xylem

OPTi® Digital Handheld Refractometer

THE PORTABLE REFRACTOMETER FOR MEASUREMENTS ON-THE-GO

Bellingham + Stanley

a xylem brand

Portable. Reliable. Digital. OPTi®.

Portable. Reliable. Digital. OPTi®.

The pocket sized digital refractometer that's ready when you are.

The OPTi Digital Handheld Refractometer from Bellingham + Stanley (pioneers of the handheld refractometer) is a highly reliable, premium quality instrument used to control the dissolved solids or blend ratios of products ranging from fresh fruit to industrial chemicals.

Portable and precise

Portable and simple to operate, the OPTi provides excellent "on-the-spot" concentration analysis with automatic temperature correction. Accurate one button measurement and a clear display presents reliable results, no matter who takes the reading.

Thanks to its compact design and clever marriage of smart software and ergonomic hardware, OPTi refractometers are perfect for taking measurements anywhere.

Software

- Quick 2 second read time of sample
- Onboard library of over 40 scales
- Up to 3 active scales on a single device
- High Ambient Light (HAL) detection warns of too much light entering the sensor
- Unique "AG Test Mode" that allows the use of long-life non sucrose based certified reference materials
- Programmable read delay for sample temperature stabilisation

Hardware

- Clear digital LCD display
- Ergonomic & durable handheld design
- IP65 rated
- Easy-clean, stainless steel prism dish
- Rapid temperature stabilisation

A high performance refractometer with a vast choice of scales for a wide range of applications – all in the palm of your hand.

Bellingham + Stanley gives you more from your refractometer

The OPTi revolutionises the way digital handheld refractometers are supplied and purchased. With the OPTi refractometer you will have all of the scales you'll need, right in the palm of your hand – no paying extra for high brix models.

An onboard library of over 40 common scales including Brix, Refractive Index, °Baumé, °Butyro, Colostrum Quality, Wort, Ethylene Glycol % and many more can be swapped and selected at any time.

Full 0-95 Brix Scale

The Brix scale is the most common scale used in refractometry, yet many refractometers cover only a small portion of it. OPTi gives you more, with coverage of the full Brix range (0-95) at no extra cost.

Over 40 Scales

Each OPTi comes with 3 interchangeable scales pre-loaded from an onboard library of over 40 individual choices - meaning there are over 9880 possible OPTi combinations.

Versatile

Thanks to its durable design and vast range of scales, the OPTi is suitable for a wide range of applications; from the clinical laboratory to the harshest of environments.

Digital Display

Readings from an OPTi refractometer are clear and defined thanks to the bold digital LCD display.

Ready when you are

The refractometer that fits in your pocket. With a long battery life, true portability, and durable design: OPTi refractometers are ready when you are.

As easy as 1, 2, 3

The choice of scale is yours. With up to 3 scales readily available at the touch of a button, the OPTi is the most versatile and feature rich refractometer on the market.

Need Brix for one application, and Alcohol Probable for the next? No problem! Switching scales only takes a moment, and with a read time of 2 seconds per sample, the OPTi is one of the quickest and most convenient ways to monitor and control your concentration on-the-go.

An OPTi® For All Occasions.

The convenient way to measure and control on-the-go

The OPTi Digital Handheld Refractometer can be used for measuring fruit ripeness, fruit juices and concentrates, carbonated beverages, alcohol content and grape must, confectionery and jams, sugar and many other food applications. Industrial applications include the measurement of soluble oils, quenchants, glycols, antifreeze, air-conditioning and heat transfer fluids, aviation fuel inhibitors, aeroplane wing de-icing surfactants, starch, textile surfactants and more.

Food & Beverage

Used for testing the ripeness of fresh fruits such as grapes and tomatoes simply by squeezing a small amount of juice directly onto the refractometer prism. OPTi refractometers are used in the manufacturing of jam, marmalade, syrup and other high sugar content products as well as quickly testing for moisture in honey direct at the hive. They are ideal for testing finished juices and other soft drinks. **Scales include**: Brix, °Butyro, HFCS, Salinity, Water in Honey, and more.

Beer & Wine

From home-brew beer to the microbrewery and beyond, our refractometers have been helping brewers for years. In the beer world, refractometers are used to measure Wort prior to fermentation as well as determining alcohol content. We supply OPTi refractometers to vineyards around the globe so that grape ripeness can be checked before harvest, sugar content assessed and alcohol content measured in the final stages of production. **Scales include**: Brix, Wort SG, °Baume, Alcohol Probable, Oechsle, and more.

Industrial

Bellingham + Stanley's industrial scales cover a broad spectrum of applications. A common scale used within the industrial sector is Glycol % - useful for engineers working on air-conditioners, heat exchangers or even pasteurisers. When using the Brix scale, refractometers can be used for fire fighting foam and industrial coolants. In the aviation industry there is a need for determining the concentration of aircraft anti-icing fluids.
Scales include: Brix, RI, Calcium Chloride %, Ethanol %, Ethylene Glycol %, and more.

Automotive

OPTi refractometers are able to test coolant fluids (measurable in either °F or °C frost protection) and battery acid, as well as AdBlue® (DEF) concentration - ideal for vehicle service centres, garages, car manufacturers and fleet managers. Keep your vehicles runing smoothly and safely with OPTi. **Scales include**: Brix, RI, Sulphuric Acid SG, AdBlue®, and more.

Veterinary & Life Science

Bellingham + Stanley offer a selection of scales for veterinarians and farmers for testing colostrum, blood and urine samples taken from animals. Thanks to needing only a small drop of sample to give a clear and accurate reading, OPTi refractometers are perfect for measuring samples that are often difficult to obtain or, in the case of colostrum, being a valuable commodity. **Scales include**: Brix, RI, Colostrum Quality, Urine Specific Gravity, Serum Protein, and more.

And Many More...

There are many more applications where OPTi digital refractometers can help you measure and control, and as such Bellingham + Stanley has developed over 40 different scales to support your business. Visit our website or speak to the Bellingham + Stanley Customer Care team today.

All the accuracy you need in an easy-to-use handheld device

All OPTi refractometers feature a four decimal place LCD display, Temperature Compensation (ATC), robust design with IP65 rating, a choice of three scales in a single device.

Typical Specifications	Sucrose (Brix)	Refractive Index	Specific Gravity (SG)	Concentration %
Range	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 (ICUMSA)	Application Specific or Brix		
Temperature Range	5-40°C (Ambient)		5-80°C (Sample)	

For a full list of available scales please visit www.bellinghamandstanley.com

Precision analysis in your pocket.

True Portability

Fits in the palm of your hand and will give you over 10,000 readings on 2 x AAA batteries.

Stainless Steel Prism Dish

Rapidly stabilises sample temperature.

Durable Design

Made from ultrasonically welded ABS plastic, making it resistant to physical bumps, chemical corrosion, and water ingress to IP65.

Clear Digital Display

The clear LCD display helps you record readings quickly and easily.

Simple Operation

Apply the sample to the prism dish and press READ.

Calibration

Requires only water to perform a ZERO calibration.

Xylem |'zīləm|

1) The tissue in plants that brings water upward from the roots;
2) a leading global water technology company.

Bellingham + Stanley is part of Xylem Analytics and a leading provider of refractometers and polarimeters.

Xylem Analytics' global brands have been leaders in the laboratory instrumentation market for decades, and are relied upon every day across more than 150 countries. Working in true partnership with our clients, we listen, learn and adapt to individual needs, offering deep application expertise built upon our long history of innovation in instruments and services. Our solutions for analysis, measurement and monitoring help enable many of today's modern laboratories and industrial processes, and provide our customers the trusted and high performing solutions they need to succeed.

Xylem Analytics is part of Xylem Inc., a global company focused on solving the world's most challenging and fundamental water issues. As accurate analysis is crucial to the water industry, Xylem Analytics taps its diverse product brands for leadership in that field and beyond, providing the best laboratory and field monitoring instrumentation across a wide variety of industries.

For more information on how Xylem can help you, go to www.xylem.com

Bellingham + Stanley, a Xylem brand, operates an Integrated Management System complying with ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.

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OPTi® Automotive

PORTABLE REFRACTOMETERS FOR QUALITY CONTROL + MEASUREMENTS ON-THE-GO

The pocket-sized refractometer for automotive applications.

OPTi digital handheld refractometers are ideal for automotive applications thanks to their durable, IP65 pocket-sized design, quick 2 second read time and broad selection of scales. Our automotive instruments are able to test coolant fluids (measurable in either °F or °C frost protection) and battery acid, as well as AdBlue® (DEF) concentration - ideal for fleet managers, vehicle service centres and garages and also manufacturers of cars, trucks, trains, boats and aeroplanes.

Keep your vehicles on the move and operating safely with OPTi.

OPTi® Digital Handheld Refractometers

- Quick 2 second read time.
- Onboard library of over 40 scales.
- 3 active scales on a single device.
- High Ambient Light (HAL) detection warns of too much light entering the sensor.
- Clear digital LCD display.
- Unique "AG Test Mode" that allows the use of long-life non sucrose based certified reference materials.
- Durable IP65 pocket sized design.
- Programmable read delay for sample temperature stabilisation.

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OPTi Refractometers FOR AUTOMOTIVE

Application	Scale	Units	Range	Resolution	Accuracy	ATC*
Automotive	AdBlue®/DEF (NOx reduction)	% Weight / Weight	0–40	0.1	±0.2	AUS32
Automotive	Ethylene Glycol	°C Freezing Point	0 to -50	1	±1	EG
Automotive	Ethylene Glycol	°F Freezing Point	30 to -40	1	±1	EG
Automotive	Propylene Glycol	°C Freezing Point	0 to -50	1	±1	PG
Automotive	Propylene Glycol	°F Freezing Point	30 to -40	1	±1	PG
Automotive	Sulphuric Acid (Battery Acid)	Specific Gravity (d20/20)	1.000–1.501	0.001	±0.003	SA
Primary	Refractive Index (ATC)		1.33–1.53	0.0001	±0.0003	°Brix
Primary	Refractive Index		1.33–1.53	0.0001	±0.0003	None

OPT-AUT-EN120

Additional Scales ONBOARD SCALES ALL AVAILABLE WITHIN THE SAME DEVICE

Application	Scale	Units	Range	Resolution	Accuracy	ATC
Primary	°Brix (ATC)		0–95	0.1	±0.2	°Brix
Primary	°Brix		0–95	0.1	±0.2	None
Food & Beverage	°Butyro		0–100	0.1	±0.5	Butyro
Food & Beverage	42 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	55 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	90 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	Fructose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Glucose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Invert Sugar	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Maltose	% Weight / Weight	0–60	0.1	±0.2	°Brix
Food & Beverage	Salinity (NaCl)	% Weight / Volume	0–28	0.1	±0.2	NaCl
Food & Beverage	Total Solids of Waste Milk	%	5–15	0.1	±0.5	°Brix
Food & Beverage	Water in Honey	%	10–30	0.1	±0.2	Honey
Industrial	Arbitrary		0-95	0.1	±0.2	
Industrial	Calcium Chloride	% Weight / Weight	0–40	0.1	±0.2	CaCl2
Industrial	Ethanol	% Volume / Volume	0–20	0.5	±1	Ethanol
Industrial	Ethylene Glycol	% Volume / Volume	0–60	0.1	±0.4	EG
Industrial	Ethylene Glycol	% Weight / Weight	0–60	0.1	±0.4	EG
Industrial	FSII DiEGME (ASTM D 5006)	% Volume / Volume	0.0-0.25	0.01	±0.02	°Brix
Industrial	Hydrogen Peroxide	% Weight / Weight	0–50	0.2	±0.5	°Brix
Industrial	Methanol	% Weight / Weight	0–40	1	±0.2	Meth
Industrial	Propylene Glycol	% Volume / Volume	0–60	0.1	±0.4	PG
Industrial	Sodium Sulphate	% Weight / Weight	0–22	0.1	±0.2	Na2SO4
Industrial	Starch	%	0–30	0.1	±0.2	°Brix
Industrial	Urea (CRC data)	% Weight / Weight	0–40	0.1	±0.2	AUS32
Life Science	Colostral Quality		Poor / PASS	Poor / PASS	±0.2	°Brix
Life Science	Seawater (Practical Salt Units)	Part Per Thousand	0–180	1	±1	NaCl
Life Science	Seawater (Practical Salt Units)	Specific Gravity (d20/20)	1.000-1.090	0.0005	±0.001	NaCl
Life Science	Serum Protein	g/100ml	0–30	0.1	±0.2	°Brix
Life Science	Urine (SG) Human	Specific Gravity (d20/20)	**1.000-1.050**	**0.0005**	**±0.0010**	**°Brix**
Life Science	Urine (SG) Large Mammal	Specific Gravity (d20/20)	**1.000-1.050**	**0.0001**	**±0.0010**	**°Brix**
Life Science	Urine (SG) 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 / Volume	10–135	0.1	±0.5	°Brix
Wine & Beer	Alcohol Probable (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	Mass Sugar (°Brix) (ATC)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Wine & Beer	Mass Sugar (°Brix)	% Weight / Weight	0–95	0.1	±0.2	None
Wine & Beer	Wort (Sucrose Equivalent)	Specific Gravity (d20/20)	1.000-1.120	0.0005	±0.001	°Brix

*Automatic Temperature Compensation

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OPTi® Beer & Wine

PORTABLE REFRACTOMETERS FOR QUALITY CONTROL + MEASUREMENTS ON-THE-GO

The pocket-sized refractometer for beer & wine

OPTi digital handheld refractometers are ideal for beer & wine applications thanks to their durable, IP65 pocket-sized design, quick 2 second read time and broad selection of scales. From home-brew beer to the microbrewery and beyond, our refractometers have been helping brewers for years. In the beer world, refractometers are used to measure Wort prior to fermentation as well determining alcohol content. We supply OPTi refractometers to vineyards around the globe so that grape ripeness can be checked before harvest, sugar content assessed and alcohol content measured in the final stages of production.

OPTi® Digital Handheld Refractometers

- Quick 2 second read time.
- Onboard library of over 40 scales.
- 3 active scales on a single device.
- High Ambient Light (HAL) detection warns of too much light entering the sensor.
- Clear digital LCD display.
- Unique "AG Test Mode" that allows the use of long-life non sucrose based certified reference materials.
- Durable IP65 pocket sized design.
- Programmable read delay for sample temperature stabilisation.

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OPTi Refractometers FOR THE BEER & WINE INDUSTRY

Application	Scale	Units	Range	Resolution	Accuracy	ATC*
Primary	°Brix (ATC)		0–95	0.1	±0.2	°Brix
Primary	°Brix		0–95	0.1	±0.2	None
Wine & Beer	°Baumé		0–50	0.1	±0.2	°Brix
Wine & Beer	°Zeiss (ABV)	% Volume / Volume	10–135	0.1	±0.5	°Brix
Wine & Beer	Alcohol Probable (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	Mass Sugar (°Brix) (ATC)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Wine & Beer	Mass Sugar (°Brix)	% Weight / Weight	0–95	0.1	±0.2	None
Wine & Beer	Wort (Sucrose Equivalent)	Specific Gravity (d20/20)	1.000–1.120	0.0005	±0.001	°Brix

OPT-BW-EN120

Additional Scales ONBOARD SCALES ALL AVAILABLE WITHIN THE SAME DEVICE

Application	Scale	Units	Range	Resolution	Accuracy	ATC
Primary	Refractive Index (ATC)		1.33–1.53	0.0001	±0.0003	°Brix
Primary	Refractive Index		1.33–1.53	0.0001	±0.0003	None
Automotive	AdBlue®/DEF (NOx reduction)	% Weight / Weight	0–40	0.1	±0.2	AUS32
Automotive	Ethylene Glycol	°C Freezing Point	0 to -50	1	±1	EG
Automotive	Ethylene Glycol	°F Freezing Point	30 to -40	1	±1	EG
Automotive	Propylene Glycol	°C Freezing Point	0 to -50	1	±1	PG
Automotive	Propylene Glycol	°F Freezing Point	30 to -40	1	±1	PG
Food & Beverage	°Butyro		0–100	0.1	±0.5	Butyro
Food & Beverage	42 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	55 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	90 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	Fructose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Glucose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Invert Sugar	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Maltose	% Weight / Weight	0–60	0.1	±0.2	°Brix
Food & Beverage	Salinity (NaCl)	% Weight / Volume	0–28	0.1	±0.2	NaCl
Food & Beverage	Total Solids of Waste Milk	%	5–15	0.1	±0.5	°Brix
Food & Beverage	Water in Honey	%	10–30	0.1	±0.2	Honey
Industrial	Arbitrary		0-95	0.1	±0.2	
Industrial	Calcium Chloride	% Weight / Weight	0–40	0.1	±0.2	CaCl2
Industrial	Ethanol	% Volume / Volume	0–20	0.5	±1	Ethanol
Industrial	Ethylene Glycol	% Volume / Volume	0–60	0.1	±0.4	EG
Industrial	Ethylene Glycol	% Weight / Weight	0–60	0.1	±0.4	EG
Industrial	FSII DiEGME (ASTM D 5006)	% Volume / Volume	0.0–0.25	0.01	±0.02	°Brix
Industrial	Hydrogen Peroxide	% Weight / Weight	0–50	0.2	±0.5	°Brix
Industrial	Methanol	% Weight / Weight	0–40	1	±0.2	Meth
Industrial	Propylene Glycol	% Volume / Volume	0–60	0.1	±0.4	PG
Industrial	Sodium Sulphate	% Weight / Weight	0–22	0.1	±0.2	Na2SO4
Industrial	Starch	%	0–30	0.1	±0.2	°Brix
Industrial	Sulphuric Acid (Battery Acid)	Specific Gravity (d20/20)	1.000-1.501	0.001	±0.003	SA
Industrial	Urea (CRC data)	% Weight / Weight	0–40	0.1	±0.2	AUS32
Life Science	Colostral Quality		Poor / PASS	Poor / PASS	±0.2	°Brix
Life Science	Seawater (Practical Salt Units)	Part Per Thousand	0–180	1	±1	NaCl
Life Science	Seawater (Practical Salt Units)	Specific Gravity (d20/20)	1.000-1.090	0.0005	±0.001	NaCl
Life Science	Serum Protein	g/100ml	0–30	0.1	±0.2	°Brix
Life Science	Urine (SG) Human	Specific Gravity (d20/20)	1.000-1.050	0.0005	±0.0010	°Brix
Life Science	Urine (SG) Large Mammal	Specific Gravity (d20/20)	1.000-1.050	0.0001	±0.0010	°Brix
Life Science	Urine (SG) Small Mammal	Specific Gravity (d20/20)	1.000-1.050	0.0005	±0.0010	°Brix

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OPTi® Food & Beverage

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The pocket-sized refractometer for food & beverage

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- Unique "AG Test Mode" that allows the use of long-life non sucrose based certified reference materials.
- Durable IP65 pocket sized design.
- Programmable read delay for sample temperature stabilisation.

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OPTi Refractometers FOR THE FOOD & BEVERAGE INDUSTRY

Application	Scale	Units	Range	Resolution	Accuracy	ATC*
Primary	°Brix (ATC)		0–95	0.1	±0.2	°Brix
Primary	°Brix		0–95	0.1	±0.2	None
Primary	Refractive Index (ATC)		1.33–1.53	0.0001	±0.0003	°Brix
Primary	Refractive Index		1.33–1.53	0.0001	±0.0003	None
Food & Beverage	°Butyro		0–100	0.1	±0.5	Butyro
Food & Beverage	42 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	55 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	90 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	Fructose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Glucose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Invert Sugar	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Maltose	% Weight / Weight	0–60	0.1	±0.2	°Brix
Food & Beverage	Salinity (NaCl)	% Weight / Volume	0–28	0.1	±0.2	NaCl
Food & Beverage	Total Solids of Waste Milk	%	5–15	0.1	±0.5	°Brix
Food & Beverage	Water in Honey	%	10–30	0.1	±0.2	Honey

Additional Scales ONBOARD SCALES ALL AVAILABLE WITHIN THE SAME DEVICE

Application	Scale	Units	Range	Resolution	Accuracy	ATC
Automotive	AdBlue®/DEF (NOx reduction)	% Weight / Weight	0–40	0.1	±0.2	AUS32
Automotive	Ethylene Glycol	°C Freezing Point	0 to -50	1	±1	EG
Automotive	Ethylene Glycol	°F Freezing Point	30 to -40	1	±1	EG
Automotive	Propylene Glycol	°C Freezing Point	0 to -50	1	±1	PG
Automotive	Propylene Glycol	°F Freezing Point	30 to -40	1	±1	PG
Industrial	Arbitrary		0-95	0.1	±0.2	
Industrial	Calcium Chloride	% Weight / Weight	0–40	0.1	±0.2	CaCl2
Industrial	Ethanol	% Volume / Volume	0–20	0.5	±1	Ethanol
Industrial	Ethylene Glycol	% Volume / Volume	0–60	0.1	±0.4	EG
Industrial	Ethylene Glycol	% Weight / Weight	0–60	0.1	±0.4	EG
Industrial	FSII DiEGME (ASTM D 5006)	% Volume / Volume	0.0–0.25	0.01	±0.02	°Brix
Industrial	Hydrogen Peroxide	% Weight / Weight	0–50	0.2	±0.5	°Brix
Industrial	Methanol	% Weight / Weight	0–40	1	±0.2	Meth
Industrial	Propylene Glycol	% Volume / Volume	0–60	0.1	±0.4	PG
Industrial	Sodium Sulphate	% Weight / Weight	0–22	0.1	±0.2	Na2SO4
Industrial	Starch	%	0–30	0.1	±0.2	°Brix
Industrial	Sulphuric Acid (Battery Acid)	Specific Gravity (d20/20)	1.000–1.501	0.001	±0.003	SA
Industrial	Urea (CRC data)	% Weight / Weight	0–40	0.1	±0.2	AUS32
Life Science	Colostral Quality		Poor / PASS	Poor / PASS	±0.2	°Brix
Life Science	Seawater (Practical Salt Units)	Part Per Thousand	0–180	1	±1	NaCl
Life Science	Seawater (Practical Salt Units)	Specific Gravity (d20/20)	1.000–1.090	0.0005	±0.001	NaCl
Life Science	Serum Protein	g/100ml	0–30	0.1	±0.2	°Brix
Life Science	Urine (SG) Human	Specific Gravity (d20/20)	**1.000–1.050**	**0.0005**	**±0.0010**	**°Brix**
Life Science	Urine (SG) Large Mammal	Specific Gravity (d20/20)	**1.000–1.050**	**0.0001**	**±0.0010**	**°Brix**
Life Science	Urine (SG) 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 / Volume	10–135	0.1	±0.5	°Brix
Wine & Beer	Alcohol Probable (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	Mass Sugar (°Brix) (ATC)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Wine & Beer	Mass Sugar (°Brix)	% Weight / Weight	0–95	0.1	±0.2	None
Wine & Beer	Wort (Sucrose Equivalent)	Specific Gravity (d20/20)	1.000–1.120	0.0005	±0.001	°Brix

*Automatic Temperature Compensation

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OPTi® Industrial Applications

PORTABLE REFRACTOMETERS FOR QUALITY CONTROL + MEASUREMENTS ON-THE-GO

The pocket-sized refractometer for industrial applications

OPTi digital handheld refractometers are ideal for industrial applications thanks to their durable, IP65 pocket-sized design, quick 2 second read time and broad selection of scales. Bellingham + Stanley's industrial refractometers cover a broad spectrum of applications. A common scale used within the industrial sector is Glycol % - useful for engineers working on air-conditioners, heat exchangers or even pasteurisers. Our refractometers can be used for fire fighting foam and industrial coolants. In the aviation industry there is a need for determining the concentration of aircraft anti-icing fluids (glycol & additives).

OPTi® Digital Handheld Refractometers

- Quick 2 second read time.
- Onboard library of over 40 scales.
- 3 active scales on a single device.
- High Ambient Light (HAL) detection warns of too much light entering the sensor.
- Clear digital LCD display.
- Unique "AG Test Mode" that allows the use of long-life non sucrose based certified reference materials.
- Durable IP65 pocket sized design.
- Programmable read delay for sample temperature stabilisation.

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OPTi Refractometers FOR INDUSTRIAL APPLICATIONS

Application	Scale	Units	Range	Resolution	Accuracy	ATC*
Primary	Refractive Index (ATC)		1.33–1.53	0.0001	±0.0003	°Brix
Primary	Refractive Index		1.33–1.53	0.0001	±0.0003	None
Industrial	Arbitrary		0–95	0.1	±0.2	
Industrial	Calcium Chloride	% Weight / Weight	0–40	0.1	±0.2	CaCl2
Industrial	Ethanol	% Volume / Volume	0–20	0.5	±1	Ethanol
Industrial	Ethylene Glycol	% Volume / Volume	0–60	0.1	±0.4	EG
Industrial	Ethylene Glycol	% Weight / Weight	0–60	0.1	±0.4	EG
Industrial	FSII DiEGME (ASTM D 5006)	% Volume / Volume	0.0–0.25	0.01	±0.02	°Brix
Industrial	Hydrogen Peroxide	% Weight / Weight	0–50	0.2	±0.5	°Brix
Industrial	Methanol	% Weight / Weight	0–40	1	±0.2	Meth
Industrial	Propylene Glycol	% Volume / Volume	0–60	0.1	±0.4	PG
Industrial	Sodium Sulphate	% Weight / Weight	0–22	0.1	±0.2	Na2SO4
Industrial	Starch	%	0–30	0.1	±0.2	°Brix
Industrial	Sulphuric Acid (Battery Acid)	Specific Gravity (d20/20)	1.000–1.501	0.001	±0.003	SA
Industrial	Urea (CRC data)	% Weight / Weight	0–40	0.1	±0.2	AUS32

OPT-IND-EN120

Additional Scales ONBOARD SCALES ALL AVAILABLE WITHIN THE SAME DEVICE

Application	Scale	Units	Range	Resolution	Accuracy	ATC
Primary	°Brix (ATC)		0–95	0.1	±0.2	°Brix
Primary	°Brix		0–95	0.1	±0.2	None
Automotive	AdBlue®/DEF (NOx reduction)	% Weight / Weight	0–40	0.1	±0.2	AUS32
Automotive	Ethylene Glycol	°C Freezing Point	0 to -50	1	±1	EG
Automotive	Ethylene Glycol	°F Freezing Point	30 to -40	1	±1	EG
Automotive	Propylene Glycol	°C Freezing Point	0 to -50	1	±1	PG
Automotive	Propylene Glycol	°F Freezing Point	30 to -40	1	±1	PG
Food & Beverage	°Butyro		0–100	0.1	±0.5	Butyro
Food & Beverage	42 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	55 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	90 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	Fructose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Glucose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Invert Sugar	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Maltose	% Weight / Weight	0–60	0.1	±0.2	°Brix
Food & Beverage	Salinity (NaCl)	% Weight / Volume	0–28	0.1	±0.2	NaCl
Food & Beverage	Total Solids of Waste Milk	%	5–15	0.1	±0.5	°Brix
Food & Beverage	Water in Honey	%	10–30	0.1	±0.2	Honey
Life Science	Colostral Quality		Poor / PASS	Poor / PASS	±0.2	°Brix
Life Science	Seawater (Practical Salt Units)	Part Per Thousand	0–180	1	±1	NaCl
Life Science	Seawater (Practical Salt Units)	Specific Gravity (d20/20)	1.000-1.090	0.0005	±0.001	NaCl
Life Science	Serum Protein	g/100ml	0–30	0.1	±0.2	°Brix
Life Science	Urine (SG) Human	Specific Gravity (d20/20)	**1.000-1.050**	**0.0005**	**±0.0010**	**°Brix**
Life Science	Urine (SG) Large Mammal	Specific Gravity (d20/20)	**1.000-1.050**	**0.0001**	**±0.0010**	**°Brix**
Life Science	Urine (SG) 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 / Volume	10–135	0.1	±0.5	°Brix
Wine & Beer	Alcohol Probable (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	Mass Sugar (°Brix) (ATC)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Wine & Beer	Mass Sugar (°Brix)	% Weight / Weight	0–95	0.1	±0.2	None
Wine & Beer	Wort (Sucrose Equivalent)	Specific Gravity (d20/20)	1.000-1.120	0.0005	±0.001	°Brix

*Automatic Temperature Compensation

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OPTi® Life Science & Veterinary

PORTABLE REFRACTOMETERS FOR QUALITY CONTROL + MEASUREMENTS ON-THE-GO

The pocket-sized refractometer for life science & veterinary

OPTi digital handheld refractometers are ideal for life science, veterinary and livestock farming applications thanks to their durable, IP65 pocket-sized design, quick 2 second read time and broad selection of scales. Bellingham + Stanley's range of refractometer scales for veterinarians and farmers enable the simple measurement of colostrum, blood and urine samples taken from animals. Thanks to only needing a small drop of sample to give a clear and accurate reading, the OPTi is perfect for hygienically measuring samples that are often difficult to obtain or, in the case of colostrum, being a valuable commodity.

OPTi® Digital Handheld Refractometers

- Quick 2 second read time.
- Onboard library of over 40 scales.
- 3 active scales on a single device.
- High Ambient Light (HAL) detection warns of too much light entering the sensor.
- Clear digital LCD display.
- Unique "AG Test Mode" that allows the use of long-life non sucrose based certified reference materials.
- Durable IP65 pocket sized design.
- Programmable read delay for sample temperature stabilisation.

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OPTi Refractometers FOR LIFE SCIENCE & VETERINARY

Application	Scale	Units	Range	Resolution	Accuracy	ATC*
Primary	Refractive Index (ATC)		1.33–1.53	0.0001	±0.0003	°Brix
Primary	Refractive Index		1.33–1.53	0.0001	±0.0003	None
Life Science	Colostral Quality		Poor / PASS	Poor / PASS	±0.2	°Brix
Life Science	Total Solids of Waste Milk	%	5–15	0.1	±0.5	°Brix
Life Science	Seawater (Practical Salt Units)	Part Per Thousand	0–180	1	±1	NaCl
Life Science	Seawater (Practical Salt Units)	Specific Gravity (d20/20)	1.000–1.090	0.0005	±0.001	NaCl
Life Science	Serum Protein	g/100ml	0–30	0.1	±0.2	°Brix
Life Science	Urine (SG) Human	Specific Gravity (d20/20)	1.000–1.050	0.0005	±0.0010	°Brix
Life Science	Urine (SG) Large Mammal	Specific Gravity (d20/20)	1.000–1.050	0.0001	±0.0010	°Brix
Life Science	Urine (SG) Small Mammal	Specific Gravity (d20/20)	1.000–1.050	0.0005	±0.0010	°Brix

OPT-LS-EN120

Additional Scales ONBOARD SCALES ALL AVAILABLE WITHIN THE SAME DEVICE

Application	Scale	Units	Range	Resolution	Accuracy	ATC
Primary	°Brix (ATC)		0–95	0.1	±0.2	°Brix
Primary	°Brix		0–95	0.1	±0.2	None
Automotive	AdBlue®/DEF (NOx reduction)	% Weight / Weight	0–40	0.1	±0.2	AUS32
Automotive	Ethylene Glycol	°C Freezing Point	0 to -50	1	±1	EG
Automotive	Ethylene Glycol	°F Freezing Point	30 to -40	1	±1	EG
Automotive	Propylene Glycol	°C Freezing Point	0 to -50	1	±1	PG
Automotive	Propylene Glycol	°F Freezing Point	30 to -40	1	±1	PG
Food & Beverage	°Butyro		0–100	0.1	±0.5	Butyro
Food & Beverage	42 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	55 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	90 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Food & Beverage	Fructose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Glucose	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Invert Sugar	% Weight / Weight	0–85	0.1	±0.2	°Brix
Food & Beverage	Maltose	% Weight / Weight	0–60	0.1	±0.2	°Brix
Food & Beverage	Salinity (NaCl)	% Weight / Volume	0–28	0.1	±0.2	NaCl
Food & Beverage	Water in Honey	%	10–30	0.1	±0.2	Honey
Industrial	Arbitrary		0-95	0.1	±0.2	
Industrial	Calcium Chloride	% Weight / Weight	0–40	0.1	±0.2	CaCl2
Industrial	Ethanol	% Volume / Volume	0–20	0.5	±1	Ethanol
Industrial	Ethylene Glycol	% Volume / Volume	0–60	0.1	±0.4	EG
Industrial	Ethylene Glycol	% Weight / Weight	0–60	0.1	±0.4	EG
Industrial	FSII DiEGME (ASTM D 5006)	% Volume / Volume	0.0–0.25	0.01	±0.02	°Brix
Industrial	Hydrogen Peroxide	% Weight / Weight	0–50	0.2	±0.5	°Brix
Industrial	Methanol	% Weight / Weight	0–40	1	±0.2	Meth
Industrial	Propylene Glycol	% Volume / Volume	0–60	0.1	±0.4	PG
Industrial	Sodium Sulphate	% Weight / Weight	0–22	0.1	±0.2	Na2SO4
Industrial	Starch	%	0–30	0.1	±0.2	°Brix
Industrial	Sulphuric Acid (Battery Acid)	Specific Gravity (d20/20)	1.000–1.501	0.001	±0.003	SA
Industrial	Urea (CRC data)	% Weight / Weight	0–40	0.1	±0.2	AUS32
Wine & Beer	°Baumé		0–50	0.1	±0.2	°Brix
Wine & Beer	°Zeiss (ABV)	% Volume / Volume	10–135	0.1	±0.5	°Brix
Wine & Beer	Alcohol Probable (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	Mass Sugar (°Brix) (ATC)	% Weight / Weight	0–95	0.1	±0.2	°Brix
Wine & Beer	Mass Sugar (°Brix)	% Weight / Weight	0–95	0.1	±0.2	None
Wine & Beer	Wort (Sucrose Equivalent)	Specific Gravity (d20/20)	1.000–1.120	0.0005	±0.001	°Brix

*Automatic Temperature Compensation

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