



TORONTECH

FOOD & BEVERAGE BRIX OPTICAL REFRACTOMETER



Food & Beverage Brix Optical Refractometer – ToronOR™ Brix Series

An Optical Refractometer in the ToronOR™ Brix Series is a handheld analog tool for measuring sugar-related concentration scales in food, beverage, brewing, dairy, honey, and specialty liquid applications.

This Refractometer lineup covers low-range and high-range Brix, Plato, wort specific gravity, Oechsle, KMW/Babo, honey water content, milk purity screening, soybean beverage checks, and contact-lens solution water content, depending on model. The equipment of this series is optical refractometers built with pure aluminum construction, ambient-light operation, and a standard field-use accessory kit.

A Brix Refractometer measures how light bends through a liquid sample, then converts that optical change into a concentration scale such as %Brix, °Plato, SG, °Oe, or water content. In food and beverage work, this gives a fast way to estimate dissolved solids, sugar concentration, or related process values from just a few drops of sample. ISO 2173 describes the refractometric determination of soluble solids in fruit and vegetable products, while ASTM D1218 is a general refractive-index method for transparent liquids.

This series is different from a general laboratory refractometer because each model is pre-scaled for a specific workflow. Some models are intended for juices and general sugar solutions, some for brewing and wort, some for honey moisture and Baumé, and others for milk, soybean beverage, or contact-lens solution. That direct-read format makes the ToronOR™ Brix Series practical for routine shop-floor and production checks.

APPLICATIONS

Food & Beverage Brix Optical Refractometer – ToronOR™ Brix Series

Application

- Fruit juice, syrup, and general sugar-solution checks: Low- and mid-range Brix models are used to check soluble solids in juices, syrups, soft drinks, and sugar-process streams. ISO 2173 is the clearest international refractometric reference for soluble solids in fruit and vegetable products, which makes it a good standard anchor for the general Brix models in this series.
- Brewing and wort monitoring: Beer-focused models combine Brix, Plato, and wort specific gravity scales for brew-house and fermentation-prep checks. These models help brewers estimate wort concentration quickly from a small sample before fermentation, with Brix and wort SG scales on the beer versions.
- Wine and must measurement: Oechsle, KMW/Babo, and Brix models support grape must and wine-process checks where operators want direct sugar-related readings in common wine scales. The ToronOR™ Brix series dedicated Oe / KMW / Brix combinations that suit wine and must be screened.
- Honey ripeness and moisture control: Honey models combine Brix, water content, and sometimes Baumé scales to help monitor ripeness and concentration. This series fit for high-sugar liquids such as honey, jelly, jam, and syrup.
- Dairy, soybean beverage, and specialty liquid checks: The series also includes specialty models for milk purity-style screening, soybean beverage concentration, and contact-lens solution water-content checks. These niche scales make the series broader than a standard Brix-only lineup.



Standards

- EN 61000-6-1: 2007
- EN 61000-3-2: 2014
- EN 61000-3-3: 2013
- EN 61000-6-3: 2007+A1:2011+AC:2012
- EN 61000-4-2: 2009
- EN 61000-4-3: 2006+A1:2008+A2:2010
- EN 61000-4-4: 2012
- EN 61000-4-5: 2014
- EN 61000-4-6: 2014
- EN 61000-4-8: 2010
- EN 61000-4-11: 2004

FEATURES

Food & Beverage Brix Optical Refractometer – ToronOR™ Brix Series Key Features

- Handheld analog Optical Refractometer lineup for food, beverage, brewing, honey, dairy, and specialty-liquid checks.
- Wide model coverage from 0–5% Brix up to 58–92% Brix, plus specialty scales such as Plato, wort SG, Oechsle, KMW/Babo, Baumé, water content, and contact-lens solution water content.
- Pure aluminum construction with durable manual design.
- Ambient-light operation with no battery or external power needed.
- Optical refractometers compensation range 10°C to 30°C for more stable routine readings.
- Easy manual focus and calibration with a non-slip grip and protective carrying case included in the standard package.

THEORY & METHOD

Theory and Method

Each handheld Optical Refractometer uses a prism and ambient light to create a visible boundary line in the eyepiece. A few drops of sample are placed on the prism, the cover plate is closed, and the user reads the scale value where the light/dark boundary falls. In this series, the optics are scaled directly in application units such as %Brix, °Plato, wort SG, °Oe, KMW/Babo, or water %, which removes the need to convert from raw refractive index during routine use.

The optical refractometers design helps reduce reading drift across normal working temperatures. These ToronOR™ Brix use automatic temperature compensation from 10°C to 30°C and operate without batteries because they rely on ambient light.

TECHNICAL SPECIFICATIONS

Food & Beverage Brix Optical Refractometer - ToronOR™ Brix Series

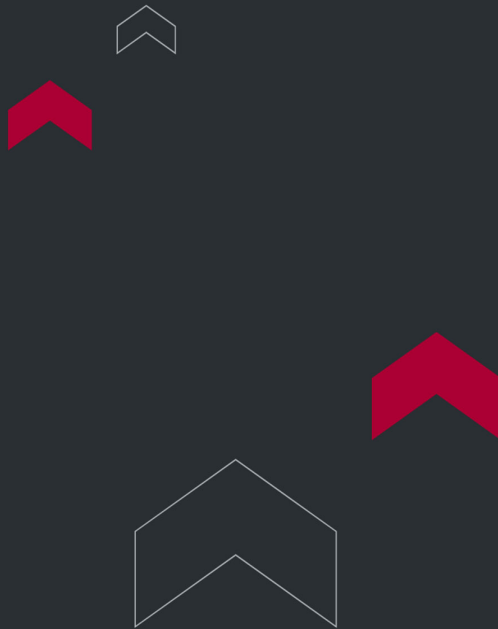
Technical Specification

Model	What this model is for	Scale details	Best-fit use case	Common build / package details
ToronOR™ Brix 5	Low-range Brix Refractometer for dilute sugar solutions.	0-5% Brix. 0.1% Brix minimum division and ±0.10% accuracy.	Best for low-sugar juices, diluted beverages, and low-concentration process liquids.	Standard Optical Refractometers package and pure aluminum body construction.
ToronOR™ Brix 10	Low-range Brix refractometer.	0-10% Brix. 0.1% Brix minimum division and ±0.10% accuracy.	Best for juices and light sugar solutions that sit above the ToronOR™ Brix 5 range.	Standard Optical Refractometers analog format.

Model	What this model is for	Scale details	Best-fit use case	Common build / package details
ToronOR™ Brix 18	Mid-low range Brix refractometer.	0–18% Brix. 0.1% Brix minimum division and $\pm 0.10\%$ accuracy.	Best for fruit juices, vegetable juices, and similar sugar-related liquids.	Pure aluminum construction and standard package contents.
ToronOR™ Brix 20	General Brix refractometer covering a slightly wider span than ToronOR™ Brix 18.	0–20% Brix. 0.1% Brix minimum division and $\pm 0.10\%$ accuracy.	Best for general beverage and syrup process checks that need a bit more top-end than 18% Brix.	Standard Optical Refractometers analog format.
ToronOR™ Brix 32	General-purpose Brix refractometer for broader sugar ranges.	0–32% Brix. 0.2% Brix minimum division and $\pm 0.20\%$ accuracy.	Best for mixed beverage, sauce, and syrup applications where 32% Brix coverage is enough.	Standard Optical Refractometers analog format.
ToronOR™ Brix 55	Higher-range Brix refractometer.	0–55% Brix.	Best for thicker syrups and higher-solids food products.	Standard Optical Refractometers analog format.
ToronOR™ Brix 50	Broad-range Brix refractometer for food processing.	0–50% Brix. 0.5% Brix minimum division and $\pm 0.50\%$ accuracy.	Best for sauces, syrups, jam solutions, and medium-to-high sugar products.	Standard Optical Refractometers analog format.
ToronOR™ Brix 62	Upper-mid Brix refractometer.	28–62% Brix.	Best for concentrated food products where the lower range is less important and more scale resolution is needed in the mid-high zone.	Standard Optical Refractometers analog format.
ToronOR™ Brix 82	High-range Brix refractometer for concentrated sugar solutions.	45–82% Brix.	Best for honey solutions, ketchup, jam, soy-based sugar applications, and similar high-solids products.	Standard Optical Refractometers analog format.
ToronOR™ Brix 612	Dairy / soybean beverage refractometer.	Milk 0–25%, Soybean 0–32% Brix.	Best for quick screening of milk purity-style checks and soybean beverage concentration.	Pure aluminum construction and standard Optical Refractometers package.
ToronOR™ Brix 635	Specialty refractometer for contact lens solution.	Contact lens water content 35–80%.	Best for specialty fluid checks where water content is the main control parameter.	Standard Optical Refractometers analog format.

Model	What this model is for	Scale details	Best-fit use case	Common build / package details
ToronOR™ Brix - 02T	Wide-range Oechsle refractometer.	0–170°Oe.	Best for wine and must measurements where a very broad Oechsle scale is preferred.	Standard Optical Refractometers analog format.
ToronOR™ Brix 06T	Wine / must refractometer focused on Oechsle and KMW/Babo.	30–140°Oe, 0–25 KMW (Babo).	Best for wineries that mainly use Oechsle and Babo rather than Brix.	Standard Optical Refractometers analog format.
ToronOR™ Brix 18P	Beer and brewing refractometer with a direct Plato scale.	0–18% Plato.	Best for brewers who want a direct Plato reading for wort concentration rather than using a general Brix-only scale.	Optical Refractometers optical refractometer format; pure aluminum construction and standard package style used across the series.
ToronOR™ Brix 32SG (1.000–1.120)	Beer refractometer with dual Brix and wort SG reading.	0–32% Brix and wort SG 1.000–1.120.	Best for brewing users who want both sugar scale and specific-gravity interpretation on one instrument.	Standard Optical Refractometers analog design.
ToronOR™ Brix 32SG (1.000–1.130)	Beer refractometer with broader SG upper range.	0–32% Brix and wort SG 1.000–1.130.	Best for brewing applications where a slightly wider SG span is preferred.	Standard Optical Refractometers analog format.
ToronOR™ Brix 32D	Dual-scale wine / must refractometer.	0–140°Oe, 0–32% Brix.	Best for users who want both wine and general sugar scales in one instrument.	Standard Optical Refractometers analog format.
ToronOR™ Brix 32E	Higher-start Oechsle plus Brix refractometer.	30–140°Oe, 0–32% Brix.	Best for must ranges that start above the lowest Oechsle values while keeping a Brix reference scale.	Standard Optical Refractometers analog format.
ToronOR™ Brix 32S	Wine / must refractometer with multiple wine scales.	0–140°Oe, 0–27 KMW (Babo), 0–32% Brix.	Best for wineries and grape-must checks where Oechsle, Babo, and Brix are all useful.	Standard Optical Refractometers analog format.
ToronOR™ Brix 90W	Honey refractometer with Brix, water, and Baumé scales.	58–90% Brix, 10–33% water, 38–43°Bé.	Best for honey ripeness checks and high-sugar products such as jam, jelly, and syrup.	Pure aluminum construction; standard package includes refractometer, pipette, screwdriver, case, manual, and cloth.

Model	What this model is for	Scale details	Best-fit use case	Common build / package details
ToronOR™ Brix 90N	Honey refractometer focused on Brix and water content.	58–90% Brix, 12–32% water.	Best for honey processors who mainly care about moisture and sugar concentration without a Baumé scale.	Standard Optical Refractometers analog format.
ToronOR™ Brix 92T	Premium honey refractometer with wider Brix and tighter water range.	58–92% Brix, 38–43°Bé, 12–27% water.	Best for higher-concentration honey and ripeness monitoring where a wider upper Brix limit is useful.	Standard Optical Refractometers analog format.



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