Korea Food and Drug Administration (KFDA) Manufacturing License No. 889 KFDA Product License No. 05-872



### **OPERATION MANUAL**

### Model : BTM-105DN Under-sink type





### Dedicated to runing water lines

- \* Read this manual carefully for proper use of the product. Keep the manual in a safe place and refer to the manual whenever necessary.
- \* Our company will not be held responsible for any malfunction or accident resulting from incorrect installation or improper handling.

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BIONTECH Co., Ltd.

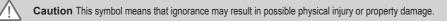
# **Safety Precautions**

The precautions are designed to prevent physical injury or property damage.

■ The precautionary symbols are classified as follows depending on the level of injury or damage as a result of incorrect use of the product arising from ignoring the precautions.



Warning This symbol means that ignorance may result in fatality or severe physical injury.



The contents to be observed are described and classified as follows (examples):



This symbol means attention is required.



This symbol means prohibitory instruction should be observed.



This symbol means compulsory instruction should be complied with.



Use only potable water such as tap water



Drinking water without removing harmful substances may be hazardous to health.

Prohibitory instruction The product should be installed properly according to the operation manual.



Incorrect installation may result in fire, electric shock or water leakage.

The receptacle should be installed safely and correctly according to standard electricity and indoor cabling and wiring regulations.

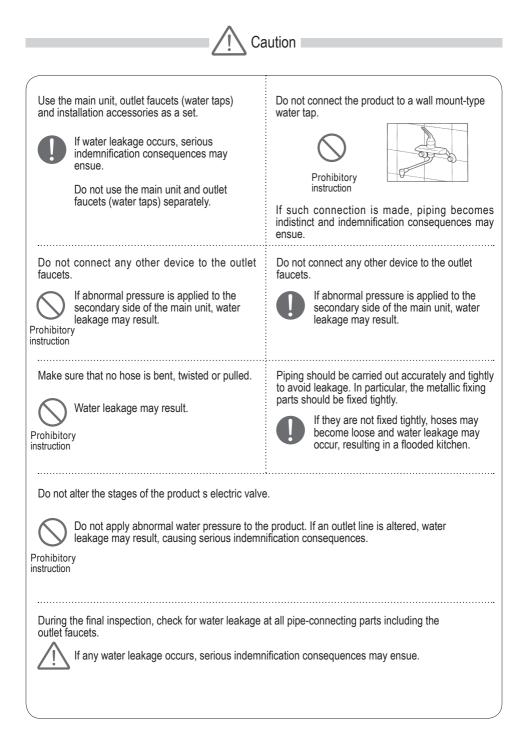


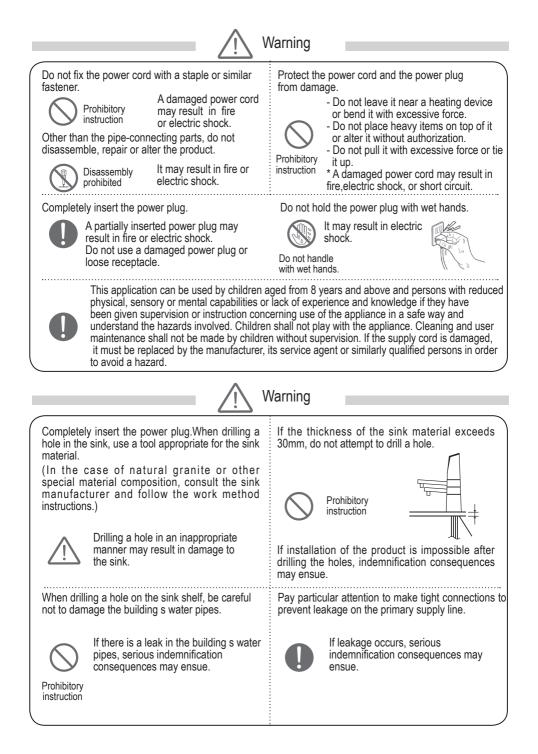
Unsound electric construction work may result in fire or electric shock. The receptacle should be installed by a qualified electrician.

Do not exceed the limit of the receptacle or power distribution devices. Use specified voltage only.



Exceeding the limit of the electric devices by multi-tapping may result in overheating and eventual fire.





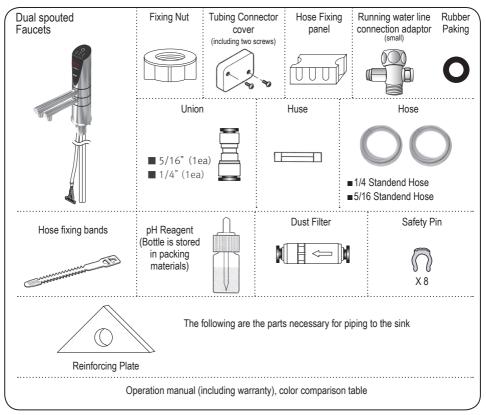
- Install the product correctly according to this manual.
- \* Piping should be carried out considering the building construction, running water regulations and the city s ordinances. It should be noted that the connection method of piping may differ depending on the combination of the sink and floor cabinet.
- During the final inspection, be sure to check for leakage, operation and flow rate.
- After completion of installation, hand over the manual, the warranty and pH measurement reagent to the customer.
- Depending on the local water quality, pH may deviate from the required range Particularly in areas where underground water is supplied as tap water, make sure to measure pH before installation.
- Our company will not be held responsible for any malfunction or accident resulting from incorrect installation or improper handling. Conduct a thorough preliminary inspection.

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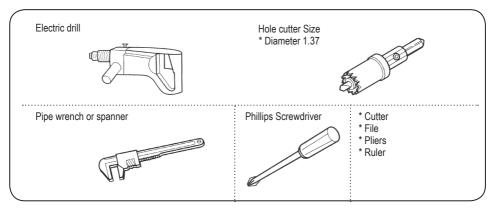
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### **Parts and Accessories**

Check the following parts and accessories:



### The following tools are necessary for installation work



6

### **Parts and Accessories**

- Do not install the product in any of the following places (product malfunction may result if ignored):
  - Near hot temperatures (40 °C or higher),
  - A bathroom or a humid place,
  - Outdoors or a place in direct exposure to rain and snow,
  - A place contaminated with petrochemicals, or
  - A place where the product may undergo freeze and burst.
  - \* This product does not function in very cold places (below freezing point).
- Piping should be carried out considering the building construction, running water regulations and the city s ordinances.

The connection method of piping should differ depending on the combination of the sink and floor cabinet.

- This product has been authorized and registered as compliant with running water regulations. Make sure to use the original main unit, faucets and installation auxiliary material set.
- Before installing the main unit, install the power receptacle inside the cabinet.

(In the event the receptacle cannot be installed inside the cabinet)

- A place where it is difficult to connect/disconnect the power plug.
- A place where leakage or condensed water may flow into the receptacle.
- You may install the product as part of kitchen sink furniture (ie - inside the cabinet) depending on your available options, but consult with the customer to make sure easy filter replacement is possible. (Minimum space required.)
- The fixing nuts for the outlet faucets of the alkaline ionized water tube and acidic ionized water tube should be tightened manually without using a tool. (Otherwise, damage or leakage may result.)
- Before beginning installation, if you require information on the structure or composition of the sink, contact the sink manufacturer for information.





- It is essential to Solenoid valve protection filters on the upstream of the water intake of this product. If the filter is not installed, contaminants may pass through the valve, resulting in malfunction of the valve and leakage.
- \* If contaminants accumulate in the protection filters, it may reduce the amount of water intake. Check and clean the filter periodically.



### **Operation Precautions**

The precautions are designed to prevent physical injury or property damage.

The precautionary symbols are classified as follows depending on the level of injury or damage as a result of incorrect use of the product arising from ignoring the precautions.



Warning This symbol means that ignorance may result in fatality or severe physical injury.



**Caution** This symbol means that ignorance may result in possible physical injury or property damage.

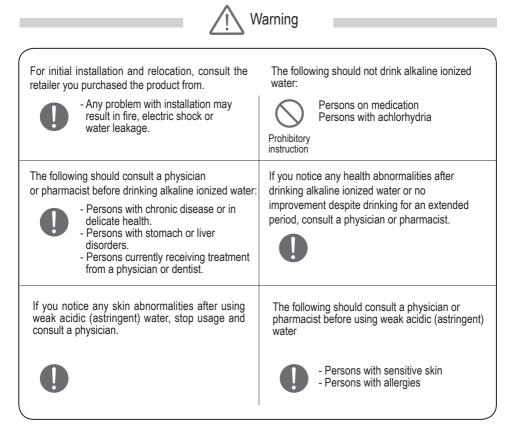
The contents to be observed are described and classified as follows (examples):

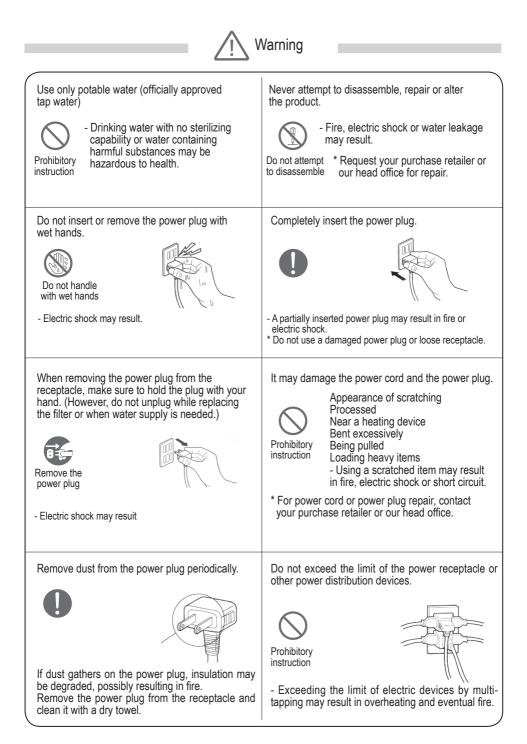


This symbol means prohibitory instruction should be observed.



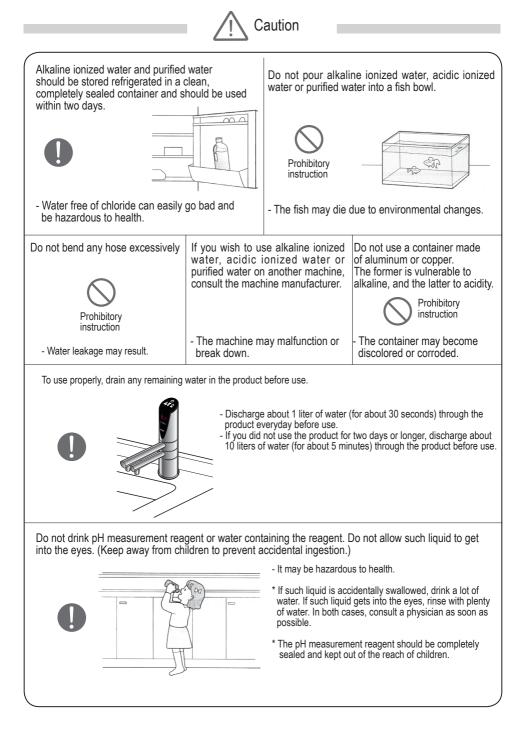
This symbol means compulsory instruction should be complied with.





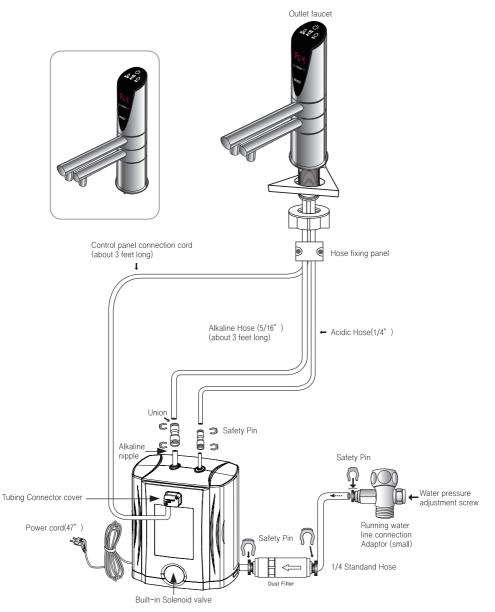
# Warning

r	
Do not drink the following:	Do not drink water with pH level 10.0 (step 5) or higher.
<ul> <li>Acidic ionized water</li> <li>Water discharged while the abnormal lamp is on</li> <li>Drain water after cleaning</li> <li>It may be hazardous to health.</li> </ul>	<ul> <li>* The recommended pH level for drinking is about 8.5 (step 2 or 3).</li> <li>* Consult a physician before drinking water with pH level 10.0 (step 5) or higher.</li> <li>* Measure pH periodically (once every month or every other month).</li> </ul>
Do not clean the product by sprinkling water on it.	Do not place anything on the product.
- It may result in electric leakage or electric shock.	Prohibitory instruction - It may fall off and damage other items
Do not apply excessive force or shock to the piping.	Use the main unit, outlet faucets (water taps) and installation accessories as a set.
- Piping connection may become loose and cause water leakage.	- If there is water leakage, a serious loss may be incurred.
Prohibitory instruction	* Do not use the main unit and outlet faucets (water taps) separately.
Do not connect any other device on the upstream of the alkaline electrolysis ionized water outlet faucet.	When removing the power plug from the power receptacle, make sure to hold the plug with your hand
<ul> <li>It may apply abnormal pressure to the secondary side of the Alkaline Electrolysis Ionized Water System and possibly cause water leakage.</li> </ul>	- Unplugging by pulling the power cord may damage the cord and fire or electric shock may result.

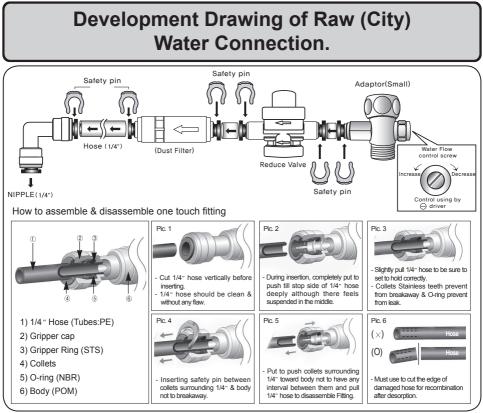


### 2. Parts Drawing for Installation

Check the positions of parts and accessories



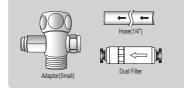
Refer to the development drawing on page 13.



#### <How to connect & caution>

- 1. Connect adaptor to water pipe and combine fitting with entrance nipple of tap water of BTM-105D.
- 2. Combine hose on two touch fitting of adaptor and connect the other side of hose with filter DUST Filter's.
- 3. Completely insert hose to the end of one touch. If don's insert to the end, it may cause to leak.(pic.2)
- 4. After installing product, if water flow is more decreased or increased than standard, please control to be standard using by adaptor water supply control valve.

 While using the water ionizer, the power could not be turned on occurs by the source water no pass though the contaminants accumulate in the dust filter and filter strainer. At that time, please wash up the filter strainer and the dust filter after remove from the Water Inlet Elbow with flowing water.

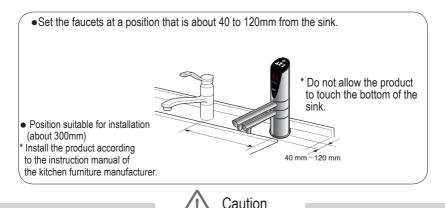


Dust Filte

 After 2 or 3 years using the water ionizer, we do recommend you to replace all related connecting parts to new ones as the shown on the left side box.
 Unless, some malfunctions of the product can occur.

# 3. Selecting Locations for Water Outlet Faucets

- Determine the locations for the outlet faucets.
  - The locations for the outlet faucets should be determined with prudence.



When drilling a hole in the sink, use a tool appropriate for the sink composition.



(In the case of natural granite or other special material composition, consult the sink manufacturer and follow the work method instructions.)

\*Drilling a hole in an inappropriate manner may result in damage to the sink.

- Drill a hole at a location of installation.
  - The diameter of the hole should be 35mm. Trim the hole with a file.
  - If the stainless steel product has no reinforcing plate or is one with thickness of 5mm or less, an additional reinforcing plate should be added.
  - Drill a hole with a diameter of 35mm and do the same on a reinforcing plate with thickness of 10 to 15mm, and attach it with double-sided tape.

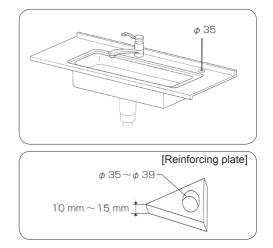
If the thickness of the sink material exceeds 30mm, do not attempt to drill a hole.



instruction

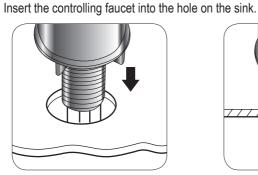
If installation of the product is impossible after drilling the holes, indemnification consequences may ensue.

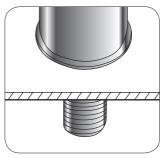
### Hole-drilling in the sink



# 4. How to Fix Water Outlet Faucets

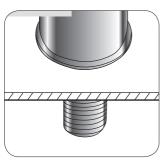
Fix the outlet faucets at the hole drilled on the sink using metallic fixing accessories. \* Before fixing the faucets, remove any dirt around the hole

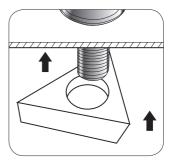




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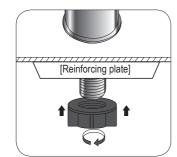
And insert the reinforcing plate into the end of stand for the controlling faucet.

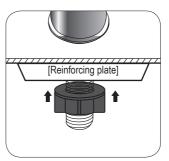






Tighten the faucet with the fixing nut.





- Make sure the center of the fixing nut and the hole on the sink is aligned. (If they do not, internal water leakage may result.)
- •Make sure the controlling faucet is accurately in place.

## 5. Installation and Connection of Alkaline Electrolysis Ionized Water System Main Unit

\* Close the valve located next to the water meter. Leave a water tap open until no water flows out of the tap.

Install the Electrolysis Ionized Water System main unit in the sink cabinet, and connect the main unit to the intermediary valve and the dual spouted faucets.

\* Make sure the alkaline ionized water hose, the acidic ionized water hose and the supply water hose are not bent.

(Otherwise, leakage may occur or improper pH levels.)

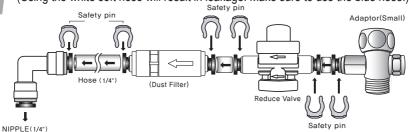
\* Caution) Please ensure that the alkaline ionized water hose and the acidic ionized water hose are not bent into a U shape.

Cut the accessory hose (900mm) to a suitable length.

(If the length of the hose is not suitable, improper pH levels will result.)

- \* After completion of piping, fix each hose with the bending hose-fixing clip.
- \* After completion of piping, do not incline the main unit.

Connect the (1/4" size) water supply hose to the main unit. (Using the white soft hose will result in leakage. Make sure to use the blue hose.)



1. Make sure to check any leakage, after installation.

- 2. When connect water suppply hose, if the end of the hose isn't straight, it can be caused leakage.
- 3. Make sure the water supply hose to connect by the one touch fitting.
- 4. Make sure insert the water supply elbow to until edge of part.



Connect the water supply hose connected to the main unit to the nipple of the intermediary valve.

- In the case of piping extension necessity:
- Install the outlet hoses from the main unit (the alkaline ionized water hose and the acidic ionized water hose) so that they are not bent or twisted.
- If the product is located fár from the water valve, purchase an addition length of hose to extend the water supply hose.



- Connect the control panel cord to the main unit.
- (1) Connect the connector of the control panel cord securely.
- (2) Arrange the connector cord so that it can be pulled out through the cover groove.
   The cord outlet is located on the part of the cover.
  - Do not apply excessive force to the connector.
- (3) Close the connector cover.
   \* Make sure to close the connector cover. (Insects may get inside the main unit through the connector cover.)

# 6. Checkpoints after Installation

- Before supplying water to the main unit, drain the running water by opening the valve at the water meter and opening one of the water taps in the building. Do not open the outlet faucet at this time. (This is to drain any foreign substances from the running water piping, thereby preventing malfunction of the built-in Solenoid valve) • Check for leakage at the pipe connection by pushing the POWER button. (Do not push the switch for 3 seconds after water supply has begun.) Leave the valve at the water meter open. Leave the (small) adaptor adjustment screw of the intermediary valve. (The (Open the valve at the water meter which product is shipped with the screw open.) was closed to connect the intermediary valve.) Open one of the running water taps to Insert the plug of the product into the receptacle. (You should hear drain foreign substances, if any. beeping sound.) Check the operation of the control panel by pressing the POWER button. (Make sure that the lamps on the control panel turn on normally during the different operation steps.) Turn on the product by pushing the POWER button, select the purification function, and drain about 10 liters of water (about 5 minutes). - This is to remove any air bubbles and fine particles from the activated carbon in the filter. \* Make sure that water comes out of the drain outlet (acidic ionized water outlet faucet). (If no water comes out, check if any part of the drain hose is bent.) Alkaline outlet fauce Drain outlet (Acidic ionized water Check for water leakage at piping connections and the filter.
  - To check leakage at the filter, open the filter cover.

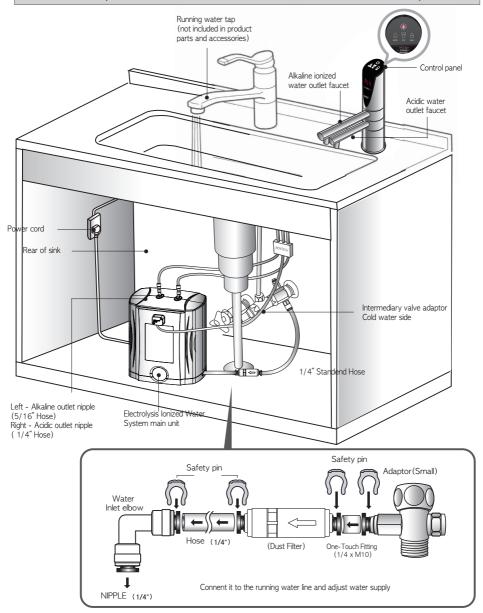
- Adjust the throughput
  - Adjust the throughput according to the following steps:
  - 1 Supply water to the product by pushing the POWER button.
  - O Adjust the throughput by rotating the valve adjustment screw.
    - (Adjust the throughput so that a 200 m cup can be filled in 3 to 5 seconds.)
  - $^{(3)}$  Set the product at normal operation conditions.
- If water pressure is too low, you may not be able to obtain sufficient throughput. (In cases when water pressure is lower than 1 kgf/ cm<sup>2</sup>.)
  - In this case, the lifespan of the filter may be shortened. Notify the customer of this fact.
- If the throughput is low due to low water pressure, do not attempt electrolysis.

#### **Operation Precautions** Problem Countermeasure (Checkpoint) No lamp lights up on the control Is the connector of the control panel cord panel after the product is plugged in. completely connected? The product responds abnormally to Is the connector of the control panel cord button operation or does not completely connected? respond at all. No water comes out of the acid \* Is the acidic water hose bent? \* Is water throughput too low? water outlet faucet. There is water leakage. Are all parts completely connected? Are all parts completely connected? Is the No water comes out after connector of the control panel cord completely pressing the POWER connected? button Water keeps coming out despite Is the connector of the control panel cord pressing the POWER button completely connected? \* A few drops from the alkaline or acidic ionized water out faucet is not a sign of machine malfunction. \* A foreign substance clogging up the built-in Solenoid valve may prevent water stoppage.

### 7. Nomenclature and Descriptions

Install the main unit inside the sink on the floor and install the outlet faucets above the sink. (For details, refer to the installation instructions.)

Install the receptacle at the rear of the sink so that it is not visible from the front.)



### Control and indicating part

Operation POWER button	This switch turns on/off water supply to the main unit.	10 10 00 00 00 00 00 00 00 00 00 00 00 0
Alkaline ionized water & level selection button	Use this button to select the alkaline ionized water that best suits your purpose.	Alkaline ionized water
Water Purification button	Water will be purified but not electrolyzed.	
Filter consumption indication	The Valum of filter consumption is expressed in numerical form ranging from 000 to 999.	Acidic ionized water outlet faucet

### Choose the level that best suits your purpose.

pH level selection		Indicated	pH value instructed		
	Step 5	When infusing vegetables to remove their bitter taste When washing vegetables Use it for drinking after consulting the doctor	10.0 ± 0.5	High	
	Step 4	Recommendable for medical and culinary usage	9.5 ± 1.0	•	
Alkaline	Step 3	Recommendable for drinking and cooking	9.0±1.0	Alkaline	
	Step 2	Recommendable for daily drinking	8.5±1.0	•	
	Step 1	Recommendable for initial drinking or dissolving powdered milk	7.5±1.0	Low	
Acidity	Step 1	Recommended for skin care an astringent	5.5±1.0	Acidity	
	Step 2	For washing dishes Strong acidic sanitary or rinsing water can come out when the water volume is adjusted	3.5±1.0	High	

% The pH value instructed is acquired by taking into consideration the source water based or Seoul, Korea concentration of pH 7.5 ±0.5 based on the water flow of 1.5 ℓ/m (±0.5 ℓ).

The pH values of the alkaline and acidic ionized water may not fall into the range of the pH value instructed of the table above depending on the water quality and water flow volume.

# How to store and manage the product after it is used. Precautions for using it

- 1. How to store and manage the product after using it.
- Turn off the power before moving the product
- ② Do not let water come inside the main body.
- ③ Do not block the outlet nozzle or the drainage hose arbitrarily. Do not bend or twist the hose arbitrarily.
- ④ Turn off the source water supply valve when the system will not be used for a long period of time.
- (5) Disconnect the electric cord from the wall socket when the system will not be used for a long period of time.
- <sup>(6)</sup> Clean the surface of the main body with soft cloth soaked with soap water.

2. Precautions for using it.

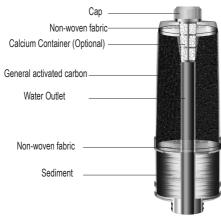
(1) Precautions to be taken when using the ionizer.

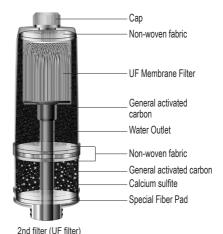
•Pay attention to the following items when drinking the alkaline ionized water generated through the electrolysis.

- ① Consult a doctor before drinking the strong alkaline water of level 5.
- ② Those people with achlorhydria need to take the advice from a doctor for drinking the treated water
- ③ Do not use any type of water that can not meet the water quality requirements for the drinking water
- (4) The product is designed exclusively for the water of normal temperature, so warm water should not be used.
- ⑤ Do not drink the alkaline ionized water together with medicine.
- © Those people who just started using the water need to begin with small amount of nearly pH neutral water. They need to consult a doctor for drinking the strong alkaline water.
- The stop drinking the water and consult a doctor if you feel abnormality after drinking the water, or if there is no alleviation of symptoms felt in the stomach even after continuously drinking the water.
- (8) Those people who currently go through medical treatment need to consult a doctor before drinking the water.
- (9) Those people with problems with the kidney, such as renal failure, calcium excretion failure, should not drink the water.
- ① Those people who drink the alkaline ionized water need to check, once a month since after the initial drinking, whether the pH value is still within the range for drinking, through utilizing a glass electrode type pH device or colorimetry before they continue to drink the water.
- ① Drink after the initial alkaline water flows through.
- 2 Avoid any metal container if possible and drink the water within a day while keeping it cold.

(2) Pay attention to the following items regarding the use environment and conditions.

- ① Should keep the water flow volume at an appropriate level in order to prevent the alkaline ionized water from being generated with difference in the pH value compared with the set pH value due to the difference in the water flow volume.
- O Do not use the product in a place, like a bathroom, where temperature or humidity is high.
- ③ Use the product in a place where there is no slope.





1st Filter (Carbon filter)

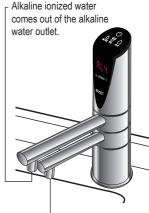
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## 8. How to Produce Alkaline Ionized Water

Supply water by pushing the POWER button.

- \* The water supply Power lamp will turn on.
- \* When the Solenoid valve opens and ionized water is available, the alkaline level selection lamp will turn on.





Acidic ionized water comes out of the acidic water outlet. Do not drink.

Set the alkaline level of your choice by pushing the ALKALINE button.

Make sure the alkaline level selection lamp turns on.

- \* Every time you push the ALKALINE button, alkalinity increases a level higher.
- 4

Take the alkaline ionized water. (Check that acidic ionized water is supplied from the acid water outlet.)

- 5
- After taking the water, stop the machine by pushing the POWER button. (To protect the machine, do not stop the machine for 2 seconds after water supply begins.)
  - \* Power supply is automatically cut off once taking of water ceases.

Audio notification "Alkaline ionized Water on Process".

When the machine is powered up and water begins to be supplied at the previously set step, the machine notifies with the audio announcement as above.

- If you use the machine at Level 5 (strong alkaline) and turn it off and on again, the machine will be automatically set to the alkaline step you selected prior to Level 5.
   Do not operate the machine at Level 5 (strong alkaline) for an extended period of time.
   Depending on the quality of water supply, the machine will shut down automatically to protect itself.
  - It is not a malfunction.

# 9. How to Use Water Purification Method

Supply water by pushing the POWER button. \* The supply Power lamp will turn on.

\* When water is supplied, the machine automatically selects the previously set alkaline step and water can be taken.



Purified water comes out of the alkaline water outlet faucet.



Purified water comes out of the acidic water outlet faucet

2

Make sure the alkaline step selection lamp turns on.

(The machine supplies water that has not been

3

Take the purified water.

Push the PURIFY button.

electrolyzed.)

Stop the machine by pushing the POWER button. (To protect the machine, do not stop the machine for 2 seconds after water supply begins.)

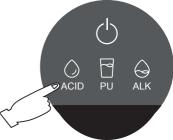
\* Audio "Crystal Clear Water in Production."

When the machine is powered up and water begins to be supplied at the previously set step, the machine notifies with an audio announcement. If you push the PURIFY button at this time, the machine will notify with the audio announcement as above for purified water.

If you use the machine in the purification mode and turn it off and on again, the machine will be automatically set to the previously selected alkaline step.

# 10. How to Perform Forced Cleaning (Production of Acidic Ionized Water)

- In the forced cleaning mode, acidic ionized water is supplied from the alkaline ionized water outlet faucet. This function is used when a large amount of acidic ionized water is needed, or to prevent the outlet hose from contamination.
  - S \*
    - Supply water by pushing the POWER button.
    - \* The supply Power lamp will turn on.





Make sure the acid lamp turns on.

- Select the purification mode by pushing the Acid button.
  - \* While it is selected, the machine plays a melody.
  - Do not drink water from the machine.
  - Acidic ionized water is supplied from the alkaline ionized water outlet faucet.
    - Use this mode when a large amount of acidic ionized water is needed.
  - After use, stop the machine by pushing the POWER button.
    - (To protect the machine, do not stop the machine for 2 seconds after water supply begins.)

Acidic ionized water comes out of the alkaline water outlet.

Alkaline ionized water comes out of the acidic water outlet. Do not drink.

Audio notification "Acidic ionized Water on Process".

When the machine is powered up and water begins to be supplied at the previously set step, the machine notifies with an audio announcement. If you push the CLEAN button at this time, the machine will notify with the audio announcement as above for acidic ionized water.

■ If you use the machine in the purification mode and turn it off and on again, the machine will be automatically set to the previously selected alkaline step.

■ For forced cleaning of the machine, operate the machine for about 5 minutes in this mode and drain the water for about two minutes to prevent contamination in the piping.

## About automatic cleaning operation

In order to clean the electrolytic bath and maintain the production function, the machine automatically cleans the electrolytic bath in the following cases:

About 10liters of alkaline or acidic ionized water has been produced.

After you close the supply valve, the machine performs an automatic cleaning operation for about 30 seconds. When you open the supply valve after the automatic cleaning operation is complete, the machine will drain about 0.2 liters of water which was used for cleaning.

- $\cdot$  Do not supply water to the machine while it performs the automatic cleaning operation.
- While performing the automatic cleaning operation, the Power lamp will blink and the machine plays a melody.
- \* If you supply water to the machine while performing the automatic cleaning operation, the machine will repeat the process until cleaning is complete.
- $\cdot$  Even if more than 10Liters has been produced, the machine will not switch to cleaning mode if you continue to use the machine.

### FYI

- $\cdot$  While performing the automatic cleaning operation, water may drip from the outlet faucets. This is not a malfunction.
- $\cdot\,$  Cleaning will complete automatically and the Power lamp will turn off.
- \* Audio notification: "Self Cleaning."
- Drain indication

After cleaning is complete, supply water by pushing the POWER button. The machine will notify with an audio announcement and drain about 0.2 of water that was used for cleaning while the Power lamp blinks. Then, the machine automatically returns to the previously set alkaline step. (Do not drink the drained water after cleaning.)

\* Audio "Drain Out. Please wait for a moment." After draining is complete,

the machine notifies with an audio "Alkaline ionized water on progress."





Do not drink drained water after cleaning, or the acidic ionized water.

# 11. How to Measure pH (Hydrogen Ion Concentration)

Measure the pH level of alkaline or acidic ionized water from the machine.

### Preparation: pH measurement reagent set

### Measurement sequence

Place two or three drops of the pH measurement reagent in the test cup. (It is difficult to describe the amount of the reagent other than "two or three drops".)

Set the machine at Step 5 and drain alkaline water for about 10 seconds before taking a sample. \* The recommended sample amount is 50 cc



Place the sample in the test cup and shake.



Compare the color of the test cup with the color comparison table in a brightly lit place.

- · Dilute the water that contains the reagent before disposing of it.
- Other measurement reagents available on the market or litmus reagents are not accurate. Make sure to use the pH measurement reagent we supply.
- The pH measurement reagent may lose its capacity for accuracy if it is stored for an extended period of time.
- · Carbon dioxide and other components resolved in water may affect coloration, differing from the color comparison table.
- For about a week after filter replacement, a higher pH level may be measured. (This is no reason for concern.)
- The pH measurement reagent is a consumable. You can purchase it from our distributor or our head office.



· Do not drink the pH measurement reagent or allow it to get into the eyes.



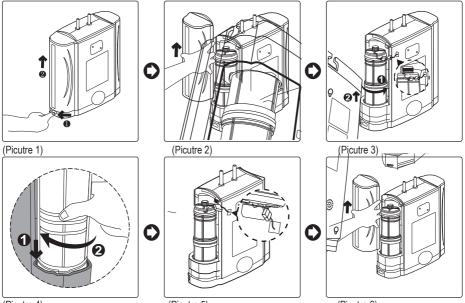
- If accidentally swallowed, drink a lot of water. If it gets into the eyes, rinse with plenty of water. In both cases, consult a physician as soon as possible.
  Do not place near a heat source. It may ignite or cause a fire. Store it out of the
- reach of children.
- · Avoid hot or humid places. Keep it in a dark, cool place.
  - \* The pH measurement reagent is a consumable. You can purchase it from our distributor or our head office.



## 12. Timing and Method of Filter Replacement

#### Do not disconnect the electric plug.

(When the plug is disconnected, the system can be restored when the filter connector is inserted)



(Picutre 4)

(Picutre 5)

(Picutre 6)

1.Open the cover . (Picutre1~2)

2.Disconnect the filter connector from the corresponding port. Replace with a new filter. (Picture 3)

Place the filter into the hole securely and turn it clockwise to insert it into the connection part.

\* Be careful of the possible water coming out of the filter. (It is not leakage)

\* Remove the sealing sticker of the filter.

Check whether the O-ring is attached well at the bottom of the new filter first.

The reverse way from the installation. (Picture 4)

Insert the filter connector into the corresponding port. (Picture 5)

3. Connect the electric plug and turn on the way supply control valve and let the water pass fluently.

Then, If a unbranded filter is installed, there will be a voice

guidance saying "Filter rejected, mount correct one.", and the power will be turned off after 20 seconds.

Check whether the filter usage status indicating number becomes [000].

4.Let the water flow through after selecting the purified water function.

■ Let the water flow through for about 2~3 minutes.

(Dusts of activated carbon which is the filtering medium may flow with water during the initial flow after the filter is replaced.)

Check whether there is any water leakage at the installation section of the filter.

5.Close the cover. (Picture 6)

O Please take note

When you get the alkaline ionized water in a cup after the filter is replaced, there can be white bubbles. which are not abnormal.

The ion concentration (pH value) can become slightly higher after the filter is replaced (For about 1 week). That is not abnormal.

% Follow the steps mentioned above even when replacing the filter earlier than the time for the replacement.

The filter without our company logo is not a genuine product. When a genuine filter is not used, the quality cannot be guaranteed and the normal after sales service(A/S) will not be available.

Calcium scale in electrodes may cause....

The reason for the calcium scale on the alkaline side of the water ionizer is because the high pH of the water causes the minerals in the water to precipitate out of the water and become displaced.

Calcium scale on the electrodes causes the pH data of lonized water decrease because the source water is not coming in contact with the electrodes. once your water ionizer is cleaned using this metod, the pH of the ionized water will be resume higher because the water is now coming in direct contact with the cleaned electrodes

Symptom of calcium scale

when whitish floating substances are found in the alkalized water when the water output declines significantly when the pH of alkalized water drops significantly

Use of Cleaning Filter

Cleaning filter will eliminate most Calcium scale on the plates and inside the chamber of your ionizer allowing for longer life and better performance.

Cleaning filter provides the way to keep your water ionizer.

insures that the platinum/titanium plates remain clean and free of calcium.

### How to use cleaning filter



- 1. Clean the water ionizer machine for every 2 or 3 months.
- 2. Do not remove the power from the receptacle.
- 3. Replace with cleaning filters from 1st & 2nd water filters together before the cleaning procedure.

Do not use cleaning filter with main water filters together at the same time.

- 1. Do not remove the power from the receptacle.
- 2. Push OFF the POWER button.
- Open the filter cover and turn the water filters counterclockwise and take them out.



4. Replace with a cleaning filter. (The reverse way from the installation)





1st filter Put empty filter on

2nd filter Put cleaning filter on

### 🕂 Warning

Replace with cleaning filters from 1st & 2nd water filters together before the cleaning procedure. Do not use cleaning filter with main water filters together at the same time.

 Insert the cap to the Acidic ionized water outlet. (The Cap is enclosed.)



6. Push on the POWER button and let the water passes for 1~2 seconds. And then push off the button again, and wait for 3-5 hours as it is.





7. Remove the cap from the Acidic ionized water outlet.

for 3-5 hours

 Push on the POWER button and next push on the PURIFY button and let the water pass fluently for about 5-10 minutes.





 Push off the POWER button and replace with the previous water filters same as of above #2, #3 and #8.

Then, let the water passes for more than 1-3 minutes.

- 10. Close the filter cover. Then cleaning procedure is finished.
- 11. The Calcium scales can be seen after replacement of filter.

Then let the water pass fluently before using.

### 11. How to Measure pH (Hydrogen Ion Concentration)

### Use of Alkaline Ionized Water

When cooking rice

Try to cook rice after soaking the rice in the alkaline water for 30 ~ 60 minutes in advance. When cooking rice with the alkaline water, the rice will be glossy like glutinous rice, tasty, stored well and kept fresh for a long period of time.

Coffee, black tea and others

Help remove the bitter taste of coffee and the puckery taste of black tea as well as enriching the faint taste and fragrance peculiar to black tea.

Heavy drinking and hangover

It will be good for your health if you drink it before going to bed or drink it on the empty stomach in the morning.

#### Various dishes

When cooking bamboo shoots, tree shoots, taro and seaweed with the alkaline water, the biting taste and the souring taste will be gone while the natural taste will enriched. When using it as the water for cooking fish, the fishy smell will be eliminated, making the fish taste better.

#### Liquors, cocktails

The liquors will be made highly mild and soft. When making an ice cocktail using the alkaline water, the taste will be better.

#### Plants

If seeds are soaked in the alkaline water before being sowed, the germination rate will be enhanced. Even in case of stem cutting or grafting, plants will take root better. When the water is applied for ornamental plants, the growth of roots will be facilitated. The alkaline water will neutralize the acid soil and effectively facilitate the growth of plants.

#### ■Vegetables, fruits

If vegetables or fruits which are to be stored are washed using the alkaline water, they can be kept fresh for a longer period of time.

#### Vegetables with unpleasant odors

When cooked after being soaked in the alkaline water for about 20~30 minutes, oder will be reduced, making vegetables more soft and tastier

#### Powdered milk for infants

When mixed with the alkaline water, the powdered milk will be healthier food for infants to eat.









### **Use of Acidic Ionized Water**

#### Bathing, washing of the face, washing of feet

When used for bathing, the acidic water can be a beauty solution good for your skin. The acidic water is astringent helpful in making the skin soft and elastic (Skin is mildly acidic). When the acidic water is used as rinse for the hair just shampooed, it will neutralize the alkalinity of the soap, helpful in keeping the hair glossy. When the acidic water is used as sanitary or astringent solution for the skin just shaved, it can replace the skin toner or skin lotion.

#### Floral arrangement

When the acidic water diluted 1:2 is applied to the cut part of the flowers, it will keep the flowers fresh for a longer period of time.

#### Water for parboiling noodles

When the acidic ionized water is used for parboiling noodles, it will keep them glutinous, chewy and tastier (Thicker noodles for spaghetti, for example, may not be well parboiled with the acidic ionized water, then the alkaline ionized water can be used).

■Washing or processing of fruits and vegetables which contains anthocyanin When peaches, grapes, strawberries, red cabbages, beans and Asparagus are washed and processed with the acidic water, their natural colors can be kept without a change.

#### When preparing fried dishes

When the acidic ionized water is used for preparing fried dishes, the foods will be crispy and tastier.

#### When boiling eggs

When the acidic ionized water is used for boiling eggs, the eggs will peel off easily and taste better a lot.

#### When cleaning

When the acidic ionized water is used for cleaning corridors, and tiled floors, the dusts of every nook and corner can be easily removed. The acidic ionized water is also fast in drying, so it is not sticky.

#### When cleaning glass

When glass, mirrors and glasses are washed with the acidic ionized water, dusts or filth can be easily eliminated and the gloss will be made better. Try to clean household items such as washbowls and chairs and they will be made surprisingly clean.

#### When deposits are formed at a kettle or a pot is incrusted due to burning

When deposits are formed at the kettles, or pots are incrusted due to burning, try to place them in the acidic ionized water for overnight, and then they will be made clean.

#### As the bathing water or for the cleaning of the bathtub

When the acidic water is mixed and boiled together with the bathing water, the combined water can be easily boiling due to the high thermal conductivity of the acidic water. The bathtub can be kept clean because the slime in the water does not build up easily.

#### When cleaning t he chopping board

When you use the chopping board continuously for a long time, it will be full of knife scars. Then filthy impurities can be stuck in those knife scars. Use the acidic ionized water to clean and sanitize the chopping board completely.

#### When cleaning the tableware

Considering that the acidic ionized water has the cleaning as well as sterilizing power, it can be used for cleaning the tableware.

#### When washing the floors

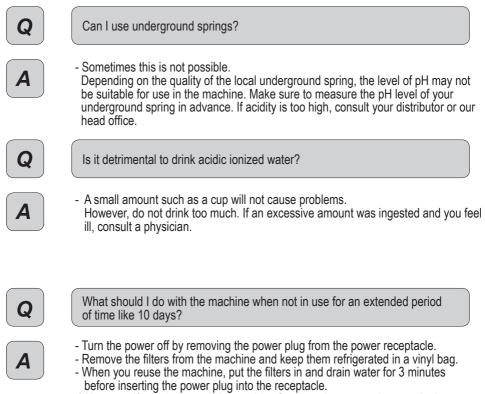
The floorcloth, which is constantly kept wet, is the hotbed for molds. When the acidic ionized water is used for washing the floorcloth, filthy odor can be removed and also the sterilizing effect can be enjoyed. The same goes for the dishcloth.







# 14. Q&A



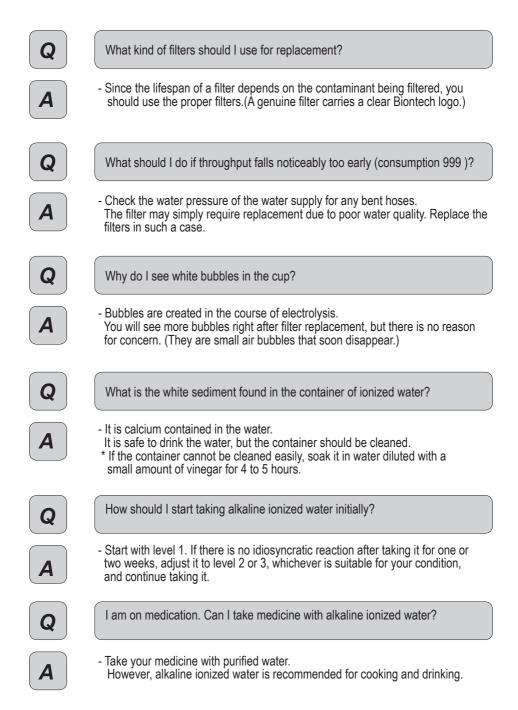
\* However, if you do not use the machine for more than a month, water in the filters may decompose. It is recommended to replace the filters before reusing the machine.



Is it all right to keep the power cord inserted into the receptacle though not using the system for an extended period of time?

Α

- Unless the period exceeds 10 days, do not remove the power cord from the receptacle. (The machine performs automatic self-cleaning.)



# **15. Troubleshooting**

Problem		Cause and Solution
Power lamp indication	The lamp is not turned on or blinks while in use.	<ul> <li>Is water supply too low?</li> <li>At least 1.4 liters per minute is necessary.</li> <li>=&gt;Adjust it by opening the adjustment valve</li> </ul>
	The power turns off and water supply stops while in use.	<ul> <li>Depending on water quality, the machine may shut down and stop supplying water to protect itself.</li> <li>=&gt; Wait about a minute and reuse the machine by pushingthe POWER button.</li> <li>If water pressure changes abruptly, the machine will detects this and may shut down.</li> <li>=&gt; Readjust water pressure.</li> </ul>
	The lamp is on, but the machine does not respond to button operation.	<ul> <li>There is a problem in the PCB circuit due to water leakage.</li> <li>Unplug it, close the supply valve and contact your distributor or our head office.</li> </ul>
Water quali	After purification or cleaning, the alkaline lamp turns on.	• The system returns to the alkaline mode automatically once you stop water supply after the purification or cleaning mode. => This is not a problem.
Water quality lamp indication	When attempting to select the alkaline or cleaning mode, the lamp turns off and I cannot control the machine.	<ul> <li>Depending on water quality, the machine may shut down automatically to protect itself.</li> <li>&gt;It will return to normal in 30 minutes. If it does not, remove and reinsert the power plug.</li> </ul>
Filter lifespan	The filter indicator blinks 999 .	<ul> <li>It is time to replace the filters.</li> <li>&gt; Replace with new filters following the instructions.</li> <li>Throughput is too low early on.</li> <li>&gt; This is not a problem. Replace the filters.</li> </ul>
Others	After one year of use, the filter indicator still does not blink "999" .	<ul> <li>If daily throughput is less than 10 liters, the filters may last longer than a year.</li> <li>This is not a problem.</li> <li>It is recommended to replace the filters after a year.</li> </ul>
	No control lamp lights up.	<ul> <li>Check if it was unplugged.</li> <li>Check the power plug.</li> <li>If the power plug is inserted, it is a machine malfunction.</li> <li>Remove the power plug and request service.</li> </ul>

Problem		Cause and Solution
	Water tastes or smells strange.	<ul> <li>Filtering capacity of the filters has degraded.</li> <li>Replace the filters.</li> <li>If water supply is contaminated falling below potable water standards, the filters may degrade very quickly.</li> </ul>
	The supply of ionized water is too low or no ionized water is supplied.	<ul> <li>Is water supply pressure too low?</li> <li>&gt; This is not a problem. Consult your distributor.</li> <li>Was the adjustment valve incorrectly adjusted?</li> <li>&gt; Readjust the adjustment valve.</li> <li>Was there a blackout or water outage?</li> <li>&gt; Wait until electric power or water supply resumes.</li> <li>Is the Solenoid valve protection filter clogged?</li> <li>=&gt; Consult your distributor or our head office.</li> <li>Check if any filter has been clogged due to excessive contaminants (Replace the filters.)</li> </ul>
Others	The ionized water is warm.	<ul> <li>Warm ionized water is possible initially depending on room temperature.</li> <li>This is not a problem. Drain some water until the water becomes cool.</li> <li>If there is no change after draining water for some time, request your distributor or our head office for service.</li> </ul>
	After the POWER button is pushed, water drips from the outlet faucet.	<ul> <li>This is because we use the source stopping method. Any dripping water is what remains in the piping.</li> <li>This is not a problem.</li> <li>Cleaning operation is in progress.</li> <li>This is not a problem.</li> <li>If the dripping problem persists, it may be caused by a foreign substance clogged in the Solenoid valve. Consult your distributor or our head office.</li> </ul>
	There is water condensation on the piping causing dripping.	<ul> <li>This occurs in very humid conditions or if there is a difference between room and water supply temperature.</li> <li>=&gt; Avoid humid places. Use insulation material to rectify the situation.</li> </ul>
	The ionized water still smells strange after filter replacement.	<ul> <li>This may be because of contamination in the water passage.</li> <li>&gt; Clean the water passage.</li> <li>- For information on the cleaning method, consult your distributor or our head office.</li> </ul>
	The machine keeps playing a melody while in the cleaning mode.	<ul> <li>The machine is designed to play a melody continuously.</li> <li>=&gt; This is not a problem.</li> <li>The melody lasts for 30 seconds in automatic cleaning, and continues when the cleaning button is in the down position.</li> </ul>

### **Final check list**

Problem	Cause and Solution	
	Is there leakage from any connecting part?	Yes / No
Leakage	Is there leakage from any filter?	Yes / No
	Is there leakage from the faucets on the control panel?	Yes / No
	Is there leakage from the main unit?	Yes / No
	Does the machine run in normal operation modes?	Yes / No
	Does each button operate properly?	Yes / No
Operation	Does each indication lamp turn on properly?	Yes / No
Operation	Can pH levels be selected properly?	Yes / No
	Is acidic ionized water supplied?	Yes / No
	Is the amount of throughput suitable?	Yes / No
Contact information of customer		
Date :	Retailer Telephone : ( ) -	Person in charge : (stamp

\* After installation, be sure to fill out the above form and hand over the operation manual, the product warranty and pH measurement reagent to the customer

# **Product Specifications**

Pro	duct Name	Water Ionizer			
Model		BTM-105DN			
	ection Type nd Class	Class 2, Type B Equipment			
Rated	Power Supply	□ 120V □ 220V / □ 50Hz □ 60Hz			
Ra	ated Fuse	🗌 125V / 3A 🛛 250V / 2A			
Wa	ter Supply	Tap Water			
Main	Dimension	320×340×140 (W×H×D)mm			
Unit	Weight	About 6.5Kg			
Wate	er Pressure	70~500kPa			
Oper	rating Temp.	5~30 °C (41~86° F)			
Protec	ction Devices	Built-in Temp. Sensors: 2 Sensors (Automatic Restoration)			
	Method	Continuous Electrolysis			
п	Capacity	Standard 1.5ℓ/min ± 0.5ℓ/min MAX 3.2ℓ /min			
Electrolysis	Steps pH level	Alkaline: 5 Levels / Acid: 2 Level / Purify 1 Level			
ysis	Cleaning	Auto Cleaning (Time: Approx. 30sec., Drain: Approx. 0.20) and Manual Cleaning			
	Electrodes	Platinum-Titanium Electrodes, 5 / 7Plates			
т	Replacement	Cartridge Type (2 Stage)			
Purification Filter	Lifespan	1st : 4000liters 2nd : 4000liters			
tion Fi	Indication	Lifespan Indication by LCD			
ilter	Material	Nonwoven fabric, Granular activated carbon, Calcium sulphite, UF membrane filter			
Effect and efficacy		Chronic Diarrhea / Intestinal Abnormal Fermentation / Indigestion / Gastric Hyperplasia			
Manufacturing License		KFDA Manufacturing License No. 889			
Product License		No. 05-872			

# **Consimer Damage indemnification Guidelines**

Type of consumer damage		Indemnification			
		Within warranty	After warranty		
	If repair is necessary within a month after purchase due to manufacturing defect.		Replacement	Charged service	
	If a replaced product requires major repair within a month of replacement.		Replacement	Charged service	
		If defect occurs.	Free service	Charged service	
Defect or malfunction in performance	Reparable	If the same defect reoccurs after repair (more than four times).		Replacement	
and function	Not reparable		Replacement	after amount deduction	
that occurred during normal operation	If repair is impossible due to lack of parts. (The company should carry parts for 5 years.)				
	If a product handed over for repair was lost by the company.		Replacement	Replacement	
	Damage during transit		Replacement	Charged service	
Defect or malfunction as a	Reparable		Charged service	Charged service	
result of consumer's negligence or error	Not reparable r		Replacement after totaling repair cost	Separate criteria	
<ul> <li>Malfunction as a result of an act of God (fire, salt damage, gas, earthquake, wind or flood)</li> <li>Normal consumption of a consumable</li> <li>Problem due to consumer not using a consumable or optional item as designated</li> <li>Any other problem as a result of external causes.</li> <li>Problem that occurred due to product serviced by an unauthorized person</li> </ul>			Charged service	Charged service	

### **Product Warranty**

This product has passed a thorough quality compliance test administered by our technical team and authorized institutions. It is produced under the Korea Food and Drug Administration (KFDA) Manufacturing Permit No. 889. In the event of any defect or product malfunction, take this warranty to your distributor, purchase retailer or our head office, and we will repair your product in accordance with the product warranty.

#### Warranty

- 1. This product is subject to one year free warranty service.
- The free service period begins from the date of purchase. Please write down the date of purchase on the warranty.

(If the date of purchase cannot be confirmed, free service is not provided.)

- 3. This warranty is not reissued. Keep it in a safe place together with the operation manual.
- 4. Responsibility and indemnification

If the retailer has closed business or incurred bankruptcy, the manufacturer will warrant the product.

#### 5. The following are "warranty exceptional cases" for which service cost will be charged:

- A. Warranty period has expired.
- B. Defect or malfunction as a result of an act of God.
- C. Malfunction as a result of the user's failure to follow the instructions in the manual.
- D. Defect or malfunction as a result of shock or disassembly of the product.
- E. A consumable has been consumed.
- F. Customer's failure to present the product warranty.

Date of Purchase :		(Day)	(Month)	(Year)
Product	Model	BTM-105DN		
FIOUUCI	Mfg. No.			
Customer			TEL	
Address				
Sold by	Branch	Distributor	TEL	

#### Request for service

If you wish to get your product serviced, contact the retailer you purchased the product from or our customer service center and present the product warranty with the date of purchase.

### The most advanced water purification and ionization system



### Bion-Tech Co.,Ltd.

#### Manufacturer

#### Bion-tech Co., Ltd.

298-15 Gongdan-ro(Geumjeong-dong), Gunpo-si, Gyeonggi-do South Korea Tel : 82-31-459-3853 Fax 82-31-429-3859 E-mail : btm@biontech.biz http://www.bion-tech.com (Korean) http://bion-tech.com/e\_main.php

#### Distributor

315030215\_20180702\_R00

