

VTSYIQI VD-99P

VTSYIQI VD-99P Smart Food Water Activity Meter

INSTRUCTION MANUAL

1. Introduction

This manual provides detailed instructions for the operation and maintenance of the VTSYIQI VD-99P Smart Food Water Activity Meter. This instrument is designed for precise measurement of water activity in various food products such as paste, jam, jello, and dough. It features real-time printing and data recording capabilities, ensuring accurate and efficient quality control.

2. Product Features

- Measuring range: Temperature, -10°C 50°C; Water activity, 0 1.000aw
- Resolution: Water activity: 0.001aw; Temperature: 0.1 C
- Measurement accuracy: Temperature $\pm 0.5^{\circ}\text{C}$; Water activity ± 0.012 (@23°C $\pm 5^{\circ}\text{C}$)
- Display mode: Large-screen LCD 128×64DOTS
- Repeatability: $\leq 0.008\text{aw}$
- Data Storage: Can circularly record 5,000 sets of measured data
- Measurement time: 5 40min; automatic measurement
- Connectivity: RS232 interface or USB interface for computer connection
- Printing Function: Print at the end of measurement or real-time print
- Work environment: Temperature -10°C 50°C; Relative humidity 0 95%RH



The meter is for water food paste jam jelly dough water activity meter. This product enables intelligent continuous measurement. For the meter 99-9, it comes with printer. Also can connect to computer. It has printing function.

● Features

Real-time print

- ✓ Real-time print Cannot computer
- ✓ Intelligent continuous measurement
- ✓ Food and water loads, paste, jam or jelly, dough

Feature	✓
Connect to computer	✓
Work environment: Temperature -10°C ~ 50	✓
Relative humidity 0~95%RH	✓
Repeatability: ≤0.008aw	✓
Interface: RS232 interface	✓
USB interface	✓
Real-time print	✓

Image: VTSYIQI VD-99P Smart Water Activity Meter displaying its key features and specifications.

3. Package Contents

Upon unpacking, please verify that all items listed below are present and in good condition:

- VTSYIQI VD-99P Smart Water Activity Meter Main Unit
- WSC-4 Water Activity Sensor (1 unit)
- Mini Printer (TPμP-T Series)
- Power Cable
- RS232 Interface Cable
- USB Interface Cable
- Sample Dishes (multiple plastic cups)
- Printer Paper Roll
- Calibration Solutions (AR MgCl₂, AR NaCl)
- User Manuals (for meter and printer)
- Carrying Case

Video: Unboxing the VTSYIQI VD-99P Smart Food Water Activity Meter and its accessories.



Product Details



Dough

Image: A complete view of the VTSYIQI VD-99P Smart Water Activity Meter, including the main unit, sensor, printer, cables, calibration solutions, sample dishes, and carrying case.

4. Setup

1. **Unpacking:** Carefully remove all components from the carrying case.
2. **Power Connection:** Connect the power cable to the 'Power Socket' on the rear panel of the main unit and plug it into a compatible power outlet (100-230VAC \pm 10% 50Hz/60Hz).
3. **Sensor Connection:** Connect the WSC-4 Water Activity Sensor cable to one of the 'Sensor Socket' ports (No.1, No.2, No.3, or No.4) on the rear panel. Ensure a secure connection.
4. **Printer Connection:** Connect the mini printer to the 'Printer Power Outlet' and the 'Communication Port' on the rear panel of the main unit using the provided cables.
5. **Initial Power-On:** Flip the 'Power Switch' to the ON position. The device will perform a self-check and display the main menu.

WSC-4 Water activity sensor

Measuring range: Temperature -10°C ~ 50°C Water activity 0 ~ 1.000aw
Professional design ensures stable and reliable performance Equipped with printer, convenient to record data .



Image: The rear panel of the VD-99P meter, highlighting the sensor sockets, communication ports, printer power outlet, and power switch.

5. Operating Instructions

5.1. Basic Navigation

Use the 'SELECT' button to cycle through menu options and the 'CONFIRM' button to enter a selected option. The '+' and '-' buttons are used for adjusting values or navigating within sub-menus.

5.2. Measurement

1. From the main menu, select "1. Measurement" and press 'CONFIRM'.
2. Prepare your sample (e.g., dough, paste) in a clean sample dish.
3. Place the WSC-4 sensor directly onto the sample, ensuring good contact.
4. The meter will begin measuring water activity (AW) and temperature (Temp). The measurement time will be displayed.
5. Once the measurement is complete (typically 5-40 minutes), the results will be displayed on the LCD screen.
6. If the printer is connected and enabled, the results will automatically print.

Video: Demonstrates the process of taking water activity measurements using the VD-99P meter and WSC-4 sensors on various food samples, including the printing of results.



Image: The VTSYIQI VD-99P Smart Water Activity Meter connected to multiple WSC-4 sensors, actively measuring water activity in dough samples.

5.3. Calibration

Regular calibration ensures the accuracy of your water activity meter. The VD-99P supports one-point and two-point calibration using standard solutions.

1. From the main menu, select "2. Calibration" and press 'CONFIRM'.
2. Choose between "1. One-Point" or "2. Two-Point" calibration.
3. For one-point calibration, select the desired standard solution (e.g., NaCl). For two-point, select two different standard solutions (e.g., NaCl and MgCl₂).
4. Place the WSC-4 sensor onto the respective calibration solution in a sample dish.
5. Follow the on-screen prompts to complete the calibration process. The meter will display the current AW and temperature readings during calibration.

Video: Demonstrates the calibration process for the water activity meter using standard NaCl and MgCl₂ solutions.



Image: Petri dishes containing calibration solutions (NaCl and MgCl₂) used for accurate water activity measurement.

5.4. Settings

The settings menu allows you to configure various parameters of the meter.

1. From the main menu, select "3. Setting" and press 'CONFIRM'.
2. You can adjust the measurement time (M Time) using the '+' and '-' buttons.
3. Toggle "Automatic measurement" ON or OFF.
4. Press 'CONFIRM' to save changes and exit the settings menu.

Video: Demonstrates how to access and adjust settings on the VD-99P meter, including measurement time and automatic measurement options.

5.5. Query

The query function allows you to review previously recorded measurement data.

1. From the main menu, select "4. Query" and press 'CONFIRM'.
2. Use the '+' and '-' buttons to navigate through the stored data sets.
3. Press 'SELECT' to view details of a specific record.

6. Maintenance

- **Cleaning:** Regularly clean the exterior of the main unit and sensors with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Sensor Care:** Keep the WSC-4 sensors clean and free from sample residue. Store them in a dry, dust-free environment when not in use.
- **Calibration Solutions:** Store calibration solutions according to their instructions to maintain their integrity and accuracy. Replace expired solutions.
- **Storage:** When not in use for extended periods, store the meter and all accessories in the provided carrying case in a cool, dry place.

7. Troubleshooting

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Meter does not power on	Power cable not connected, power switch off, power outlet issue.	Check power cable connection, ensure power switch is ON, test power outlet.
Inaccurate readings	Sensor dirty, sensor not properly placed, calibration needed, expired calibration solution.	Clean sensor, ensure good contact with sample, perform calibration, replace calibration solutions.
Printer not printing	Printer cable disconnected, no paper, printer power off, printer settings incorrect.	Check printer connections, replace paper roll, ensure printer is powered on, verify printer settings in the meter.
Sensor not detected	Sensor cable loose or damaged.	Ensure sensor cable is securely connected to the correct port. Inspect cable for damage.

8. Specifications

Feature	Detail
Manufacturer	VTSYIQI
Model Number	VD-99P
Measuring Range (Temperature)	-10°C 50°C
Measuring Range (Water Activity)	0 1.000aw
Resolution (Water Activity)	0.001aw
Resolution (Temperature)	0.1 C
Measurement Accuracy (Temperature)	±0.5°C
Measurement Accuracy (Water Activity)	±0.012 (@23°C±5°C)
Repeatability	≤0.008aw
Display Mode	Large-screen LCD 128×64DOTS
Data Record Capacity	5,000 sets
Measurement Time	5 40min (automatic)
Work Environment (Temperature)	-10°C 50°C
Work Environment (Relative Humidity)	0 95%RH
Power Source	100 230VAC ±10% 50Hz/60Hz
Item Weight	16 kg
Parcel Dimensions	75 x 45 x 24 cm

9. Warranty and Support

VTSYIQI provides a standard quality assurance for one year from the date of purchase. In addition, if you encounter any quality issues with the meter within the first three months, a replacement will be provided. The printer's warranty period is also one year.

The warranty does not cover:

- Damage to visible components of the sensor.
- Damage caused by pulling out the plug incorrectly or inserting the wrong plug type.
- Damage due to improper operation, unauthorized disassembly, or human factors.

This warranty card must be owned and fully preserved by the user for warranty claims. The card service is not accepted without it.

For technical support or service inquiries, please contact your vendor or refer to the contact information provided in the product packaging.

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