How to handle the ISFET pH meter S2K series

(The description is based on the instruction manual included with the product. Please note that the instruction manual and contents at hand may have changed due to product version upgrades, etc. (2022.1. 25th edition))

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Before using

Remove the protective film at the tip of the comparison electrode.

A transparent film for protection is attached to the tip of the comparison electrode. There is a red dot on the mark, so please peel off this film before using it.



It is in a reset state when using for the first time and when replacing the battery.

Be sure to perform one-point calibration (see the next item) when using for the first time.

If the calibration value or measured value is not stable, clean the sensor part and liquid junction part, and then immerse the sensor part in an aqueous solution for about 5 minutes. Please use from

Please note that if the main body is disassembled, it will not be covered by the warranty.

If the sensor body is forcibly disassembled, the case body will be damaged and will not be covered by the warranty even if it is within the warranty period. It is a specification

One-point calibration

Press the POWER switch (red) on the side to turn on the power.

Confirm that the operation is normal.

The following display will appear for about 1 second after the power is turned on (all lights up). This state indicates that the **operation is normal**.

618.88;B

If the message is displayed after replacing the battery

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and it does not blink, it is a " **state requiring calibration** ", so be sure to follow the procedure below. Please calibrate with

Enter measurement mode

It automatically enters the measurement mode and the temperature and pH values are displayed

HL #

(at this time, if there is no solution in the sensor part, an error message will be displayed, but this is not a malfunction).

Thoroughly clean the tip

Thoroughly wash the tip with tap water and wipe off the water.

Prepare a standard solution of 6.9 pH in a beaker, etc.

Thoroughly immerse the sensor part in the standard solution.

Press the CAL switch (blue)

Press the CAL switch to make the "C" mark blink. To the right of the "C" mark, the temperature and pH values at the time of calibration are displayed alternately.



Please wait until the value stabilizes

Calibration is complete when the value on the LCD screen stabilizes. Clean the tip with tap water and wipe off the water.

Measurement method ① **Immersion measurement**

It is a method of measuring by putting an aqueous solution in a beaker liquid and putting a sensor in it.

Put the sample liquid in the beaker

Make sure that the sensor area is properly immersed in the sample solution . The temperature and pH values are displayed alternately until the measured value stabilizes.

Read when the number is stable

After the measurement is completed, press the POWER switch (red) to turn off the power (even if it is left as it is, the power will be turned off automatically after a certain period of time).

Store after thorough cleaning

Thoroughly wash the sensor with tap water, etc., and wipe off the water. **Be sure to put on the cap and** store it after use .

If the sensor part is very dirty, clean it properly with a household detergent and a toothbrush.

Measurement method <a>Drop measurement

Measurement is possible with a very small amount of sample solution.

Clean the sensor part with tap water and wipe off the water droplets.

Drop the sample liquid so that the sensor part and the liquid connection core are connected.

The pH value cannot be measured unless the sensor and the liquid core are connected.



measurable)The sample liquid does not touch the liquid core of the comparison electrode.



sample liquid is in contact with both the sensor part and the liquid core.

When the numbers are stable, read the measurements

If the alternate display of temperature and pH value disappears and only the pH value is displayed, the measured value is confirmed.

Clean the sensor part before storing.

After use, thoroughly clean the tip, close the cap, and store.

Replacement of comparison electrode

The comparison electrode is a consumable item. As you use it, the amount of liquid inside will decrease and the bubble will grow larger. If you can see the bubble, it is a guide for replacement.

Estimated replacement time

When you can see the bubble when you hold the pH meter vertically with the sensor part down, it is the end of the life of the comparison electrode. Please replace it as it will not be possible to measure accurately. Please prepare



two replacement models R2K712.

Carefully wipe off the water on the body.

If it is wet, water may get inside and cause a malfunction.

Pull out the comparison electrode from the main body



Insert the new comparison electrode firmly.

At this time, be careful not to twist the waterproof packing (O-ring).

Press the POWER button and check that the unmounted error has disappeared

If a non-installed error is displayed, please check the installed status again. Non-

ErJ⁵ installed error message

Battery replacement

Use a commercially available lithium battery (3V 2032) as the battery.

Carefully wipe off the water on the body.

If it is wet, water may get inside and cause a malfunction.

Pull out the main body case



Remove the battery

Float the battery with a pen tip and remove it.



Dispose of the old battery according to the method specified by your local government.

Replace with a new battery

Please install so that the "+" of the battery is on top.

Insert the body case firmly

At this time, be careful not to twist the waterproof packing (O-ring).

Be sure to perform one-point calibration

After installing a new battery, it will be in the initial state and the following screen will be displayed.



Press the CAL switch (blue) and be <u>sure to perform one-point calibration</u>.

Precautions for use

Please note the following points to obtain accurate measurements.

The measured value may become unstable when used for the first time or after being left for a long time.

In such a case, leave the sensor part in an aqueous solution (neutral) for about 5 minutes before using it.

Point

Use a soft material to clean the sensor.

When cleaning the sensor part, use a soft material such as a cotton swab. We recommend using a soft, extra-fine hair type toothbrush when cleaning with a neutral detergent.

Point

Do not expose to direct sunlight

If the silicon chip ISFET part is exposed to direct sunlight, it may cause an error. Please be careful not to expose it to sunlight

Point

Always keep the silicon chip ISFET part clean

The surface of the silicon chip ISFET is so sensitive that it cannot be measured if it is dirty. If there are deposits or films, carefully remove them before measuring.

Point

The measured value may not be stable depending on the type of sample solution.

The measured values may not be stable depending on the type of tap water, rainwater, or other samples with extremely low ion concentration.

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