



OPTi® - Pocket-sized Digital Handheld Refractometer

Portable Refractometer for Mobile Measurements

Portable. Reliable. Digital. OPTi®.

The pocket-sized digital refractometer: ready to use whenever you need it!

The OPTi® digital handheld refractometer from Bellingham + Stanley®, the pioneers of handheld refractometry, is an extremely reliable, high-quality instrument for determining dissolved solids and mixing ratios. It is suitable for a wide range of applications – from fresh fruit to industrial chemicals.

Portable and accurate

The compact and user-friendly OPTi® provides a precise concentration analysis with automatic temperature compensation in a matter of seconds. Measurements are taken at the push of a button, while the easy-to-read display ensures clear results. This provides users with reliable measurement results – regardless of who performs the measurement.

Thanks to its ergonomic design and the intelligent combination of powerful software and well-engineered hardware, the OPTi® is ideal for precise measurements wherever they are needed.



Software

- Measurement of samples in just 2 seconds
- 50 stored measurement scales
- Up to 3 active measurement scales on a single device
- The High Ambient Light (HAL) detection feature alerts you when too much light is hitting the sensor
- The unique “AG Test Mode” allows for the use of long-lasting, non-sucrose-based, certified reference materials
- Programmable measurement delay for temperature stabilization during sample measurement

Hardware

- Easy-to-read digital LCD display
- Ergonomic, durable, and compact design
- IP65 protection rating
- Easy-to-clean stainless steel prism plate
- Rapid Temperature Stabilization

A high-performance refractometer with a wide range of measurement scales

For use in a wide variety of applications, the OPTi® offers a wide range of measurement scales that are immediately available at any time.

Refractometers from Bellingham + Stanley® offer more

With the OPTi®, you have all the measurement scales you need right at your fingertips. There's no need to purchase additional devices, for example, for high Brix measurement ranges.

Fifty common measurement scales are already stored in the device and can be selected at any time. These include, among others, degrees Brix, refractive index, degrees Baumé, degrees Butyro, colostrum quality, wort, ethylene glycol %, and many other scales.

Just select and measure

Select the measurement scale you need at any time. With up to three measurement scales available at the touch of a button, the OPTi® is one of the most flexible and feature-rich handheld refractometers on the market. Do you need to determine the Brix value in one application and the estimated alcohol content in another? No problem. Switching between measurement scales takes just seconds. Combined with a measurement time of only 2 seconds per sample, the OPTi® is one of the fastest and most practical devices for mobile concentration monitoring and control.

Full Brix Scale (0–95)

The Brix scale is the most commonly used measurement scale in refractometry. However, many refractometers cover only a limited measurement range. The OPTi® offers more: It measures the entire Brix scale from 0 to 95 °Brix at no additional cost.

Over 40 measurement scales

Every OPTi® comes equipped with three interchangeable measurement scales from the factory and also provides access to 50 custom measurement scales. This results in over 9,880 possible OPTi® combinations for a wide variety of measurement requirements.

Versatile

Thanks to its robust design and wide range of measurement scales, the OPTi® is suitable for numerous applications, from clinical laboratories to use in demanding environmental conditions.

Digital Display

The OPTi®'s measurement results can be read clearly and easily on the high-contrast digital LCD display.

Ready to go whenever you need it

The pocket-sized refractometer. With long battery life, true portability, and a rugged design, the OPTi® is always ready for use when it counts.



An OPTi® for every application.

The practical solution for mobile measurements and inspections

The OPTi® digital handheld refractometer is suitable for measuring the ripeness of fruits, fruit juices, and fruit juice concentrates; carbonated beverages; alcohol content; grape must; as well as confectionery, jams, sugar, and many other applications in the food industry.

The OPTi® is also ideally suited for industrial applications. These include, among others, the measurement of soluble oils, quenching agents, glycols, antifreeze, coolants, fuel additives, deicing surfactants for aircraft wings, starch, textile surfactants, and many other media.



Food & Beverages

To determine the ripeness of **fresh fruits** such as grapes or tomatoes, all that is needed is a small amount of juice applied directly to the prism of the refractometer. OPTi® refractometers are used in the production of **jams, marmalades, syrups**, and other sugar-containing products. They also allow for quick checks of the moisture content of **honey** right at the beehive. In addition, they are ideal for testing **fruit juices** and other **soft drinks**.

Available measurement scales: Brix, degrees Butyro, HFCS, salinity, water content in honey, and more.



Beer & Wine

From homebrews to professional breweries, our refractometers have reliably supported quality control for many years. In the brewing industry, refractometers are used to **measure wort** before fermentation and to determine **alcohol content**. Winemakers around the world use OPTi® refractometers to check the **ripeness of their grapes** before harvest, assess **sugar content**, and determine alcohol content during the final stages of production.

Available measurement scales: Brix, wort SG, Baumé degrees, estimated alcohol content, Oechsle, and more.



Industrial Applications

Bellingham + Stanley® industrial scales cover a wide range of applications. The **glycol %** measurement scale is used particularly frequently, for example, when working on **air conditioning systems, heat exchangers, or pasteurization systems**.

Using the Brix scale, refractometers can also be used for **firefighting foams** and industrial **coolants**. In the aviation industry, the OPTi® helps determine the concentration of **deicing fluids** for aircraft.

Available measurement scales: Brix, refractive index (RI), calcium chloride %, ethanol %, ethylene glycol %, and others.

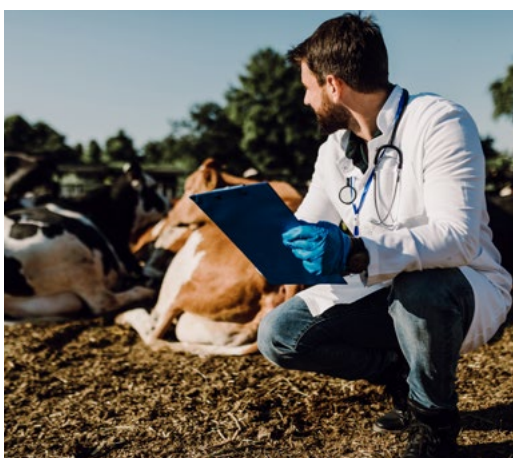


Automotive Sector

OPTi® refractometers allow for the testing of **coolants**—displayed as antifreeze in °F or °C—as well as **battery acid** and **AdBlue® concentration** (DEF).

This makes them ideal for vehicle service centers, repair shops, automakers, and fleet managers. OPTi® helps ensure reliable and safe vehicle operation.

Available measurement scales: Brix, refractive index (RI), sulfuric acid SG, AdBlue®, and more.



Veterinary & Life Sciences Sector

Bellingham + Stanley® offers a selection of specialized measurement scales for veterinarians and farmers to analyze **colostrum**, as well as **blood and urine samples** from animals. Since only a small drop of sample is needed for a measurement, OPTi® refractometers are particularly well-suited for samples that are available in limited quantities or are of high value, such as colostrum. The result is displayed quickly, clearly, and precisely.

Available measurement scales: Brix, refractive index (RI), colostrum quality, urine specific gravity, serum protein, and more.



And many more applications

There are numerous other applications in which digital OPTi® refractometers can support measurements and quality control. To this end, Bellingham + Stanley® has developed more than 40 different measurement scales to meet a wide variety of requirements.

For more information, please visit our website or contact our customer service team directly.

Accurate measurement results. Easy to use.

With the OPTi® refractometers, users can obtain precise measurement results using a compact and user-friendly handheld device. Equipped with a four-decimal-place LCD display, automatic temperature compensation (ATC), a rugged IP65 design, and a choice of three measurement scales in a single device, the OPTi® combines accuracy, flexibility, and reliability in a compact format.

Typical Specifications	Sucrose (Brix value)	Refractive Index	Specific Gravity (SG)	Concentration %
Area	0-95	1.33-1.53	1.000-1.050	0-95
Resolution	0.1	0.0001	0.001	0.1
Accuracy	±0.2	±0.0003	±0.003	±0.2
Temperature Compensation (ATC)	Brix Value (ICUMSA) Application-specific or Brix value			
Temperature Range	5–40°C (ambient temperature)		5–80°C (sample)	



Pocket-sized precision analysis.

True Portability

It fits in your hand and provides over 10,000 readings with 2 AAA batteries.

Stainless Steel Prism Dish

Rapid stabilization of the sample temperature.

Easy-to-read digital display

The easy-to-read LCD display makes it quick and easy to record measurement values.

Robust Construction

Made of ultrasonically welded ABS plastic that is resistant to physical impact, chemical corrosion, and water ingress in accordance with IP65.

Easy to Use

Place the sample on the prism plate and press READ.

Calibration

Only water is needed to perform a zero calibration.



Application-specific measuring scales

Application	Scale	Units	Area	Resolution	Accuracy	ATC
Primary	°Brix (ATC)		0-95	0.1	±0.2	°Brix
Primary	°Brix		0-95	0.1	±0.2	None
Automotive Sector	AdBlue®/DEF (NOx Reduction)	Mass fraction (% w/w)	0-40	0.1	±0.2	AUS32
Automotive Sector	Ethylene glycol	Freezing point in degrees Celsius	0 to -50	1	±1	EG
Automotive Sector	Ethylene glycol	Freezing Point (°Fahrenheit)	30 to -40	1	±1	EG
Automotive Sector	Propylene glycol	Freezing point in degrees Celsius	0 to -50	1	±1	PG
Automotive Sector	Propylene glycol	Freezing Point (°Fahrenheit)	30 to -40	1	±1	PG
Automotive Sector	Sulfuric acid (battery acid)	Specific Gravity (d20/20)	1.000-1.501	0.001	±0.003	SA
Food & Beverages	°Butyro		0-100	0.1	±0.5	Butyro
Food & Beverages	42 HFCS (high-fructose corn syrup)	Mass fraction (% w/w)	0-95	0.1	±0.2	°Brix
Food & Beverages	55 HFCS (high-fructose corn syrup)	Mass fraction (% w/w)	0-95	0.1	±0.2	°Brix
Food & Beverages	90 HFCS (high-fructose corn syrup)	Mass fraction (% w/w)	0-95	0.1	±0.2	°Brix
Food & Beverages	Fructose	Mass fraction (% w/w)	0-85	0.1	±0.2	°Brix
Food & Beverages	Glucose	Mass fraction (% w/w)	0-85	0.1	±0.2	°Brix
Food & Beverages	Invert sugar	Mass fraction (% w/w)	0-85	0.1	±0.2	°Brix
Food & Beverages	Maltose	Mass fraction (% w/w)	0-60	0.1	±0.2	°Brix
Food & Beverages	Salinity (NaCl)	Mass/Volume Percentage (% w/v)	0-28	0.1	±0.2	NaCl
Food & Beverages	Total Solids in "Waste Milk"	%	5-15	0.1	±0.5	°Brix
Food & Beverages	Water in Honey	%	10-30	0.1	±0.2	Honey
Life Sciences	Colostrum Quality		Fail / Pass	Fail / Pass	±0.2	°Brix
Life Sciences	Seawater (Practical Salt Units)	Parts per thousand	0-180	1	±1	NaCl
Life Sciences	Seawater (Practical Salt Units)	Specific Gravity (d20/20)	1.000-1.090	0.0005	±0.001	NaCl
Life Sciences	Serum protein	g/100 ml	0-30	0.1	±0.2	°Brix
Life Sciences	Human Urine (SG)	Specific Gravity (d20/20)	1.000-1.050	0.0005	±0.0010	°Brix
Life Sciences	Urine (SG) of a large mammal	Specific Gravity (d20/20)	1.000-1.050	0.0001	±0.0010	°Brix
Life Sciences	Urine (SG) of a small mammal	Specific Gravity (d20/20)	1.000-1.050	0.0005	±0.0010	°Brix
Wine & Beer	°Baumé		0-50	0.1	±0.2	°Brix
Wine & Beer	°Zeiss (ABV)	Volume percentage (% v/v)	10-135	0.1	±0.5	°Brix
Wine & Beer	Probable Alcohol Content (AP)		0-22	0.1	±0.2	°Brix
Wine & Beer	KMW (Babo)		0-25	1	±1	°Brix
Wine & Beer	Oechsle (German)		30-130	1	±1	°Brix
Wine & Beer	Oechsle (Swiss)		0-130	1	±1	°Brix
Wine & Beer	°Plato		0-30	0.1	±0.2	°Brix
Wine & Beer	Sugar Content (°Brix) (ATC)	Mass fraction (% w/w)	0-95	0.1	±0.2	°Brix
Wine & Beer	Sugar Content (°Brix)	Mass fraction (% w/w)	0-95	0.1	±0.2	None
Wine & Beer	Sweetness (sucrose equivalent)	Specific Gravity (d20/20)	1.000-1,120	0.0005	±0.001	°Brix

AdBlue® is a registered trademark of the VDA, the German Association of the Automotive Industry.

Xylem | 'zīlām|

- 1) the tissue in plants that brings water and nutrients upward from the roots.
- 2) a leading provider of unique solutions for your lab.

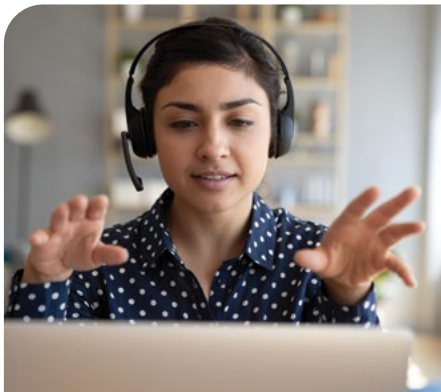
Xylem (XYL) is a global water and wastewater management company listed on the Fortune 500 index. Xylem supports its customers and the community in creating a world with safe access to clean water. Our 23,000 employees generated pro forma operating revenue of \$8.1 billion in 2023 and are OPTimizing water and resource management through innovation and expertise.

Visit us at www.xylem.com and "Let's Solve Water."



More than just support

We carry the full range of consumables and accessories and also provide on-site and field technical support to ensure your operations run smoothly. Contact your local sales representative to find out which products are available in your region.



Technical Support



Consumables & Replacement Parts



Calibration & Service



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