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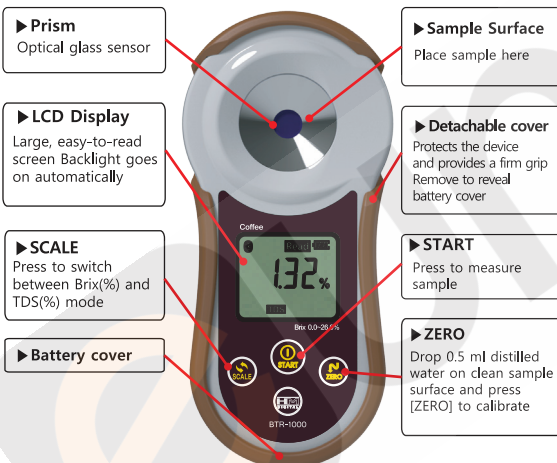
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## 1. Precautions

- 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 a 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.

## 5. Function and Parts

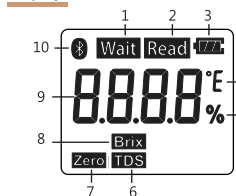


### Supplement parts

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

## 6. Display and Buttons

### Display



1. "Measurement indicator" Icon
2. "Measurement complete" Icon
3. Battery Life Indicator
4. Temperature Unit
5. Percentage Unit (Brix/TDS)
6. "Coffee TDS(%) mode" Icon
7. "Zero correction mode" Icon
8. "Brix(%) mode" Icon
9. Measured Value Display
10. Bluetooth Icon

### Buttons

- Start button**
  - Press to turn ON the device or to measure the sample.
  - Press for 2 seconds to turn OFF.
- Scale button**
  - Press to switch between Brix(%) and TDS(%) mode.
- Zero button**
  - Calibration function.
- Start button + Zero button**
  - Press the combination of buttons to show temperature.

## 2. Specifications

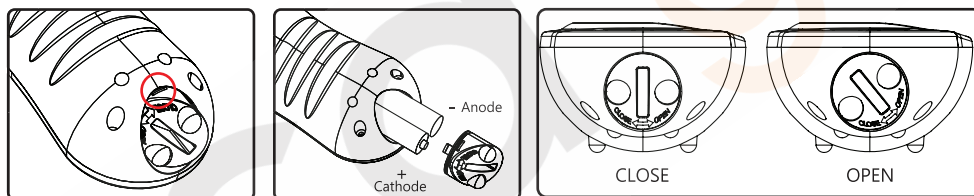
<b>Model Name</b>	BTR-1000 (Coffee) Coffee Refractometer	<b>Temperature Compensation</b>	ATC (10~60°C)	<b>Usage Environment</b>	10~40°C
<b>Measurement Units</b>	% (Brix, TDS) °C (Temperature)	<b>Backlight</b>	Automatic Brightness Control (20 seconds)	<b>Power Source</b>	1.5V x 2(AAA Alkaline)
<b>Measurement Ranges</b>	Brix: 0.00%~26.00% TDS: 0.00%~23.00% Temp: 0.0~70.0°C	<b>Auto Shut-Off</b>	After 2 minutes	<b>Size</b>	58(W)X 36(D) X 122(H)mm
<b>Resolution</b>	Brix: 0.01% TDS: 0.01% Temp: 0.1°C	<b>Measurement Time</b>	Within 5 seconds	<b>Weight</b>	149 gram (Including Batteries & detachable cover)
<b>Accuracy</b>	Brix: ±0.20% TDS: ±0.20% Temp: ±1.0°C	<b>Ideal Sample Volume</b>	Volume 0.5ml	<b>Bluetooth Compatible Devices</b>	Android Kitkat and up IOS 10 and up

## 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 sample is on the sample surface.</li> </ul>
Out of Range / Above observable range	Hi	<ul style="list-style-type: none"> <li>• Sample must be used within the specified range limits.</li> <li>• Calibrate using distilled water.</li> </ul>
Out of Range / Below observable range	Lo	<ul style="list-style-type: none"> <li>• Sample must be used within the specified range limits.</li> <li>• Calibrate using distilled water.</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 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-check the quality and quantity of the distilled water.</li> </ul>
Temperature Error	Er3	<ul style="list-style-type: none"> <li>• If Er3 is displaying after stabilizing, contact the product service.</li> </ul>

## 4. Replacing Batteries

If "Lob" 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.

## 7. Using BTR-1000

1. Put approximately 0.5ml of measuring sample on the prism.
2. When pressing [START] button, power comes on and the measurement starts instantly.
3. Please wait while the measurement is being taken place indicated by "Wait" icon.
4. When "Read" icon is displayed on the screen, the measurement is complete.

## 8. Calibration

1. Clean the prism surface and drop 0.5ml of distilled water.
2. Press [ZERO] button to calibrate.
3. Wait while the measurement is taking place indicated by "Wait" icon.
4. Calibration is completed after "000" sign flashes twice.

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

## 9. Temperature Display

The function is to check the temperature after the measurement or during zero

1. Press and hold the [START]+[ZERO] buttons simultaneously for 2 seconds.
2. The temperature is displayed on the screen only when the buttons are pressed and held.
3. When buttons are released, the display returns to the original screen.

## 10. Setting TDS and Brix mode

BTR-1000 (Coffee) has two different measurement modes; Total Dissolved Solids (TDS(%) and Brix(%). Please check the mode prior to measurement

1. Press [SCALE] button to toggle modes between Brix(%) and TDS(%) mode.
2. The current mode is always displayed at the bottom of LCD screen.

## 10. Connecting Bluetooth



1. Download the "HMCoffee" from Google play Store or Apple App store.
2. Follow the pop-up instructions by opening the app.
3. Further instructions can be found in App Manual in the menu section.

