Water Quality Tester

Code: 86311

User Manual V1.0

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

I. Product Introduction

water quality tester is mainly used for detecting the quality of drinking water, including tap water, purified water, and groundwater. It can also be used for salinity detection in seawater and aquaculture. The instrument utilizes the UV absorbance method to measure the COD, TOC, and UV275 water quality parameters of drinking water. Additionally, it measures TDS, conductivity, salinity, hardness, and specific gravity by detecting the electrical conductivity between electrodes. When measuring drinking water, the instrument features an intelligent scoring function, which indicates water quality on a 4-level scale (Excellent, Good, Fair, and Poor) through the LCD backlight color. The instrument also has temperature compensation, offering excellent repeatability and measurement accuracy.

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*
- *JJG 761-2016 Electrode-type Salinity Meter Verification Procedure*

II. Parameters

Measurement Object	Tap water, purified water, bottled water, ground water, surface water (non-sewage) , Seawater, aquaculture, etc.
Measurement parameters	COD (Chemical Oxygen Demand), TOC (Total Organic Carbon), UV275 (Ultraviolet Absorption Value), TDS (Total Dissolved Solids), Electrical conductivity, SAL (Salinity), GH (Hardness), S.G. (Specific Gravity), Temperature
Measurement Range	COD(0-100mg/L), TOC(0-100mg/L), UV275(0-1.0au/cm), TDS(0-2000ppm),Electrical conductivity(0-4000us/cm), SAL (0-26%), GH (0-1000ppm), S.G. (0.9800-1.2000), Temperature(0-50℃)
Resolution	COD(0.01mg/L), TOC(0.01mg/L), UV275(0.001au/cm), TDS(1ppm), Conductivity(1us/cm), SAL (0.01%), GH (1ppm), S.G. (0.0001), Temperature(0.1℃)
Accuracy (H is the standard value)	**COD:** 0-5mg/L:±0.5mg/L; 5-100mg/L:±10%H **TOC:** 0-5mg/L: ±0.5mg/L; 5-100mg/L: ±10%H **UV275:** 0-0.1au/cm: ±0.01au/cm; 0.1-1.0au/cm: ±10%H **TDS:** 0-100ppm：±5ppm; 100-2000ppm：±5%H **Electrical conductivity:** 0-200us/cm：±10us/cm, 200-4000us/cm：±5%H

	SAL: 0-5%: ±0.25%; 5-15%: ±5%H; 15-26%: ±10%H **Temperature:** ±2℃
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℃
Storage Temperature Range	-10~60℃，0~85%RH（no condensation）
Supply Voltage	DC3V
Operating Current	20mA
Operating Power Consumption	60mW

# III. Operation

1. Instrument Structure
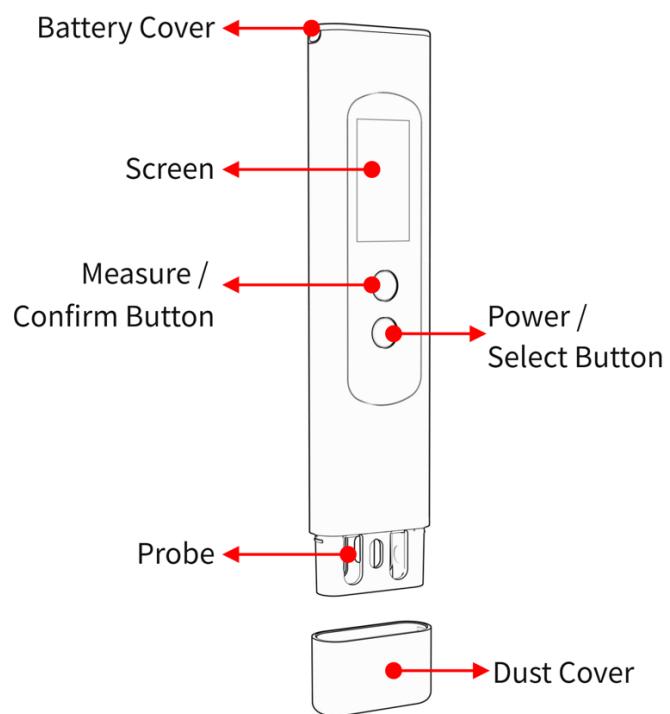
2. Calibration

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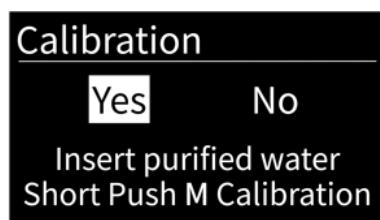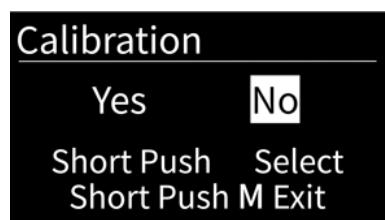
If the calibration fails, the possible reasons are as follows:

- 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

Measure drinking water:

COD	TOC	TDS
0.0	0.0	4

100 (Excellent)

100 (Excellent)
90-100: Excellent
82(Good)
80-90: Good
76 (Average)
60-80: Average
58(Poor)
0-60: Poor
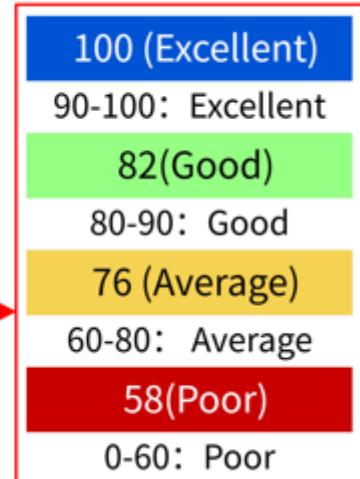
Measure saline wate:

SAL	GH	S.G.
1.12	1465	1.0059

(Saline Water)
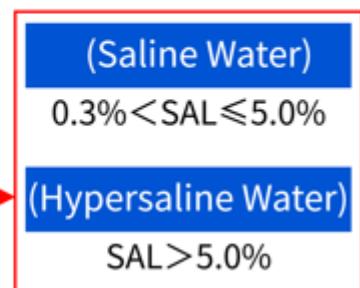
(Saline Water)
0.3%＜SAL≤5.0%
(Hypersaline Water)
SAL＞5.0%

SAL	0.00	%
GH	0	ppm
S.G.	0.9963	
1/3		

COD	0.0	mg/L
TOC	0.0	mg/L
TDS	4	ppm
2/3		

UV275	0.0	au/cm
EC	7	us/cm
T	33.4	°C
3/3		

(Measurement Interface)

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 Tolerance, Exit], short

press the ⟨M⟩ button to confirm the selection.
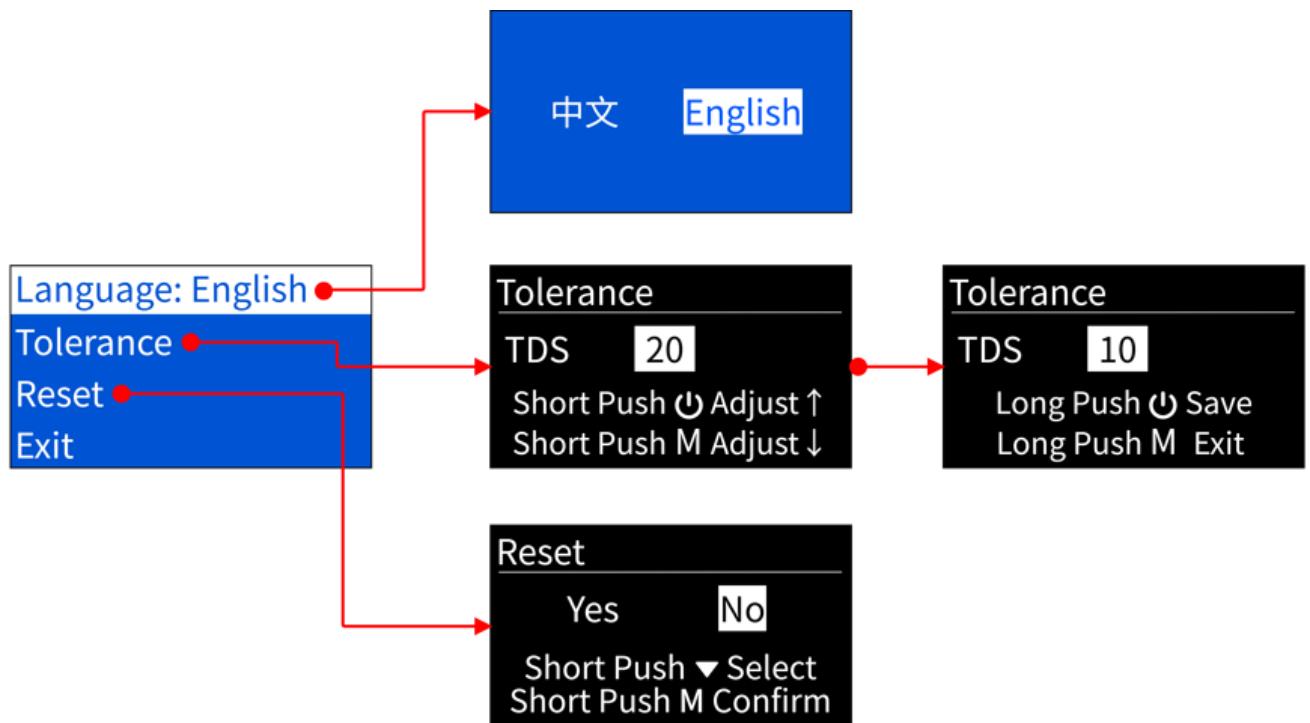
IV. Attentions

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 ℃, 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.

V. Packing List

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

VI. 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.