Alkaline ion Water Tester

NEGATIVE WATER TESTER

Model : NI-214

Your purchase of NEGATIVE ION WATER TESTER marks a step forward for you into the field of precision measurement.
Although this TESTER is a complex and delicate instrument, its durable structure developed. Please read the following instructions carefully and always keep this manual within easy reach.

OPERATION MANUAL

TABLE OF CONTENTS

1. FEATURES.....1

2. SPECIFICATIONS.....1

3. FRONT PANEL DESCRIPTIONS.....3
3-1 Display.....3
3-2 Power On/OFF button.....3
3-3 Hold button.....3
3-4 BNC socket.....3
3-5 Battery compartment/Cover.....3
3-6 Cal. VR.....3
3-8 Electrode plug.....3
3-9 Electrode handle.....3
3-9 Electrode sensing head.....3
3-10 Protection bottle for electrode.....3

4. MEASURING PROCEDURE.....5

5. REPLACEMENT OF BATTERY.....6

6. ELECTRODE STORAGE, CLEANING and RECONDITIONING.....6

7. CAIIBRATION PROCEDURES.....7

1. FEATURES

* For health reason, negative (alkaline) water generator is used in the home and office popularly. However seldom peoples know the intensity of negative (alkaline) ions that are contained in the water.
* NI-214 is the useful tester to measure the negative ion potential value in the water.
* Kits included Negative Ion probe (ORP probe) with the meter and the carrying case.
* Measurement range : 1999 mV to -1,999 mV.
* LCD display, data hold.
* Easy operation, compact size.
* Water resistance on the front panel.
* DC 9V battery (006P).

2. SPECIFICATIONS

2-1 Meter

Display	13 mm (0.5") LCD, 3 1/2 digits.
Measurement Range	1999 mV to -1,999 mV.
Resolution	1 mV.
Accuracy	± 3% F.S. ** 23± 5 ℃ * F.S. : full scale*

Electrode	* Professional ORP electrode with high accuracy and extreme reliability. * Silver-silver/chloride reference gel. * Epoxy body, BNC connector and 3 meters cable. *
Input Impedance	10^12 ohms.
Sampling Time	Approx. 0.4 second.
Hold Function	To freeze the display reading value.
Operating Temperature	0 to 50 ℃ (32 to 122 ℉)
Operating Humidity	Less than 80% RH.
Power Supply	006P DC 9V battery.
Power Consumption	Approx. 2.0 mA.
Dimension *(meter)*	135 x 60 x 33 mm, (5.3 x 2.4 x 1.3 inch).
Dimension *(electrode)*	12.5 mm Dia, x 150 mm length.
Weight	196 g/0.43 LB (including battery).
Standard Accessories	Instruction Manual..... 1 PC. ORP electrode (Negative Ion electrode)..... 1 PC. Hard Carrying case..... 1 PC.

3. FRONT PANEL DESCRIPTION

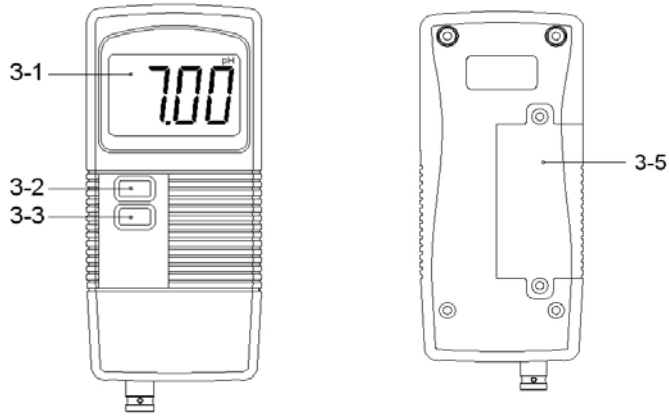
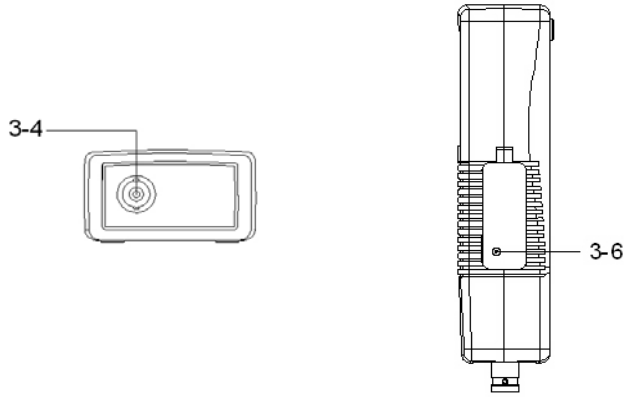
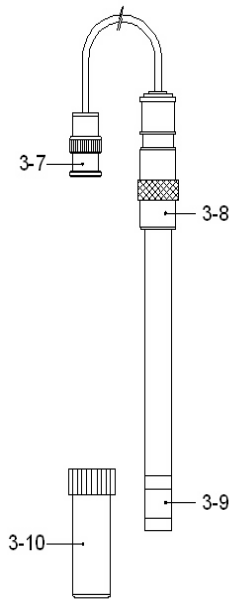


Fig. 1





3-1 Display
3-2 Power On/OFF Button
3-3 Hold button
3-4 BNC socket
3-5 Battery compartment/Cover
3-6 Cal. VR
3-7 Electrode plug
3-8 Electrode handle
3-9 Electrode sensing head
3-10 Protection bottle for electrode

4. MEASURING PROCEDURE

1) Connect the " Electrode plug " (3-7, Fig. 1) to the " BNC socket " (3-4, Fig. 1).
2) Power on the instrument by using " Power ON/OFF Button " (3-2, Fig. 1).
3) Use the hand to hold the " Electrode handle " (3-8, Fig. 1), immerse the " Electrode sensing head " (3-9, Fig. 1) into the measured water (solution), the instrument will display the potential value of Negative Ion Water in " mV " (ORP value in " mV ").

* Electrode (attached) is the rough and durable ORP electrode. However user should operate the electrode very carefully.
* The electrode is the consumer accessory, after the electrode is used, if the damage of the Electrode Sensing Head (Spear Tip Head), it is without warranty.

4) After make the measurement, please rinse the electrode in distilled water.

Data Hold

During the measurement, press the " Hold Button " (3-3, Fig. 1) once will hold the measured value & the LCD will display a " HOLD " symbol.
Press the " Hold Button " once again will release the data hold function.

5. REPLACEMENT OF BATTERY

1) When the left corner of LCD display show "  " , It is necessary to replace the battery. However, in-spec measurement may still be made for several hours after Low Battery Indicator appears before the instrument become inaccurate.
2) To replace the battery, remove the " Battery Cover " (3-5, Fig. 1) on the rear cabinet.
3) Take out the battery, install a new one (006P DC 9V) and reinstall the battery cover again.

6. ELECTRODE STORAGE, CLEANING and RECONDITIONING

6-1 Electrode Storage

When the readings are made infrequently, for example, several days or weeks apart, the electrode can be stored simply by replacing it in its soaker bottle. First, slide the cap onto the electrode, then the o-ring, then insert the electrode into the bottle and firmly tighten the cap. If the solution in the soaker bottle is missing, fill the bottle with pH 4 buffer.

6-2 Electrode Cleaning

Coating of the pH bulb can lead to erroneous readings including shortened span. The type of coating will determine the cleaning technique. Soft coatings can be removed by vigorous stirring or by use of a squirt bottle. Organic chemical or hard coatings should be chemically removed. Only in extreme cases should the bulb me mechanically cleaned as abrasion can lead to permanent damage. If cleaning does not restore performance, reconditioning may be tried.

7. CALIBRATION PROCEDURE

The meter along the electrode has been calibrated carefully during manufacture. However, it may be necessary to re-calibrate periodically. Particularly if the instrument is used foe a long period or if the conductivity electrode is changed. To re-calibrate the instrument, follow the procedures shown below :

1) Prepare a " Standard ORP Calibration Solution " (optional)
2) Connect the electrode into the meter.
3) Power ON the meter
4) Immerse the " Electrode sensing head " (3-9, Fig. 1) into the calibration solution up to the immersion level. Use the small screw driver to adjust the " Cal. VR " (3-6, Fig. 1) until the display reading value same as the " Standard Calibration Solution " value.