

Economical Rugged Series Refractometer

T-HENG

WPDR RUGGED SERIES

T-HENG Mechanical & Electrical Co. Ltd.

Tel: (+86) 010-60251782 Fax: (+86) 010-60252017

Web: www.t-heng.com

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INTRODUCTION

The WPDR Rugged Series Refractometer is cost-effective and meets requirements of most users. It is fully waterproof, reliable accuracy and a striking exterior.

FEATURE

IP67 waterproof
Rechargeable Lithium Ion battery
User friendly
Measurement limit indicator
Multi-scales measurement

MATERIALS SUPPLIED

Refractometer
1 Lithium battery
DC Power Adapter
Instruction Manual

LCD DISPLAY



	Name	Description
1	S 8	Current scale number
2	Battery Icon	Current battery power level
3	Temperature Scale	Current temperature unit.
4	Display	Digital display area

Battery Power Icon:

75%-100%, shows full	
40%-75%, shows 2 cells	
15%-40%, shows 1 cells	
Less 15% show 0 cells and flashes	
Display showing battery charging from less 15% to full charged	




POWER SUPPLY

AC 100V-240V

DC 5V 1A

KEYPAD



	Name	Function	Remark
1	POWER	Power on/off	
2	READ	Reading /Changing Scale	
3	CAL	Calibration	

SETUP MODE

Power on

1. Press **POWER** once to turn the refractometer on.
2. Press **POWER** again to turn the refractometer off.

NOTE: ALL operation will function when the refractometer is turned on.

Temperature Scale

Temperature unit °C, display range [0.0 – 40.0]

Switch Scale

Keypad	Operation	Display	Remark
READ	Press for 2S	<u>S1 ~ S7</u>	Only when refractometer is turned on

Calibration

Calibration solution should be distilled water and the range of Refractive index is 1.3330~1.3340

1. Press **CAL** for 2S, LCD display **CAL** and refractometer start to calibrate
2. Refractometer automatically return to measurement mode that indicates calibration finished.

Measurement

After calibration, drop measuring solution

1. Short press **READ** , measurement reading display on the LCD
2. Repeat press **READ** , enable to repeat measurement

Measurement Failed

- Without putting into any measuring solution :
 1. Short press **READ**, LCD show ---
- Measurement go beyond the upper limit:
 1. Short press **READ**, LCD show **HHH**
- Measurement go beyond the lower limit:
 1. Short press **READ**, LCD show **LLL**

Auto Power Off

Refractometer will automatically turn off without any operation for 3min.

SPECIFICATION

	Scale	Unit	MIN	MAX
Measurement Range	Brix	%	0.0	95.0
Resolution	Brix	%	0.1	
Accuracy	Brix	%	+/- 0.2	
Temperature Range	Temp.	°C	0.0	40.0
Accuracy	Temp.	°C	+/- 0.5	
ATC Range		°C	0.0	40.0
Sample Capacity		mL	0.3	
Measurement Time		Sec	0.5	1.0
Quantity of Scale			<u>2</u>	9
Power Supply	Lithium-Ion Battery			
Waterproof Grade	IP67			

Appendix:

Series	Model	Scales	Range	Resolution	Accuracy
Sugar	WPDR101	Brix	0.00--60.00%	0.1%	±0.2%
		Refractive Index	1.3330--1.4420nD	0.0001nD	±0.0003nD
	WPDR102	Brix	40.00--95.00%	0.1%	±0.2%
		Refractive Index	1.4000--1.5320nD	0.0001nD	±0.0003nD
	WPR103	Brix	0.00--95.00%	0.1%	±0.2%
		Refractive Index	1.3330--1.5320nD	0.0001nD	±0.0003nD
	WPDR104	Sucrose(Brix)	0.00--95.00%	0.1%	±0.2%
		Refractive Index	1.3330--1.5320nD	0.0001nD	±0.0003nD
		Dextran	0.00--10.60%	0.1%	±0.2%
		Fructose	0.00--68.90%	0.1%	±0.2%
		Glucose	0.00--59.90%	0.1%	±0.2%
		Lactose	0.00--16.50%	0.1%	±0.2%
		Maltose	0.00--15.60%	0.1%	±0.2%
	WPDR104S Sapphire Prism	Sucrose(Brix)	0.00--95.00%	0.1%	±0.2%
		Refractive Index	1.3330--1.5320nD	0.0001nD	±0.0003nD
		Dextran	0.00--10.60%	0.1%	±0.2%
		Fructose	0.00--68.90%	0.1%	±0.2%
		Glucose	0.00--59.90%	0.1%	±0.2%
Lactose		0.00--16.50%	0.1%	±0.2%	
Maltose		0.00--15.60%	0.1%	±0.2%	
Salt	WPDR201 (sodium chloride)	salinity	0.00--28.00%	0.1%	±0.2%
		salinity	0--280‰	1‰	±2‰
		specific gravity	1.000-1.217	0.001	±0.002
		Refractive Index	1.3330--1.3900nD	0.0001nD	±0.0003nD
	WPDR202 (sea water)	salinity	0--100‰	1‰	±2‰
		chlorinity	0--57‰	1‰	±2‰
		specific gravity	1.000-1.070	0.001	±0.002
		Refractive Index	1.3330--1.3530nD	0.0001nD	±0.0003nD

Series	Model	Scales	Range	Resolution	Accuracy
Car	WPDR701	Cleaner	(32)-(-40)°F	0.1°F	±0.2°F
		ETHYLENE GLYCOL	(32)-(-50)°F	0.1°F	±0.2°F
		PROPYLENE GLYCOL	(32)-(-50)°F	0.1°F	±0.2°F
		Battery	1.000-1.500sg	0.001	±0.005sg
	WPDR702	Cleaner	(0)-(-40)°C	0.1°C	±0.2°C
		ETHYLENE GLYCOL	(0)-(-50)°C	0.1°C	±0.2°C
		PROPYLENE GLYCOL	(0)-(-50)°C	0.1°C	±0.2°C
		Battery	1.000-1.500sg	0.001	±0.005sg