

LS310

Water Quality Tester

User Manual V1.10

Please read this manual carefully before using and reserve it for reference.

I. Product Introduction

Water quality meter designed for use in applications such as tap water, purified water and ground water. The instrument measures the drinking water's COD, TOC, and UV275 water quality parameters according to the ultraviolet absorption spectrophotometry, and it measures the conductance between electrodes to determine the water's TDS and Electrical conductivity. The instrument includes an intelligent scoring feature, and through the LCD backlight color, it displays 4 degrees of water quality: fine, good, average, and poor. The instrument contains a temperature correction feature that is accurate and repeatable.

Standard for the product:

- GB5749-2020 Standards for Drinking Water Quality
- GB/T5750-2023 Standard Examination Methods for Drinking Water
- JJG 821-2005 Verification Regulation of Total Organic Carbon Analyzer
- JJG 376-2007 Verification Regulation of Electrolytic Conductivity Meters

II. Parameters

| | |
|------------------------|---|
| Measurement Object | Tap water, purified water, bottled water, ground water, surface water (non-sewage) and other drinking water |
| Measurement parameters | COD (Chemical Oxygen Demand), TOC (Total Organic Carbon), UV275 (Ultraviolet Absorption Value), TDS (Total Dissolved Solids), Electrical conductivity, Temperature |
| Measurement Range | COD(0-100mg/L), TOC(0-100mg/L), UV275(0-1.0au/cm), TDS(0-2000ppm), Electrical conductivity(0-4000us/cm), Temperature(0-50°C) |
| Resolution | COD(0.01mg/L), TOC(0.01mg/L), UV275(0.001au/cm), TDS(1ppm), Conductivity(1us/cm), Temperature(0.1°C) |
| Accuracy | <p>COD: 0-5mg/L:±0.5mg/L; 5-100mg/L:±10%H, H is the standard value</p> <p>TOC: 0-5mg/L: ±0.5mg/L; 5-100mg/L: ±10%H, H is the standard value</p> <p>UV275: 0-0.1au/cm: ±0.01au/cm; 0.1-1.0au/cm: ±10%H, H is the standard value</p> <p>TDS: 0-100ppm: ±5ppm; 100-2000ppm: ±5%H, H is the standard</p> <p>Electrical conductivity: 0-200us/cm: ±10us/cm; 200-4000us/cm: ±5%H,H is the standard</p> <p>Temperature: ±2°C</p> |


| | |
|-----------------------------|-------------------------------------|
| Display | 240*135 1.14 inch TFT color screen |
| Power Supply | 2 AAA alkaline dry batteries |
| Size | 157 * 37 * 14mm |
| Weight | About68g |
| Working Temperature Range | 0~50°C |
| Storage Temperature Range | -10~60°C, 0~85%RH (no condensation) |
| Supply Voltage | DC3V |
| Operating Current | 20mA |
| Operating Power Consumption | 60mW |


III. Features

1. The instrument simultaneously measures 6 parameters of COD, TOC, UV275, TDS, Electrical conductivity and Temperature to make a comprehensive evaluation of the water quality.
2. The instrument uses a color screen display, which uses the color of the backlight to indicate different water quality levels and provides a score.
3. The instrument has the function of ambient temperature compensation, the value is stable, and it allows long-term calibration.
4. Small, portable, pen-like design that is simple to use and carry.

IV. Operation




1. Power on/off


Power on: Short press  button, the version and the serial number of the instrument host and probe are displayed on the screen at the same time after powering on, and then the instrument will enter the measurement interface.

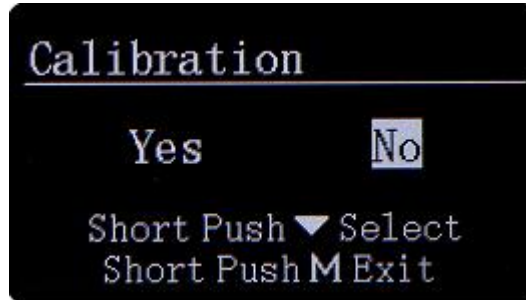
Power off: Long press the  button to shut down the tester or within 3 minutes no operation automatically shut down.

2. Calibration

The instrument has to be calibrated when it is used for the first time or after a lengthy period of inactivity.

Long press  button to enter the calibration interface in measuring mode, On the calibration interface, short press  button to select the [Yes/No] option, and short press  button to confirm the selection.


At this time, insert the probe of the instrument into the distilled water and short press  to start calibration. After calibration is completed, it will prompt "Calibration successful!", and exit to the measurement page.



If the calibration fails, the possible reasons are as follows:

- The instrument has not been placed in distilled water.
- The probe is contaminated, please rinse it with clean water before calibrating.
- The attenuation of the light source makes it unable to work normally, and needs to be returned to the factory for inspection and maintenance




3. Measurement

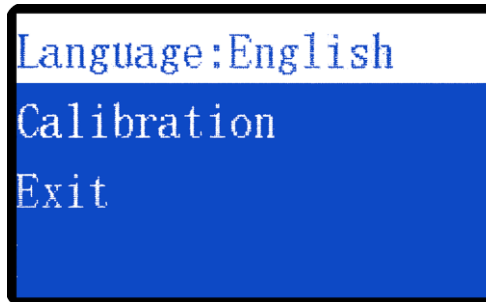
Short press  to measure after inserting the instrument's probe into the water sample to be tested. Following the measurement, the water quality will be graded in accordance with the test results, and the display will show various backlight colors depending on the results: poor -- red, general -- yellow, good -- green, excellent -- blue. Scoring judgment:




| | | | | |
|-----------|--------|----------|----------|-----------|
| TOC(mg/L) | 0-1.25 | 1.25-2.5 | 2.5-5.0 | 5.0-12.5 |
| COD(mg/L) | 0-0.75 | 0.75-1.5 | 1.5-3 | 3-7.5 |
| TDS(ppm) | 0-250 | 250-500 | 500-1000 | 1000-2000 |
| Score | 90-100 | 80-90 | 60-80 | <60 |
| Judgment | Fine | Good | Average | Poor |

| | | | | |
|-----------------|------|-------|--------|-----|
| Backlight color | Blue | Green | Yellow | Red |
|-----------------|------|-------|--------|-----|




4. Setup and Calibration

Press and hold the  button for 3 seconds in the off state to enter the Main Menu of the instrument with three sub-options, press the  briefly to select [Language, Calibration, Exit], short press the  button to confirm the selection.



- **Language:** Short press  button to enter the language option and press  button to select the right language, then press  button to confirm your selection.



- **Calibration:** Short press the  button to enter the calibration interface, the function is the same as long pressing the  in the measurement interface to enter the calibration interface.
- **Exit:** Short press  button briefly to exit the main interface and enter the measurement interface.

V. Attentions

1. Corrosive liquids like beverages, tea, or sewage should not be utilized with the device.

2. To prevent contaminating distilled water during calibration, the instrument must be cleaned of water stains and dirt at the probe.
3. The instrument must be calibrated with distilled water (bottled distilled water is labeled "Distilled Water"), and it is prohibited to calibrate with mineral or natural drinking water.
4. After measuring the liquid out of the instrument, the residual liquid need to be cleaned up at the probe to avoid mixing the two different liquids, which might cause errors in the test results.
5. Use the temperature of 0-50 °C, such as beyond please calibrate before use, extreme temperatures will cause permanent damage.
6. Do not use alcohol and other organic solutions to clean the contact probe, as it will cause permanent damage.
7. When an instrument is used for the first time or has been inactive for a while, it has to be calibrated.
8. The battery needs to be taken out when the instrument is not used for a long time.

VI. Packing List

| No. | Product Name | Quantity | Unit |
|-----|---------------------|----------|------|
| 1 | Water Quality Meter | 1 | set |
| 2 | User Manual | 1 | pcs |

VII. Service

1. The gauge has one-year warranty. If the gauge works abnormally, please send the whole gauge to our company for maintenance.
2. Provide users with spare parts and lifelong maintenance services.
3. Provide the users with the gauge calibration service. Free technical support for the long term.

Manufacturer: Shenzhen Linshang Technology Co., Ltd.

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