

Digital Refractometer 300066



INSTRUCTION MANUAL

SPER
SCIENTIFIC

Environmental Measurement Instruments

Content

Instrument structure	1
Instrument measurement	2
Before the testing	2
Power on	2
Power off	3
Operating steps	3
Zero point calibration	4
Instruction of power charging	5
Note	6
Technical parameters	7
Common trouble shooting	8

Instrument measurement

Power off

Press and hold the “ON/OFF/START” for at least one second until the screen display “Power off”.

Operating steps

1. Open the shading plate counterclockwise.
2. Use the pure water to clean the detection slot with soft cloth, then remove the residual water.
3. Add 3~5 drops of liquid test sample to the detection slot.
4. Close the shading plate clockwise.
5. Press the “ON/OFF/START” shortly, or touch the “touch instruction point”. The screen shows the value of BRIX and Value of Refractive index.

Instrument measurement

Zero point calibration

Generally the instrument can be used directly. Zero point calibration need to be performed when the instrument is long time unused or there's a zero offset. The method is as follows,

- 1, Use the pure water to clean the detection slot with soft cloth repeatedly.
- 2, Add 3~5 drops of pure water to the detection slot.
- 3, Press and hold the“ZERO” until the screen shows “ zeroing”, release the button and start.
- 4, When the Screen shows “Zero Success”, it means the Zero point calibration is finished. When the screen shows “Zero Failure”, it means the Zero point calibration is failed.
- 5, Press the “ON/OFF/START” When the value is “0.0%”, means the Zero point calibration is successful.

Instrument measurement

Instruction of power charging

- 1, Plug the data cable into the interface at the bottom of instrument, Plug the other end into charging power of 5v.
- 2, When the charging light turns red, it means the instrument is charging.
- 3, When the charging light turns green, it means the power charging is finished.

Note

- 1, Make sure the clean pure water is used for Zero Point Calibration.
- 2, Make sure to clean the detection slot after testing.
- 3, The instrument should be placed in the environment of dry and normal temperature. Avoid the instrument exposing in the high temperature and strong sunlight to prevent the accuracy and OLED failed.
- 4, Don't wash the instrument immersion into the water to avoid the leaking.
- 5, Digital Refractometer is a precision optical instrument, please using and maintaining carefully and softly. Avoid the damage to the prism in detection slot from cut and bump.
- 6, Avoid the evaporation of the test sample to affect the result, please operate fast.
- 7, The low power will cause the wrong date , please charge in time.

Technical parameters

Measuring range	0.0~55Brix(%)
Resolution	0.1Brix(%) / 0.1°C
Accuracy	±0.2Brix(%) / 1°C
Temperature compensation	10~80°C
Operating temperature	10~40°C
Sample volume	≈0.2mL (3~5drops)
Measure time	≈3S
Power supply	3.7VLithium battery
Dimension	154X52X44mm
Weight	140g

Help In the process of using this instrument, problems or questions will inevitably be encountered. The following index give examples of common situation and exclusions, and you can find solutions based on the index.

The following **situation** is not a malfunction, please do not worry.

Situation	Paraphrase	Cause reason	Exclusion measures
The concentration is too high or too low.	Beyond the range (not within the scope of detection)	The sugar content of the detect substance is higher than the detection range of the instrument	Dilute the testing sample.
		Influence of external light	Rotate and cover the shade plate.
		The tested liquid contains particles	Filter out the particles.

The concentration is too high or too low.	Beyond the range (not within the scope of detection)	Liquid concentration is higher than the instrument range	Post-dilution.
		Liquid temperature is lower than the instrument range	The temperature of the liquid should be the same as the temperature of the instrument and the environment.
No solution		Missing sample solution	Add the test solution to be tested.
Zero failed		Detection slot is not clean	Cleaning the detection slot.
		The calibration solution is not correct	Change the calibration solution.
Test data is incorrect	1	The surface of the prism is uncleaned	Wipe or clean prism.
	2	Improper operation	Please follow the instructions.
	3	Photometric effect	Operation after covering the shading plate.
	4	Operation at high temperature	Operation at normal temperature.

Test data is incorrect	5	Insufficient electricity	The power is displayed as empty, which will affect the test data. Please charge in time.
Misjudgment of quality	1	Misjudgment of product quality due to improper operation	Please follow the instructions.
	2	Misjudgment of product quality due to other reasons	Please contact our after-sales service center.
Instrument failure	1		Please contact our after-sales service center.