

EYELAFor Rotary
Evaporators**Water Bath****Instruction Manual****Model SB - 350****Important**

This manual is designed to use this unit safely with the best performance.

Read carefully the chapter on [For safety operation] before operating this unit.

Keep this instruction manual beside the unit.

Tokyo Rikakikai Co., Ltd.

Precautions for your safety

1. Warning signal words

On account of the function and characteristic, some parts of this unit will be heated to high temperature. This manual shows precautions for your safety to prevent careless injuries.

They are classified and defined according to their risk, and indicated with an alert mark and a signal word. Please follow these instructions.

Alert Mark Signal word	Definition
 Warning	Indicates a potentially hazardous situation which, if you use incorrectly, could result in death or serious injury.
 Caution	Indicates a potentially hazardous situation which, if you use incorrectly, may result in injury or physical damage.

We investigate enough possible hazards during the operation, however it is very difficult for us to find every hazardous occasions.

Therefore this manual cannot describe all hazardous operations.

Please follow this manual and be careful to operate the unit, to prevent injuries or physical damages.

1 For Safety Operation

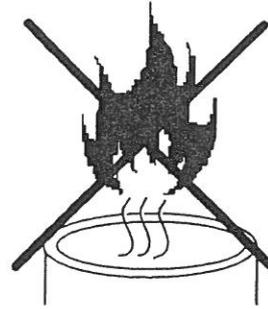
This product becomes very hot.
Take care for handling this product.



Warning

**This water bath is for water only.
Do not use other liquid such as oil.**

If other solvent except water is used, there is a danger of ignition or mechanical trouble.



Caution

Be careful not to get a burn.

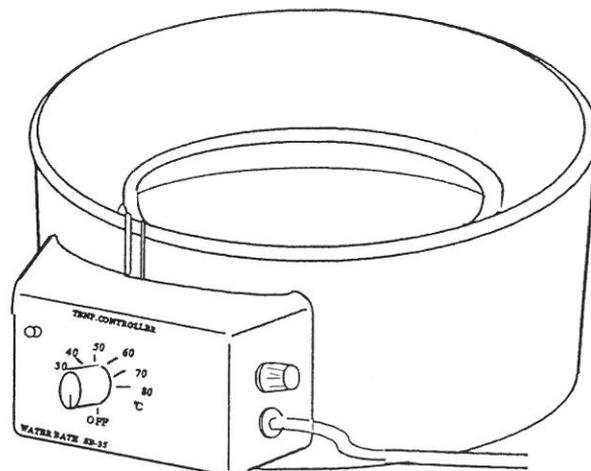
During operation or after operation, the edge of bath or a sample flask is heated.

Be careful not to touch.

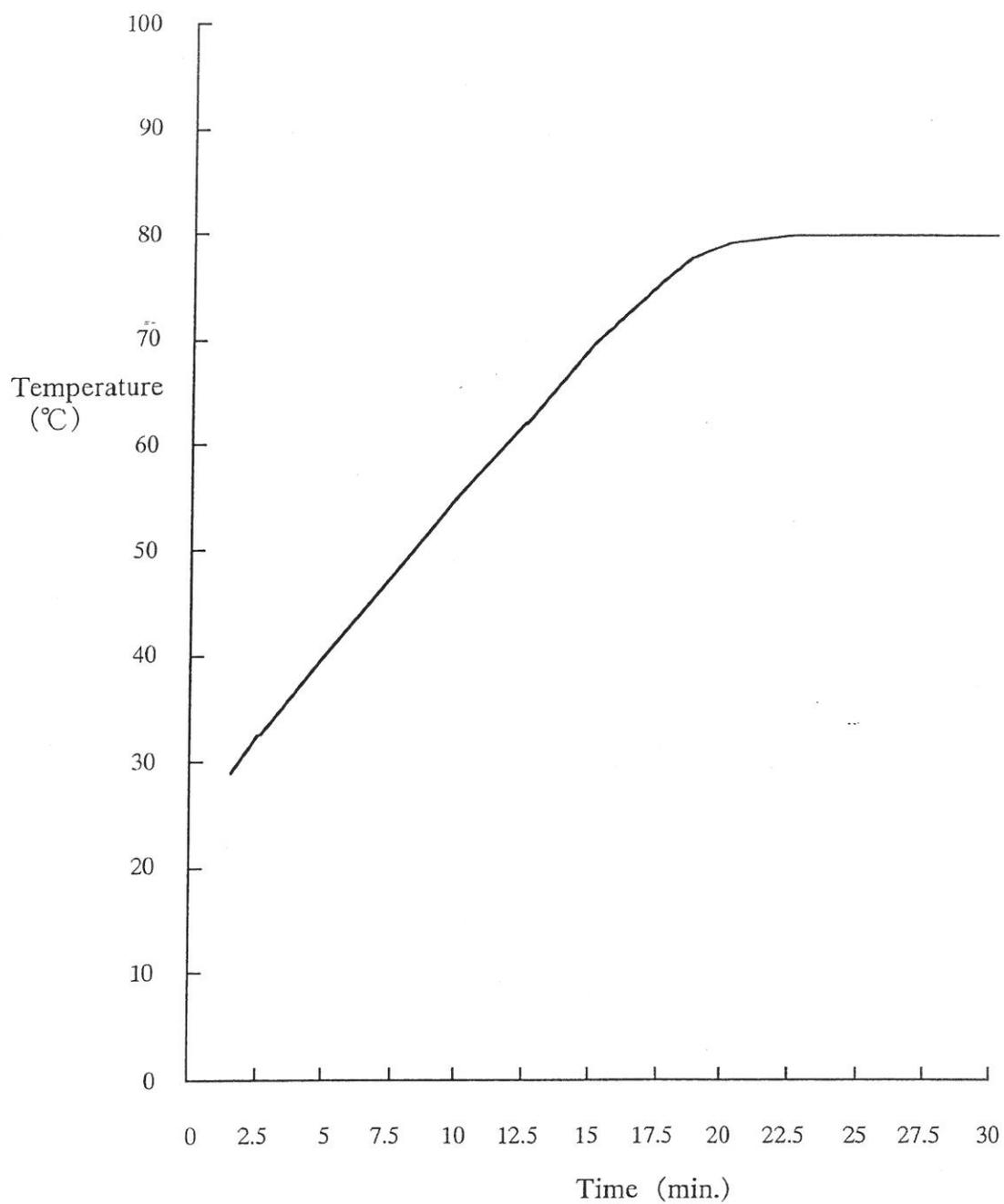
If it is moved during the operation, you may get a burn from the splash of hot water.

- Part becomes hot

Whole part of tank



2-4 Temperature rising curve

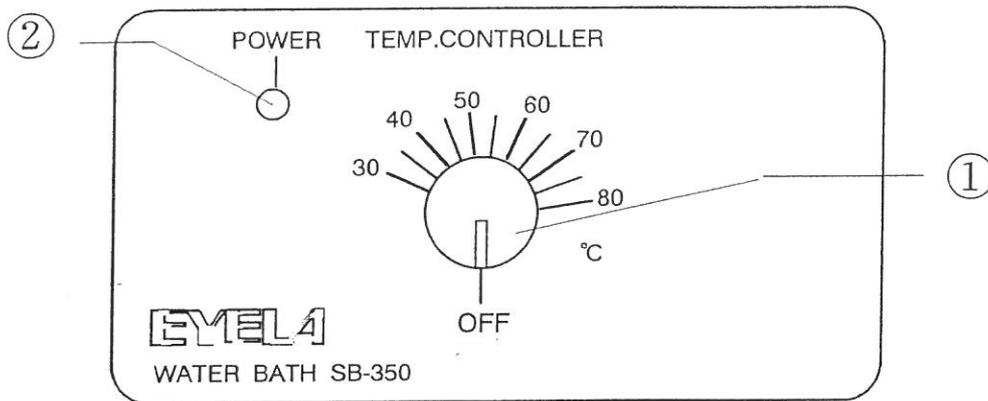


※ Temperature rising time depends on the experimental conditions.

Room temperature : 24°C
Water volume : 2.5 l
Setting temperature : 80°C
No load, at stirring

3 Descriptions and functions of the control panel

3-1 Control panel



NO	Description	Function
①	Temperature control knob	It sets the temperature.
②	Power indicator	Illuminates when it is plugged in. (It indicates the power is supplied to this unit. It illuminates even if the temperature controller is at OFF position.)

3-2 Safety feature

This unit has safety feature as below.

When an abnormal operation occurs, solve it referring to [Trouble shooting] on P.11.

Safety function

Safety device	Function	Cause
Fuse	Fuse is blown by excess current to shut down the power.	Electric circuit short or excess current.
Over temperature protector (High limiter)	The power is shut down to stop heater and the power indicator turns off if the temperature reaches 120°C. (Empty heating)	Empty heating, or the bath temperature exceeds the upper limit.

4-3 Connection of utility

 Warning

Use a suitable voltage, phase,
capacity and plug type.
Unsuitable power source may cause a
fire or electric shock hazard.

 Warning

Ground this unit correctly.
Do not ground to gas or water pipe.

 Warning

Do not use a multi-plug extension cord.
There is a danger of a fire of cable by
excess current.

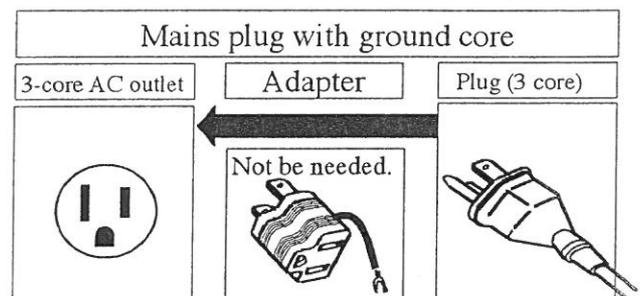
- (1) Check the voltage, phase, current capacity of this unit.
It is shown in the right table.

Model	Power source	
	Voltage	Current
SB - 350	AC - 100V	15A

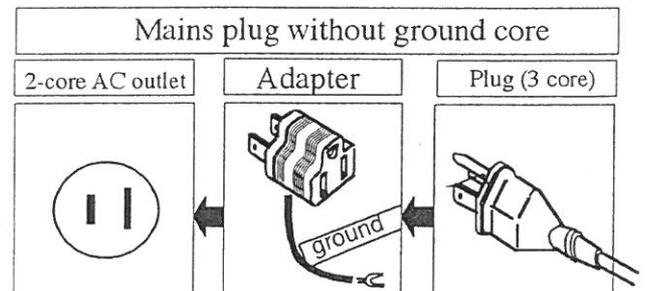
- (2) Check the AC outlet to be used.
(Do not connect the unit yet.)

You can use a AC outlet with a ground core without adapter.

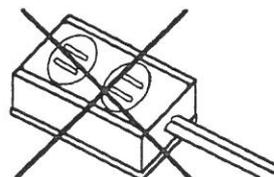
AC100V only.



AC outlet without a ground core needs an adapter.
Ground the wire of adapter.



Do not use a multi-plug extension cord.



5-2 Operation

 Caution

Stop operating when an abnormal operation occurs.

Turn off the power immediately when any abnormal operation occurs. Refer to [Trouble Shooting].

 Caution

During operation or after operation, do not touch the heated part.

During operation or after operation, the edge of bath or a sample flask is heated. Be careful not to touch.

 Caution

Take care not to get a burn when pouring water while the bath is hot.

If adding the water to bath while it is hot, take care not to get a burn.

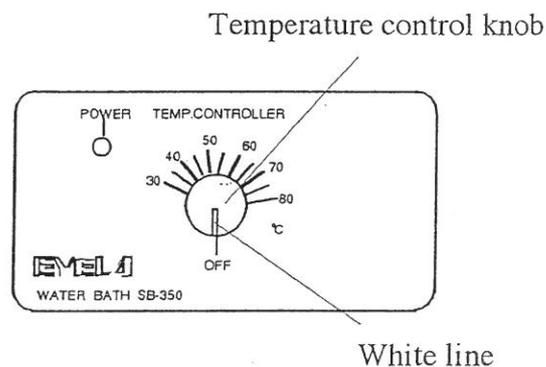
 Caution

Be careful for the breakage of glass container.

The glass container may be broken if it is dipped in the high temperature water. Be careful for handling glass container.

Be careful not to break the sensor or capillary by rough handling during operation.

- (1) Check the water level in the bath and dip the container in the bath gently. If dipping the container in the bath after the temperature reaches the set-point, be careful not to get burn or breakage of a container.
- (2) Turn the temperature control knob clockwise to set the temperature. As the water evaporates in proportion to the heating time, add the water properly.
- (3) When stopping the operation, turn the temperature control knob at OFF position and disconnect the mains plug from the power source.



After operation

- When draining the water after operation, be careful of the temperature of water and the unit. If the temperature of water and the unit are still hot, wait until they become cool. Take care not to splash the water on the operation panel.
- In order to keep the optimum condition, empty the bath and clean the surface of heater by a sponge.
- If you operate the bath without changing water but adding water, the heater may be corroded by scale. Use fresh water each time.

6

Trouble shooting

Call a service if you have troubles except following.

Problem	Cause	Remedy
Mains neon does not illuminate. (The temperature does not rise.)	Mains cable is not connected to AC outlet.	Turn the temperature control knob at the off position and connect the plug correctly.
	Power failure or power source is shut down.	Supply electric power once.
	Excess current blows a fuse. Electric short circuit.	Stop operation immediately and disconnect the plug from ac outlet.
Mains neon does not illuminate. (The temperature rises.)	Mains neon is broken.	Call your service agent for repairing.
Bath temperature does not rise. (heater does not heat.)	Incorrect setting.	Set temperature temperature control knob at suitable value.
	Over temperature protector is not reset.	Press the reset button of the over temperature protector. (See P.10)
	The screw of temperature control knob loosens.	Stop operation immediately. Call your service agent.
	Heating element is broken.	Stop operation immediately. Call your service agent.
	Temperature controller is broken.	Stop operation immediately. Call your service agent.
Temperature cannot be controlled. (Temperature rises.)	Temperature controller is broken.	Stop operation immediately. Call your service agent.
Bath temperature is not controlled at the set temperature.	Temperature control knob is slipped off from the correct position.	Stop operation immediately. Call your service agent.
	The temperature control knob is broken.	Stop operation immediately. Call your service agent.

8	Disposal of unit
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To dispose the unit, follow the disposal standard of your country.