



TORONTECH



## WINE & ALCOHOL OPTICAL REFRACTOMETER

## **Wine & Alcohol Optical Refractometer – ToronOR™ WA Series**

An Optical Refractometer in the ToronOR™ WA Series is a handheld analog tool for fast checks of alcohol-related and wine-related concentration scales. This Refractometer lineup covers alcohol by volume, Brix, Baumé, Oechsle, KMW/Babo, and wine mass concentration scales, depending on the model. The ToronOR™ WA Series are designed for wineries, grape must checks, alcohol estimation, and fermentation-related process control.

A wine and alcohol Optical Refractometer measures how light bends through a liquid sample, then converts that optical change into a direct reading on a built-in scale. In this series, the scales are tailored for wine and alcohol workflows rather than general food or automotive use. That means users can read units such as %Vol, °Oe, °Brix, °Bé, or °KMW (Babo) directly through the eyepiece instead of converting from a raw refractive-index value.

This is what makes the ToronOR™ WA Series different from a regular general-purpose refractometer. A general refractometer may only show refractive index or a single Brix scale, while these models are configured around common winery and alcohol-production scales. That makes them better suited to grape reception, must checks, fermentation monitoring, and alcohol-related process screening.

### **APPLICATIONS**

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## **Wine & Alcohol Optical Refractometer – ToronOR™ WA Series Application**

- Winery and grape-must checks: Several models in this series use Oechsle, Brix, or KMW/Babo scales, which are widely used to assess grape must concentration before and during fermentation. This helps wineries estimate sugar content and track raw-material readiness at intake or during production. ISO 2173 is a recognized refractometric method for soluble solids determination and is the closest broad international reference for sugar-related concentration checks.

- Alcohol estimation in wine and fermentation workflows: The ToronOR™ WA Series combine alcohol by volume with another wine-related scale, which makes them useful for quick process checks where operators want a direct alcohol estimate together with Brix, Oechsle, or Baumé. This is especially helpful for small wineries, distillation prep, and routine cellar checks.
- Fermentation tracking and conversion reference: The multi-scale ToronOR™ WA Series 150F model is especially useful when teams want several interpretive scales in one instrument. Since it shows %Vol, CNM, KMW/Babo, Brix, and Oechsle, it fits users who compare multiple regional or process conventions during wine and alcohol production.
- High-concentration wine and alcohol solutions: The ToronOR™ WA Series 80 model is aimed at high concentration measurement using a 0-80% w/w scale. That makes it more specialized than the dual-scale wine models and better suited to users working with stronger solutions or concentration-oriented checks.



## 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

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### **Wine & Alcohol Optical Refractometer - ToronOR™ WA Series Key Features**

- Handheld analog Optical Refractometer lineup for wine, must, and alcohol-related concentration checks.
- Multiple direct-reading winery scales, including alcohol by volume, Brix, Oechsle, Baumé, KMW/Babo, and CNM depending on the model.
- Pure aluminum construction as a quality advantage.
- Ambient-light operation with no battery required for measurement.
- Manual focus and calibration design for practical field and cellar use.
- Optical Refractometer format with standard accessory kit.
- Durable manual design suited to wineries, beverage processing, and laboratory support work.

## THEORY & METHOD

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### Theory and Method

Each handheld Refractometer uses a prism and ambient light to produce a visible boundary line in the eyepiece. A few drops of sample are placed on the prism, the daylight plate is closed, and the operator reads the scale value where the light and dark fields meet. In this series, the scales are factory-aligned to wine and alcohol units such as %Vol, °Oe, °Bé, °Brix, and °KMW, so the result is easy to interpret during production work.

The instrument design includes automatic temperature compensation over the stated working range used analog refractometer lineup, which helps reduce routine reading drift in normal workshop and cellar conditions.

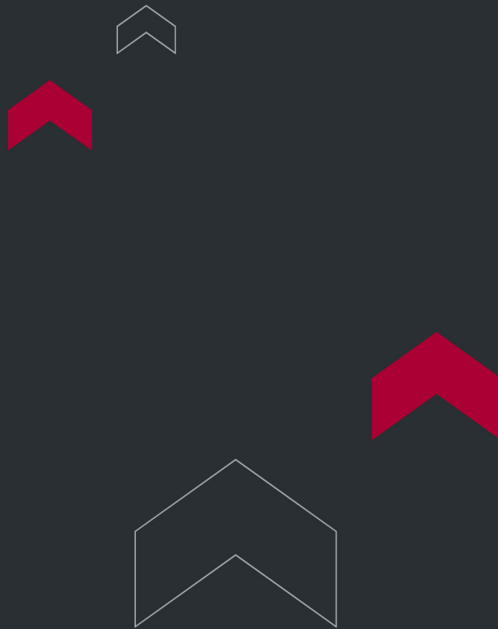
## TECHNICAL SPECIFICATIONS

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### Wine & Alcohol Optical Refractometer - ToronOR™ WA Series Technical Specification

| Model                 | What this model is for                                                                                                                                                        | Scale details             | Best-fit use case                                                                                                                       |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| ToronOR™<br>WA 25Vol  | A dual-scale wine refractometer that combines alcohol by volume with Oechsle. This model is useful when users want a simple alcohol-and-must reading in one handheld unit.    | 0-25% Vol and 0-170°Oe.   | Best for wineries and wine-process users who want to compare approximate alcohol-related reading with a classic must scale.             |
| ToronOR™<br>WA 25Brix | A dual-scale wine refractometer that combines alcohol by volume with Brix. It is the better fit for users who prefer the more familiar sugar-scale format instead of Oechsle. | 0-25% Vol and 0-40% Brix. | Best for beverage and winery users who track sugar concentration in Brix and also want an alcohol-related scale on the same instrument. |

| Model                           | What this model is for                                                                                                                                                 | Scale details                                                | Best-fit use case                                                                                                                      |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| ToronOR <sup>™</sup><br>WA 25Be | A dual-scale wine/alcohol refractometer that combines alcohol by volume with Baumé. This is a good fit for users working with Baumé-based process interpretation.      | 0–25% Vol and 0–20°Be.                                       | Best for wine and alcohol workflows where Baumé remains a preferred scale for process control or legacy reference.                     |
| ToronOR <sup>™</sup><br>WA 80   | A specialized wine/alcohol refractometer for high concentration by weight measurement rather than a dual interpretive scale. This is the simplest model in the series. | 0–80% w/w.                                                   | Best for higher-concentration liquid checks where users want a direct concentration-by-weight reading.                                 |
| ToronOR <sup>™</sup><br>WA 150F | A multi-scale winery refractometer with the broadest interpretive coverage in this lineup. It combines alcohol, CNM, KMW/Babo, Brix, and Oechsle in one unit.          | 5–22% Vol, 10–37 CNM, 0–30°KMW (Babo), 0–35% Brix, 0–150°Oe. | Best for wineries, labs, or distributors who work across multiple regional wine scales and want one versatile reference refractometer. |



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