



# BTR-1000 (Brix) Instruction Manual

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## 1. Safety and Precaution

- 1) Keep the product in a dry and shaded environment.
- 2) Do not use organic solvents to clean the product.  
(acetone, benzene, thinners for paints, gasoline, etc)
- 3) Remove the sample solution from the Sample surface and wipe with a soft dry cloth after use.  
Do not use steel wool and harsh scrub pads to wipe the Sample surface / Prism.  
Do not use metal or sharp objects (eg. Spoons, needles) to place a sample on the Sample surface.
- 4) Do not submerge or drench the unit completely in water.
- 5) Dropping the unit or subjecting it to strong impact may cause the unit to malfunction. Do not dismantle or attempt to fix the device.  
Any unauthorized repair and modification attempts will result in forfeiture of warranty service of the device.

## 2. Specifications

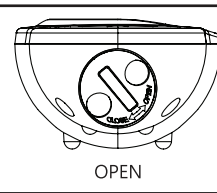
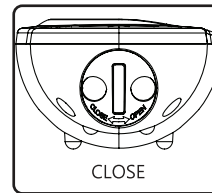
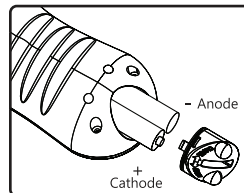
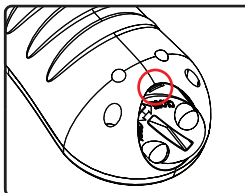
<b>Model Name</b>	BTR-1000 (Brix) / Suger(Brix) Refractometer	<b>Temperature Compensation</b>	ATC (10~60°C)	<b>Data Store</b>	Up to 20
<b>Measurement Units</b>	% (Brix) °C (Temp)	<b>Backlight</b>	Automatic Brightness Control (20 seconds)	<b>Usage Enviroment</b>	10~40°C ( 50~104°F )
<b>Measurement Range</b>	Brix(%): 0.0%~28.0% Temp: 0~70°C	<b>Auto shut-Off</b>	After 2 minutes	<b>Power Source</b>	1.5V x 2(AAA Alkaline)
<b>Resolution</b>	Brix(%): 0.1% Temp: 0.1°C	<b>Measurement Time</b>	Within 5 seconds	<b>Size</b>	58(W)X 36(D) X 122(H)mm
<b>Accuracy</b>	Brix(%): ±0.2% Temp: ±1.0°C	<b>Idle Sample volume</b>	Volume 0.5ml	<b>Weight</b>	149 gram (Including Batteries & detachable cover)

## 3. Error Messages

Problem	Error Message	Reason(s) and/or Potential Solution(s)
The meter will not power ON		<ul style="list-style-type: none"><li>• Change the batteries.</li><li>• Double-check the polarity of the batteries.</li></ul>
Not enough sample placed	Alr	<ul style="list-style-type: none"><li>• Make sure at least 0.5ml of a sample is on the sample surface. (refer Section 8. )</li><li>• Re-measure the sample while covering the sensor with hands to create a shade.</li></ul>
Out of Range / Above observable range	Hl	<ul style="list-style-type: none"><li>• Must be used within the specified range limits</li><li>• Calibrate using distilled water (refer Section 9. on the manual)</li></ul>
Out of Range / Below observable range	Lo	<ul style="list-style-type: none"><li>• Must be used within the specified range limits</li><li>• Calibrate using distilled water (refer Section 9. on the manual)</li></ul>
Low battery	Lob	<ul style="list-style-type: none"><li>• Change the batteries</li></ul>
Ambient light intensity is too strong	---	<ul style="list-style-type: none"><li>• Re-measure the sample while covering the sensor with hands to create a shade.</li><li>• Wait for the sample's temperature to stabilize</li></ul>
Zero correction failure	Er2	<ul style="list-style-type: none"><li>• Re-measure the sample while covering the sensor with hands to create a shade.</li><li>• Re-check the quality and quantity of the distilled water</li></ul>
Temperature Error	Er3	<ul style="list-style-type: none"><li>• Wait for the sample's temperature to stabilize</li><li>• Measure the sample within acceptable temperature range</li></ul>

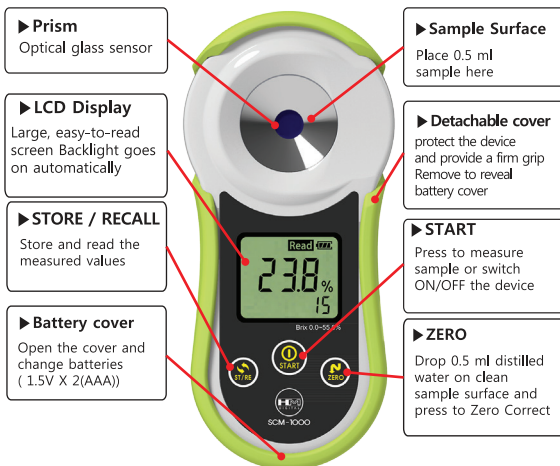
## 4. Inserting and Replacing Batteries

If " " sign is displayed on the LCD screen, we advise you to replace the batteries. If left unchanged, "Lob" sign will be displayed and measurements cannot be taken.



Please turn it left as the directional sign indicates "OPEN" until the groove (as shown) is aligned in the middle. Pull the groove to reveal the battery slot. To put it back, insert the cover as the groove is aligned in the middle like before and turn it right to close the cover.

## 5. Function and Parts

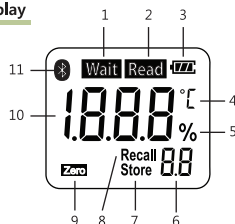


## ► Supplement parts

- 1) Instruction manual.
- 2) Eye Dropper(Spoid): To place sample solution on the sample surface.
- 3) Product warranty

## 6. Display and Buttons

### Display



### Buttons



- Press to turn ON the device or to measure the sample.
- Press for 2 seconds to turn OFF.

### ST/RE button



- Store and read the measured value

### Zero button



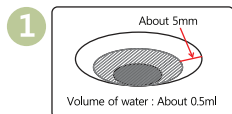
- ZERO correction function.
- Select through recalls in recall mode.



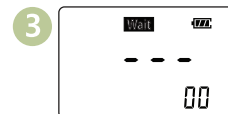
### Zero button

- Press the combination of buttons to show temperature.

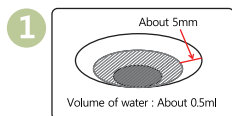
## 7. Using BTR-1000 (Brix)



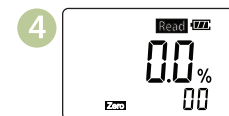
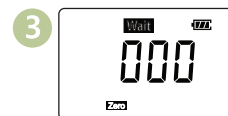
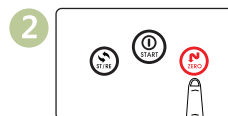
Put approximately 0.5ml of measuring sample on the prism.



## 8. Calibration



Clean the prism surface and drop 0.5ml of distilled water.



**\* STOP** If the measurement of distilled water is zero. The device does not need a calibration.

**⚠** When "Er2" is displayed on the screen, it means lack of distilled water or the water is not distilled water (tap water should not be used).

## 9. Temperature Display

The function is to check the temperature after measuring or during zero correction.



## 10. Store and Recall measurements

### Store Measurements



Once 20 measurements are stored, it overwrites from "01".



### Recall/Delete Measurements

