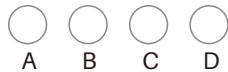


User Manual v1.0.9

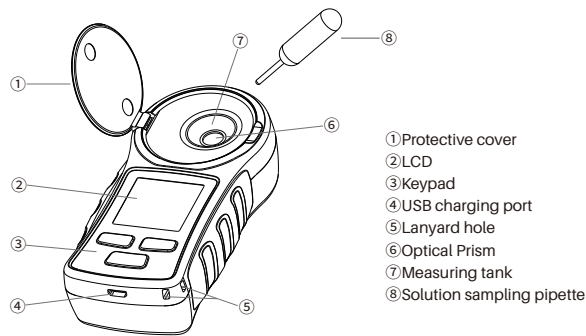
Digital Refractometer



Precautions

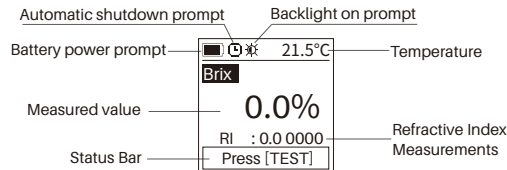
- (1) Do not collide, drop the instrument or scratch the measuring tank and optical prism with hard objects.
- (2) When not in use for a long time, please fully charge and place the instrument in a dry, dust-free and non-corrosive environment.
- (3) The USB charging voltage should not exceed the DC6V limit.
- (4) The instrument can be flushed with a small flow of water, but it is forbidden to immerse the instrument in water.

1. Product Schematic Description



1

LCD



2. Key Description

- (1) "⏻" key: Long press to turn the instrument on or off.
- (2) "⚙️" key: Short press to switch the temperature unit °C and °F; long press to turn on or off the automatic shutdown function. After turning it on, the instrument will automatically shut down without any key operation for about 10 minutes.
- (3) "TEST/ZERO" key: Short press to measure; long press to calibrate.

Note:

- a. In the power-on state, short press any key, the backlight will automatically turn on for about 30 seconds.
- b. When it is powered off and charging, short press any key, the backlight will automatically turn on for about 5 seconds.

3. Measurement Methods

Before measuring, please ensure that there is no dirt in the measuring tank, so as not to affect the measurement results.

Step 1: Place the instrument on a horizontal table, and long press the "⏻" key to turn it on.

2

Step 2: Use a sampling pipette to suck the solution to be tested, drop the solution into the measuring tank, be careful not to fill the solution, and it is enough to be about 1mm away from the top of the tank (the capacity is about 0.5ml).

Step 3: Short press "TEST/ZERO" key to measure.

Step 4: After the measurement, clean the measuring tank in time for the next use.

Note: When measuring multiple solutions at one time, clean the measuring tank after each solution is measured.



Tips

- (1) Since the temperature compensation of the instrument needs to be consistent with the temperature of the solution, when measuring high and low temperature solutions, it is necessary to wait for about 20s to avoid errors.



- (2) Uneven solution or suspension will affect the measurement results. When measuring solutions containing suspended solids, first filter the solution with a filter or gauze, and stir the solution evenly (do not use hard objects to avoid scratching the optical prism).

3

4. Cleaning

When it is not used for a long time or there is dirt in the measuring tank, it needs to be cleaned before measuring.

(1) Drop clean water into the measuring tank, wipe it with a clean flannel or cotton swab; repeat several times until it is completely cleaned.

(2) After cleaning, dry the water with a clean and dry flannel or cotton swab.



Tips

When the measuring tank contains oily or difficult-to-clean solution residues, it can be cleaned with ethanol or soapy water.

5. Calibration

When it is found that the measurement accuracy of the instrument is reduced, that is, when the brix of water or pure water is less than 0.0%, the instrument needs to be calibrated.

(1) Make sure that the measuring tank is clean and free of scale before calibration.

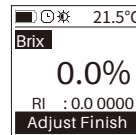
(2) Take clean water or pure water and drop it into the measuring tank (the solution capacity is about 0.5ml).

(3) Long press the "TEST/ZERO" key to calibrate.



Long press

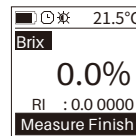
TEST
ZERO



(4) After calibration, please measure with clean water or pure water and observe if the brix is 0.0%. If the brix is not 0.0%, re-calibration is required.

Short press

TEST
ZERO



6. Status Bar Display Description

Display content	Description
Too Bright	External light affects the measurement, need to cover the protective cover
Too More Sugar	The brix of the calibration solution is too high, it needs to be calibrated with water
Too Less Water	Too little measuring solution or calibration solution in the measuring tank
Over Range	The concentration of the tested solution is too high

7. Technical Parameter

Model		A	B	C	D
Measuring range	Brix	0~32%		0~55%	
	Environment temperature	10~40℃			
	Refractive index	1.333~1.385		1.333~1.431	
Precision	Brix	±0.2%	±0.5%	±0.2%	±0.5%
	Others	Environment temperature: ±0.5℃ Refractive index: ±0.001			
Resolution		Brix: 0.1%; Environment temperature: 0.1℃ Refractive index: 0.00001			
Temperature compensation		10~40℃			
Power supply		Built-in lithium battery (800mAh)			
Protection degree		IP66			
Shell material		119*55*31mm			
Dimensions		ABS			
Weight		About 122g			