

Hygiene Control of Hydrothermal Therapy Devices

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Thank you for choosing our products and your continuous kind support.
 We have prepared this "Hygiene control (disinfection, sterilization, cleaning) of the hydrothermal bath therapy device" for customers in order to provide you with information about effective methods to prevent Legionella infection. Please refer to this manual for maintaining hygiene of the device.

■ Objective hydrothermal therapy devices

Product Name
Ejector Bath Air HK-122
Ejector Bath Air HK-121
Ejector Bath HK-152
Ejector Bath HK-151
Ejector Bath Air HK-123

Product Name
Ejector Bath HK-21
Ejector Bath HK-22
Ejector Bath HK-23
Ejector Bath HK-51
Ejector Bath HK-52

Product Name
Bubble Bath HK-31
Bubble Bath HK-32
Bubble Bath HK-33

Product Name
Bubble Bath HK-15
Bubble Bath HK-12
Bubble Bath HK-16



HK-122



HK-121



HK-152



HK-151



HK-123



HK-21



HK-22



HK-23



HK-52



HK-51



HK-31



HK-32



HK-33



HK-15



HK-12



HK-16

■ Hygiene control (disinfection, sterilization, cleaning) of device

Periodic hygiene control (disinfection, sterilization, and cleaning) is necessary and useful means to prevent Legionella infection which is caused by Legionella bacteria.

The “Periodic hygiene control (disinfection, sterilization, and cleaning)” will be explained in this manual from the following page.

1. Disinfection and sterilization methods of hydrothermal bath therapy device

It has been confirmed that Legionella bacteria can be disinfected by chlorine, therefore, we recommend to use “sodium hypochlorite” (solution) for the disinfection and sterilization of the hydrothermal bath therapy device and the water filled in the bath.

Disinfection and sterilization should be conducted at least once a month.

- (1) Prepare a sodium hypochlorite solution of 6%. Please purchase only the required amount of sodium hypochlorite at a pharmacy nearby. Sodium hypochlorite needs to be handled with care. Please refer to the aforementioned “Control and handling of sodium hypochlorite” guidelines.
- (2) Fill hot water in the bathtub as usual.
- (3) Add the 6% sodium hypochlorite solution to the center of the bathtub.
Please refer to the following “Table-1” for the appropriate volume of solution to be added in accordance with the type of device you have.
 - The volume shown in the “Table-1” is based on the density of 10mg/L (ppm).
Considering the influence to the device and the generation of trihalomethane, a density of 5 to 10mg/L(ppm) may be appropriate.
- (4) Agitate the sodium hypochlorite solution in the bathtub.
Activate the ejector or bubbler device for several minutes to agitate the sodium hypochlorite solution.
- (5) After agitating, leave the device with sodium hypochlorite solution inside for about 4 hours.
- (6) After the aforementioned time has elapsed, drain the water.
Please rinse inside the bath and the piping of the device well by using clean water (tap water) after the device has been drained.
 - After draining, place add fresh water and activate the ejector or bubbler again for a few minutes in order to clean inside the bath and piping.
Remove a detachable cover in the bath and wash separately it.
- (7) These processes will disinfect and sanitize the device.

Table-1: Volume of 6% sodium hypochlorite solution to be added to the device

Target rate of content: 10mg/L (ppm)

	Model	Volume of sodium hypochlorite to be added	Capacity of bath
Whirlpool bath	HK-122	Approx. 16mL	95L
	HK-121	Approx. 5mL	27L
	HK-152	Approx. 16mL	95L
	HK-151	Approx. 5mL	27L
	HK-123	Approx. 30mL	180L
Whirlpool bath	HK-21	Approx. 6mL	35L
	HK-22	Approx. 21mL	125L
	HK-23	Approx. 33mL	200L
	HK-51	Approx. 6mL	35L
	HK-52	Approx. 21mL	125L
	HK-31	Approx. 6mL	35L
	HK-32	Approx. 20mL	120L
	HK-33	Approx. 33mL	200L
Whirlpool bath	HK-12	Approx. 13mL	80L
	HK-15	Approx. 5mL	30L
	HK-16	Approx. 13mL	80L

2. Cleaning of the hydrotherapy device

Please drain the water and clean the bath well after use.

■ Legionella bacteria

What is Legionnaires' disease:

The Legionnaires' disease is a communicable disease from the Legionella bacteria. People with weakened immune systems, such as infants, the elderly and sick people, tend to be affected by the disease. In most cases Legionnaires' disease comes in the form of Legionella pneumonia whose major symptoms are high fever, chills, aching muscles, nausea, and disturbance of consciousness. In some cases, patients become severely ill.

Legionella bacteria is widespread in natural environments, such as in soil, rivers and ponds. In general, they can multiply at temperatures from 20 degrees C to 50 degrees C and most prolifically at temperatures around 36 degrees C. They can also grow in the bodies of protozoa such as ameba.

Infectious source of Legionnaires' disease:

It has been reported that infections can come from water and hot water supply equipment, water in chilling devices, circulation baths, moisturizers, artificial water supplies such as fountains and manmade ponds, and in heat storage tanks.

Route of infection of Legionnaires' disease:

In general, the Legionnaires' disease is transmitted by the inhalation of infected aerosols (extremely small water drops in the air), the inhalation of infected mist, and oral transmission.

Control and handling of sodium hypochlorite

Caution



- Please assign a person to be in charge of controlling the sodium hypochlorite and implement strict control procedures.

1. Avoid mixing and using the sodium hypochlorite with any other acid and any other products.

This will generate a chlorine gas harmful to the human body.

2. In case of inhaling the chlorine gas, seek medical care immediately.
3. The efficiency of the sodium hypochlorite is weakened as it deteriorates with time. Be sure to purchase only the required volume at a pharmacy nearby when replenishing the supply of sodium hypochlorite. Do not use sodium hypochlorite after its expiration date.



- Sodium hypochlorite should only be handled in a sufficiently ventilated area fresh air. Be sure to wear protective clothing (mask, goggles, rubber gloves, boots) in order to avoid any direct contact with the sodium hypochlorite.

1. When sodium hypochlorite accidentally comes into contact with the human body or clothes, please rinse with large volumes of water. Leaving sodium hypochlorite on clothes may lead to the generating of chloride gas.
2. If the sodium hypochlorite gets into the eyes, rinse with clean water sufficiently. Seek medical care immediately, and give the detailed situation report to the doctor.
3. If the sodium hypochlorite is accidentally ingested, drink volumes of water or milk, or consume food with higher organic nature such as raw eggs. Then seek medical care immediately, and give the detailed situation report to the doctor.
4. If any cutaneous symptoms, such as rash, turgescence, itchiness, a burning sensation, and blisters, are recognized, consult with a doctor immediately.



- Please pay attention to following matters when storing and disposing sodium hypochlorite.

1. Store in places beyond the reach of children.
2. Avoid direct sunlight and keep it at cool place.
3. Do not repack it into other container. This may cause misuse or deterioration in quality.
4. Make sure to check for any residual solution in the container after use. Please rinse the container before disposing.
 - 1) A small amount of sodium hypochlorite can be disposed of through a drain. However, it is necessary to first dilute the solution in water, otherwise pipes could be damaged.
 - 2) Be sure to neutralize the solution when draining into the digestion tank. Use a sodium sulfite solution for neutralization or heat the sodium hypochlorite solution for resolving. If the amount of solution is small, it can be resolved in the sun before disposing.