POSSIBLE TO CHOOSE SAFE AND HEALTHY WATER, WHICH IS USEFUL TO OUR DAILY LIFE.?

YES...

It is possible to choose safe and healthy water, which is necessary to our daily life by choosing Mitsubishi Cleansui - Alkaline Ionized Water purifier

Mitsubishi cleansui provides water with different pH level by simple control panel operation



Technical Specifications

MODEL- EU301		
voltage	220V-240V 50-60Hz	
Power capacity	Maximum about 250W (sleep mode, about 0.5W)	
Static pressure	0.07 – 0.75 Mpa	
Dynamic pressure	0.07 – 0.35 Mpa (Works under dynamic pressure of 0.07 Mpa)	
Permissible temperature	Maximum 35°C	
	ABS plastic, POM plastic, Platinum & Titanium Electrode Plates	
	Electrolysis method	Continuous electrolysis
		Alkaline: 4 levels, Acid: 1 level
	Continuous running time allowed	Alkaline 1, 2, 3... approximately 10 minutes
		Strong alkaline, acidic water...approximately 5 minutes
		2.5L/min (at pressure 0.1 Mpa, 20oC)
	Flow rate (water produced) UZC2000E	Filtered water: ~2.2L/min Rinsed water: ~0.3L/min
		Filtered water: ~3.3L/min Discharged water: ~0.4L/min (pressure 0.3 MPa, 20oC)
	Method for cleaning electrodes	Automatic cleaning
Capacitive faucet	Design specifications	The faucet has a water flow adjustment function design
	Bore diameter	
	Signal cable	
	Size	Maximum height: 290mm
		Filter nozzle height: 225mm
		Discharge nozzle: 64mm
		Filter nozzle sweep radius: 150mm
	Diameter(WxDxH)	
Standard		
	Size	Maximum diameter 105 mm x Height 217 mm
	JIS S 3201 / ISO9001-14001	