TORONTECH

SIMPLE BRIX DIGITAL REFRACTOMETER

Simple Brix Digital Refractometer – ToronDR™ SB

A Digital Refractometer in the ToronDR™ SB is built for quick sugar-content checks in water samples, foods, fruits, and crops. This Brix Refractometer measures 0.0–55% Brix with a portable, battery-powered design for on-the-spot use. The Simple Brix Digital Refractometer – ToronDR™ SB is simple and fast to operate, lightweight, and easy to carry for field and production work.

Simple Brix Digital Refractometer – ToronDR™ SB uses optical principles to measure sugar concentration and supports two working modes: sugar content (Brix) and refractive index. It is positioned for food and beverage production, agriculture, and agricultural food processing where operators need quick checks without a benchtop instrument. The device is designed for small sample volumes, fast test time, and easy portable operation.

APPLICATIONS

Simple Brix Digital Refractometer – ToronDR™ SB Application

- Food and beverage production checks: this instrument supports routine Brix screening for juices, syrups, and processed foods where soluble-solids control impacts taste and batch consistency. ISO 2173 provides recognized method context for refractometric determination of soluble solids in fruit and vegetable products.
- Agriculture and crop quality screening: field teams can use Brix readings to compare crop ripeness and sugar development during harvesting decisions and grading. The Simple Brix Digital Refractometer is used for fruits and crops and is widely used in agriculture and agricultural food processing.
- On-site QC and incoming inspection: the ToronDR™ SB is practical for incoming checks and quick batch comparisons because it needs only a few drops of sample and delivers results in seconds. Its small size and low-power battery operation support portable workflows.

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ON/OFF
CAL
MEAS
TEMP

PRODUCT STRUCTURE

ON/OFF：ON/OFF　　CAL：Zero calibration

MEAS：Measurement / long press mode switch

TEMP：Temperature measurement

FEATURES

Simple Brix Digital Refractometer – ToronDR™ SB Key Features

- Portable Digital Refractometer for sugar-content measurement in foods, fruits, crops, and water samples.
- No moving parts, high sensitivity, and a wide dynamic linear range.
- Small sample requirement and fast analysis speed.
- Battery-powered, low power consumption, with auto shutdown after 2 minutes of no operation.
- Mode conversion between refractive index and sugar content (Brix).
- Automatic Temperature Compensation (ATC): All models feature internal sensors to adjust for temperature fluctuations, ensuring consistent readings.
- Portability: Handheld design with no moving parts, powered by standard batteries for field and factory use.
- Easy Calibration: Feature a simple "Zero" button for quick calibration using distilled water before use.
- Auto-Off: Includes power-saving features that shut down the device after several minutes of inactivity.

PRODUCT DETAILS

ALLOY SAMPLE SLOT

The sample tank is made of alloy, and the bottom is precision glass corners. When not in use, you can cover the light-shield

LCD SCREEN

Clear numbers and easy display

BATTERY COMPARTMENT

AUTOMATIC SHUTDOWN, ENERGY SAVING

If the instrument is at rest, it will automatically shut down after 2 minutes. You can also manually shut down by pressing the "START" key

Refractive index mode

Brix mode

Dual-mode switching for easy use

PRODUCT FEATURES

Automatic temperature compensation, strong adaptability

- ▼ Self-set temperature detection at 10 °C -80 °C
- ▼ Automatically corrects detection errors due to temperature

Improve the accuracy of sugar content

THEORY & METHOD

Theory and Method

A digital refractometer measures how light bends through a liquid sample, then converts that optical response into a numerical result. ToronDR™ SB applies this principle to display Brix for sugar-content work and can switch to refractive index mode when needed. Automatic temperature compensation helps reduce temperature-related reading drift during routine testing.

TECHNICAL SPECIFICATIONS

Simple Brix Digital Refractometer – ToronDR™ SB Technical Specification

Feature	ToronDR™ SB 100	ToronDR™ SB 200	ToronDR™ SB 300
Measuring Range	0.0 – 55.0% Brix	0.0 – 55.0% Brix	0.0 - 55.0% Brix
Accuracy	±0.5% Brix / ±1°C	±0.5% Brix	±0.2% Brix
Resolution (Division)	0.5% Brix / 0.1°C	0.5% Brix	0.1% Brix
Measurement Time	≈ 3 seconds	≈ 3 seconds*	≈ 3 seconds*
Sample Volume	≥ 0.2 ml (3–5 drops)	2–3 drops	
Voltage	2 x AAA Alkaline Batteries		
Operating Temp.	10°C – 80°C	10°C – 40°C*	
Application	Water, Food, Fruits, Crops	Juice, Honey, Beverages	High-precision Juice testing

**Estimates based on series standard specifications where not explicitly detailed in the brief snippet.*

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