Error Messages

The following messages alert the user when an operation has failed.

The battery is low.

The ZERO button was pressed with nothing or something other than water on the sensor.

The sample measured outside the measurement range.

The sensor temperature is below the temperature range.

The sensor temperature is above the temperature range.

The instrument is faulty. (Replace the batteries. Contact ATAGO if this error persists.)

Automatic Temperature Compensation

The readings are corrected, based on the temperature of the sensor, within the automatic temperature compensation range.

【Caution】

◇ Measurements may fluctuate with hot or cold samples. Wait for approximately 20 seconds to press the START button. Measurements will stabilize once the instrument acclimates to the sample temperature.

Storage and Maintenance

Store the instrument in a dry place away from direct sunlight. Exposure to humidity and heat may damage the instrument.

Clean and dry the sample stage thoroughly, following the "Cleaning" instructions.
Store the unit away from direct sunlight at a stable temperature with as little fluctuation as possible.

Repair and Warranty

The instrument is warranted for one year from the date of purchase. This warranty is void if the instrument shows evidence of the following. Send the included batteries as well if they are still in use.

- Having been disassembled by unauthorized personnel
- Having been misused and/or operated outside the environmental specifications
- Damages to the sensor and/or sample stage
- Leakage from batteries other than those included with the unit
- Water damage or having been dropped

Repair services are available for a fee after the warranty expires. Contact an ATAGO authorized service center for service and support.

Please have the serial number information ready when contacting a service center.

Specifications

Measurement range	Peracetic acid 10–1000ppm 10–40℃
Resolution	1ppm / 0.1℃
Accuracy	About ±50ppm / ±1℃
Automatic temperature compensation range	10 to 40℃
Ambient temperature range	10 to 40℃
Backlight	The backlight stays on for 30 seconds after any button is pressed.

Output	NFC Forum Type 4 Tag , ISO/IEC 14443 Type A
Output category : Date Time,CONC[ppm], Temp [degC] (e.g.) 2017/08/17 09:30:45, 503, 20.4	
Maximum number of data history	100
Sample volume	At least 0.6mL
Measurement time	Approx. 2 seconds
Power supply	Two (2) AAA alkaline batteries
International Protection class	IP65
Dimensions and weight	55 (W) x 31 (D) x 109 (H)mm, 100g (main unit only)

Patent Granted in Japan, United States, Germany, China and Taiwan.

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4557-E03

Peracetic acid Meter

PAL-Peracetic acid (COVID-19)

Cat.No.4557

ATAGO® Instruction Manual

Parts

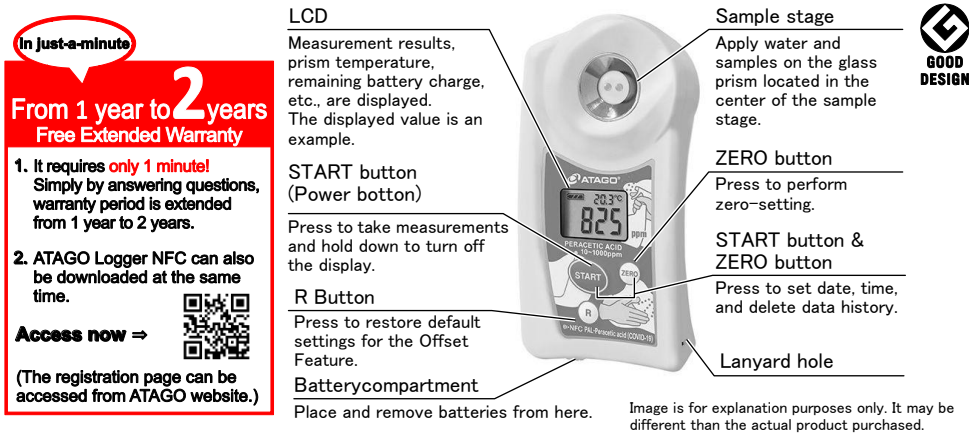


Image is for explanation purposes only. It may be different than the actual product purchased.

Contents

◆ Main unit.....1 ◆ Instruction Manual (this book).....1 ◆ AAA batteries.....2

AAA alkaline batteries are included. Remove the tape from the battery compartment before inserting the batteries.

ATAGO instruments are rigorously inspected to ensure each unit meets the highest standards of quality assurance.

Introduction

Thank you for purchasing the instrument. Carefully read and follow all instructions. Keep this manual for future reference.

Safety Instructions

Read and follow all safety instructions before operating the instrument. Failure to comply with the following instructions may result in personal injury or property damage.

⚠ WARNING

◇ Ensure safety when handling hazardous materials. Observe precautionary measures and use protective equipment, Be aware of the hazards of such chemicals and emergency response guidelines.
◇ ATAGO may not be held liable for any injury or damage arising in connection with handling of hazardous materials during the use of the instrument.
◇ Do not drop the instrument or subject it to strong physical shock.
◇ Do not attempt to repair, modify, or disassemble the instrument.

⚠ CAUTION

◇ Carefully read this manual to have basic knowledge of the function of each component.
◇ ATAGO is not liable for any loss and damage caused by the measurement and use of this instrument.
◇ Some acids may corrode the sensor and/or metal sample stage, which may cause erroneous measurements.
◇ Do not use metal tools, such as a spoon, as they may scratch the sensor, resulting in erroneous measurements.
◇ Do not use water above 50℃ to rinse the instrument.
◇ Only use the specified battery type. Observe proper polarities, properly aligning the anodes and cathodes.
◇ Store the instrument away from direct sunlight/heat sources and excessive amounts of dust/debris.
◇ Do not expose the instrument to a rapid change in ambient temperature.
◇ Do not subject the instrument to strong vibration.
◇ Do not subject the instrument to extreme cold temperature.
◇ Do not place the instrument under anything heavy.
◇ Loosen the battery compartment cover for air transportation.

<International Protection Classification IP65>

◇ The instrument is water-resistant, not waterproof, and should not be submerged.

<Chemical Resistance of Body Case>

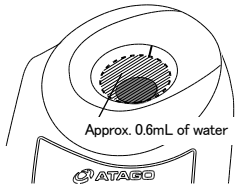
◇ The body case is made of resin. Do not expose it to water vapor. Some solvents may compromise the structural integrity of the instrument.

Zero-setting and Measurement

ZERO Setting with the water used for the sample dilution.

【Caution】
◇ Zero-set the instrument at the beginning of each day before use as well as after replacing the batteries.
◇ Let water on the sensor acclimate to the temperature of the instrument before zero-setting.
◇ When "AAA" is displayed, wipe the sensor clean, apply water, and press the ZERO button again.

1. Wipe the sensor clean and apply about 0.6mL of water used for dilution.



2. Press the ZERO button while the water is on the sensor.

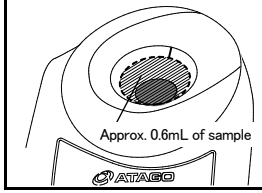
3. Zero-setting is complete when "000" blinks twice and then stops.

Proceed to measurement.
Wipe the sensor clean with tissue paper.

Press the ZERO button (with nothing on the sensor).⇒Clear the zero setting.

Measurement

1. Wipe the sensor clean and apply about 0.6mL of the sample.



2. Press the START button

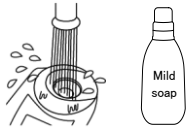
3. After "---" appears, the measurement and the sensor temperature are displayed.

【Caution】
◇This instrument displays the concentration of peracetic acidin water as a ppm of total volume.
◇Do not use metal tools to apply samples on the sensor as they may scratch the sensor.
◇Initial measurements may fluctuate with hot or cold samples. Wait for the instrument to acclimate to the sample temperature, approximately 20 seconds, to press the START button. Alternatively, press the START button multiple times until measurements become stable.
◇Do not splash water above 50℃. The plastic may warp, which may compromise the water resistance.
◇The displayed temperature is that of the sensor and may not necessarily match the temperature of the sample.

<LCD Auto Shut-off>
The instrument will turn itself off after 2 minutes of inactivity. To manually turn it off, hold down the START button for more than 2 seconds.

Cleaning

【Caution】
◇ Do not scratch the sensor.
◇ The instrument is water-resistant, not waterproof, and should not be submerged.
1. Wipe off the sample.
2. Clean the sensor and sample stage using a mild soap and thoroughly rinse with water.
3. Dry the area with tissues thoroughly.



Offset Function

For addition/subtraction (b) / For coefficient (a)

1. Hold down ZERO while it is turned on. "b" wil appear.

2. Press ZERO to select either addition (b) or subtraction (-b).

No plus sign will be displayed.

3. Press START to confirm.

For addition, only "b" will appear.

4. Enter the addition/subtraction number.
ZERO to change the number:
0, 1, 2, ···, 8, 9, 0, 1, 2···
START to confirm and move to the next decimal place.

5. Press START to confirm the addition/subtraction number.
Next is to program a coefficient.

6. Enter the coefficient.
Refer to the step 4.

7. Press START to confirm the coefficient.

※ Screen images when offset is on

During measurement 

Water after zero-setting 

Offset "b" = addition of 30

y = ax + b
y : Actual concentration
x : PAL readings
a : Coefficient (multiplication)
Range: 0.50 to 5.00
b : Addition/subtraction number
Range: -999 to 999 (Factory default 0.00)

For default : Press the Ⓡ button while setting up the Off-Set feature.

Checking with Reference Solution

When there is any doubt regarding accuracy of measurement results, adjust the reference value according to the following procedur.
The reference solution is available from ATAGO. Part No. RE-130004 Reference solution (0.04% Citric acid solution)

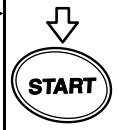
1. Clean the sensor with water. Dry the area with tissues thoroughly. Press the ZERO button (with nothing on the sensor).

Clear the zero setting.

2. Apply the reference solution.

At least 0.6mL

3. Turn on the instrument. Press the START and ZERO buttons simultaneously.



4. "CCC" will appear.

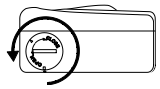
Flash ⇒ Light up

Replacing the Batteries

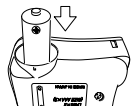
【Caution】
◇ Fasten the battery compartment cover tightly to prevent water ingress or poor connection, which will cause erroneous measurements. Push the cover in firmly and turn.
◇ When the O-ring on the cover is dirty or damaged, the water resistance may be compromised.
◇ When the battery icon indicates the low power level (), replace both batteries with a brand new set of AAA alkaline batteries (1.5V).
◇ Static images may occasionally appear on LCD. Such retained pixel charges do not indicate a faulty display, consume the battery power, or affect the instrument's performance in any way.
◇ Check the expiration dates on batteries before purchase.
◇ Zero-set the instrument after the batteries are replaced.

O-ring

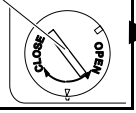
1. Insert a coin in the groove on the battery compartment cover. Turn the coin counterclockwise to remove the cover.



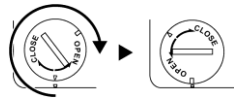
2. Insert batteries, observing the correct polarity.



3. Align the cover and push it down.



4. Close the battery compartment cover by pushing the cover in with a coin in the groove and turning it clockwise until it stops.
*Turning excessively may cause malfunction.



Open Close