How to Get Extended Warranty 1 year → 2 years

The warranty period will be extended from 1 year to 2 years when you register customer information. ATAGO Logger NFC can also be downloaded at the same time

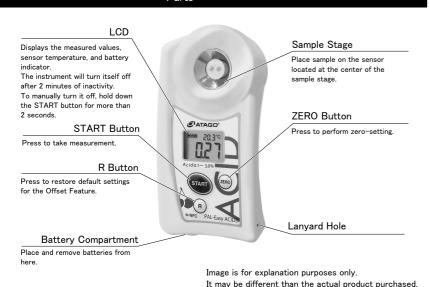


Trouble scanning the code? Access this link https://www.atago.net/ur/index.php?l=en QR code

Pocket Acidity Meter (Cherry) Master Kit PAL-Easy ACID16







Contents

Main unit…1 Inspection Certificate…1 AAA batteries…2 Measuring Spoon 1mL…1 Beaker 100mL…1 Digital scale ... 1 (About the Digital Scale)

Note Please remove the tape in the battery compartment before first use.

Memo The measuring spoon is available from ATAGO. Part No. RE-39005 Measuring Spoon 1mL

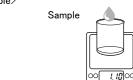
ATAGO instruments are rigorously inspected to ensure each unit meets the highest standards of quality assurance.

Instrument

The instrument measures the acidity (%) in the 1:50 dilution of a sample that is diluted with purified water. The measurement value is the acidity (%) of the undiluted sample (stock-solution).

Sample Preparation Tips

Any amount of sample can be made as long as the dilution ratio is 1:50. We recommend 1.00g of sample to keep accuracy consistent. <example>







Sample 1.10g

Add purified water until the total weight is 55.00g

Measurement Value

This unit measures and determines the acidity through electrical conductivity. Malic acid is the primary acid found in Cherry

The instrument measures the total acidity in a sample and converts it into malic acid concentrations

Automatic Temperature Compensation

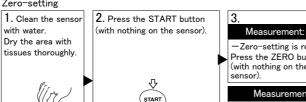
The Automatic Temperature Compensation (ATC) feature is based on temperature detected by the thermo sensor located

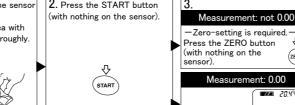
ATC may not work correctly when the temperature of the sensor area is not the same as the actual temperature of the sample. When measuring a hot or cold sample, let it sit on the sensor for approximately 20 seconds and measure, or take multiple readings until measurements become stable

Zero-setting and Measurement

Preparation

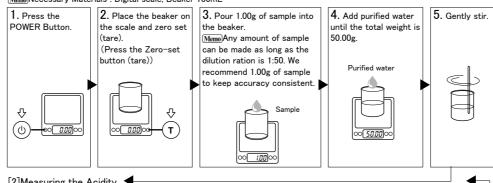
Zero-setting

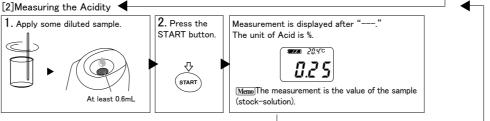




Measurement

MemoNecessary Materials : Digital scale Beaker 100ml





Cleaning ·Wipe off the sample. Clean the sensor with water.

Dry the area with tissues thoroughly. Clean oily residues with mild soap, and then, rinse with water.

Note Handle the sensor with care so as not to scratch it.

Addendum

Measuring Without using a Scale For approximate measurement only

[1]Dilution

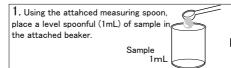
6.Apply the reference solution.

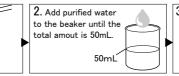
Press the START and ZERO

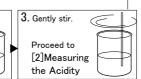
Turn on the instrument

buttons simultaneously.

Memo Necessary Materials: Measuring spoon 1mL, Beaker 100mL







Note Recommended on a daily basis

20,4°C

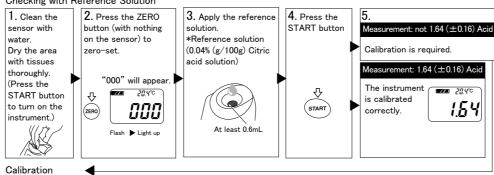
Flash Light up

Proceed to Measurement

"000" will appear.

Checking with Reference Solution

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



"CCC"

will appear

20.4°C

Flash Light up

Acid: Offset Function

Discrepancies with titration

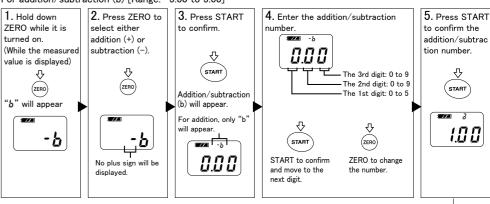
Due to the difference in measurement principles, readings from the instrument may not match up exactly with the readings by titration for certain samples. However correlation between the two testing methods can be seen

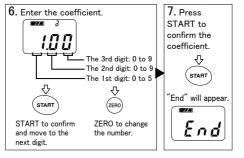
Offset feature use

Create a conversion chart between the two testing methods

y = a x + by:titration readings x: The instrument readings a: coefficient (multiplication) b:addition/subtraction number 0.65 0.75 0.35 0.45 0.55

For addition/subtraction (b) [Range: -5.00 to 5.00]

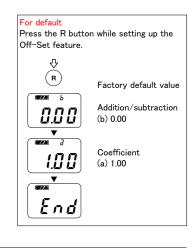




For coefficient (a) [Range: 0.50 to 5.00]

•The measurement range is shifted according to the offset settings. ·Screen images when offset is on





Error Messages

The following messages alert the user when an operation has failed

•The battery is low.

LLL Temperature
The sensor temperature is below the temperature

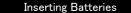
Acid
•The sensor was not empty when zero-setting

· Calibration was attempted with something other than the calibration solution.

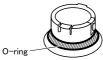
•The sample measured outside the measurement range.

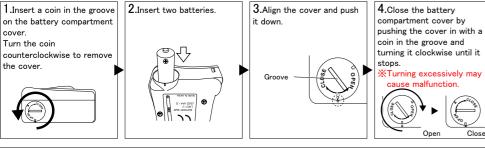
•The sensor temperature is above the temperature range.

Specifications	
Measurement range	Acid 0.10 to 3.00% 10.0 to 40.0°C
Resolution	Acid 0.01% 0.1°C
Measurement accuracy	Acid $\pm 0.10\%$ (0.10 to 1.00%) Relative precision $\pm 10\%$ (1.01% or more) $\pm 1^{\circ}\text{C}$
Measurement time	Approx. 2 seconds
Backlight	The backlight stays on for 30 seconds after any button is pressed.
Output	NFC Forum Type 4 Tag SO/IEC 14443 Type A
Output category	Date Time, Acidity [%], Temp [degC]
Acidity scale	(e.g.) 2019/01/17 09:30:45, 0.24 21.3
Automatic temperature compensation range	10 to 40°C
Ambient temperature range	10 to 40°C
International Protection class	IP65
Power supply	Two (2) AAA alkaline batteries
Dimensions and Weight	$55(W) \times 31(D) \times 109(H)$ mm , $100g$ (main unit only)



Note When the O-ring on the battery compartment cover is dirty or damaged, the water resistance may be compromised.



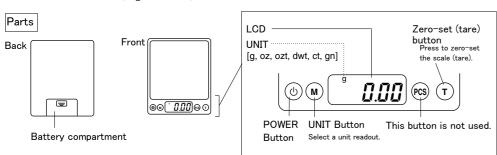


About the Digital Scale

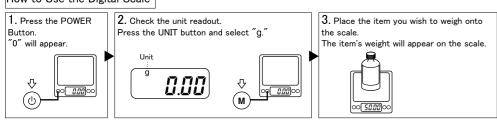
Note Remove the tape from the battery compartment

Contents

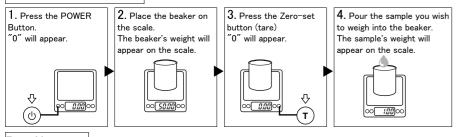
Cover···2 (large and small) AAA batteries···2 Main unit…1



How to Use the Digital Scale



Zero-setting and Weighing



Error Messages

:The battery power is low. Replace with new alkaline AAA batteries.

O-LD : The item you are trying to weigh exceeds the permissable weight limit of the scale. Quickly remove it from the scale.

Environmental conditions

- •Do not expose the scale to extreme heat or cold.
- •Do not expose the scale to any type of moisture.
- ·Use between 10 to 30°C only. ·Use in a dry, clean environment
- · Any contact with or exposure to dust, debris, humidity, strong vibrations, extreme atmospheric conditions or other electronics may affect the accuracy of the scale and result in unreliable readings.

- For precise measurements, place the item you wish to weigh onto the scale gently.
- •Place the scale atop a flat, stable surface.
- •The digital scale is remarkably durable. However, it is a precision instrument and should be used and treated with the utmost
- ·Use of the scale for purposes other than its intended use will result in damage to its internal components. *Do not shake or drop the scale.

- 'E' >=+:

Specifications	
Measurement range	0.01 to 500.00g
Resolution	0.01g
Unit	g, OZ, ozt, dwt, t, gn
LCD	LCD display with backlight
Auto-Off Feature	The scale will automatically turn off after 90 seconds of inactivity.
Power supply	Two (2) AAA alkaline batteries (Do not use rechargable batteries.)
Temperature Conditions	Ambient temperature: 10 to 30°C

About Data Transmission Function

This instrument is equipped with NFC (Near Field Communication) technology Data history can be accessed by bringing PAL-NFC to any Android devices, iPhone or PC-linked USB NFC Reader/Writer* (in conformance to PC/SC specification). * Operation tested with SONY USB NFC Reader

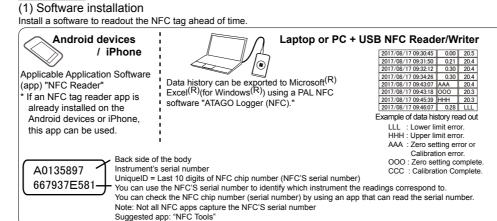


Caution Data history exceeding 100 will overwrite old activity

with new data, replacing the oldest recorded information first.

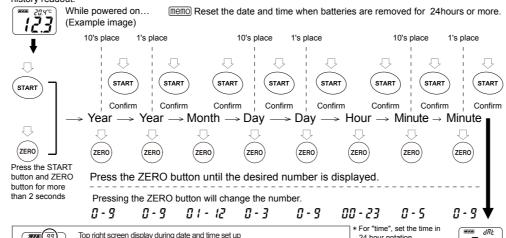
Preparation

PaSoRi RC-S380.

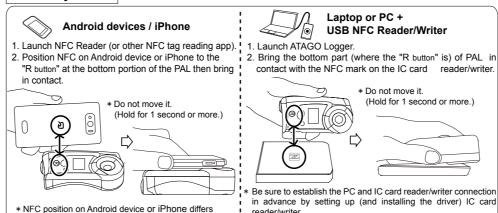


(2) Date and time setting

Set the date and time (year [the last two digits of the western calendar], month, date, time and minute) prior to data history readout



Data history readout



Year : 99 | Month : 12 | Day : 31 | Hour : 24 | Minute : 80

Reader/writer to the PAL unit.

* If data history is not read out, bring both in contact and move the one that is over the other device in

All recorded data stored in this instrument are read out.

reader/writer

Caution Bring PAL and Android devices, PAL and iPhone or PAL and USB NFC Reader/writer as close to each other as possible. (Position it so that the distance between both devices are 5mm or less.)

memol Data history can be read out while PAL is powered off. memo Data history readout will not delete the stored data history

Delete data history

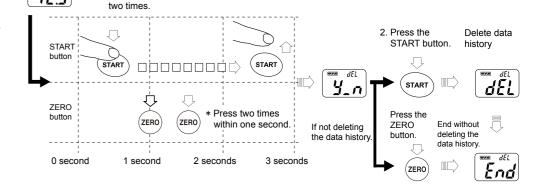
All data history will be deleted from this instrument.

Caution Deleted data history can not be restored. memo A data history can not be selected.

While powered

(Example image) 1. Quickly (3 seconds or less) do the following button operation. (a) While pressing the START (b) Quickly release

button, press the ZERO button the START button.



Safety Precautions

Read and follow all safety instructions before operating the instrument.

- •When measuring hazardous materials, use proper safety procedures, materials, and clothing to avoid personal injury.
- Anyone handling hazardous materials should understand its properties and its safety requirements.
- •If the instrument is dropped or subjected to a strong impact, contact your supplier for inspection.
- •Do not attempt to repair, modify, or disassemble the instrument.

- ·Before use, carefully read the instruction manual and fully understand the function and operation for each part of the instrument.
- •ATAGO is not liable for any loss and damage caused by the measurement and use of this instrument.
- ·If this instrument is used to measure highly acidic samples, the sensor section and sample stage may be damaged, resulting
- •Do not use any metal tools when applying sample to the sensor section. The metal can damage the sensor section. If the sensor section is scratched or damaged, inaccurate measurements will occur
- •When the unit needs to be washed, use water at a temperature not exceeding 50°C.
- •Only use the specified battery type. Observe proper polarities, properly aligning the anodes and cathodes. •Do not leave the instrument in a location exposed to direct sunlight or near a heat source for any extended period of time
- •Do not change the ambient temperature of the instrument suddenly.
- •Do not place the instrument where it will be subject to strong vibrations
- *Do not use the instrument where there are excessive amounts of dust.
- •Do not store the instrument in an extremely cool area.
- •Do not set or drop heavy objects on top of the instrument
- *Loosen the battery compartment cover for air transportation •The instrument is water-resistant, not waterproof, and should not be submerged.

Storage and Maintenance



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(Seconds : Fixed 00)

Data history can be read out by holding up the USB NFC

Store the instrument in a dry place away from direct sunlight. Exposure to humidity may cause condensation inside and exposure to direct sunlight may cause the plastic to warp



Cleaning Clean and dry the sensor area thoroughly after use, leaving no sample residues or water. ⟨For oily samples:⟩

Remove oily residues with mild soap, and then, rinse with water *Storage Store the instrument 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. •Damages to the sensor section and/or sample stage

- *Having been disassembled by unauthorized personnel
- •Water damage or having been dropped ·Leakage from batteries other than those included with the unit
- *Having been misused and/or operated outside the environmental specifications

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.

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