

xylem



Eclipse Refractometers

HANDHELD OPTICAL REFRACTOMETERS FROM BELLINGHAM + STANLEY



a xylem brand

Precise concentration measurement in the palm of your hand

What is Refractive Index?

When light passes from one medium to another, the speed at which the light travels will change depending on the parameters of the materials. This principle can be seen when looking at a straw in a glass or an oarsman on the river, as shown in the diagram.

The ratio or change in the speed of light is called refractive index and instruments that measure this are called refractometers. Additionally, refractometers may also be used as part of a more complex multiple parameter experiment such as that required to determine the alcohol content of beer, wine or cider.

Dilution and blend ratios

The refractive index of a liquid is uniquely related to its specific density; a refractometer may be used to measure the purity or, more importantly, the concentration of a sample when mixed with other liquids. Refractometers are therefore commonly used to measure dilution and blend ratios of many different solutions found within food, beverage, environmental, life science and industrial applications including sugars (°Brix, glucose, sucrose, etc.), salts (sodium chloride, seawater, calcium chloride, etc.) and heat transfer fluids (antifreeze, de-icing, heat pump, machine shop lubricants, etc.).

Experience and expertise

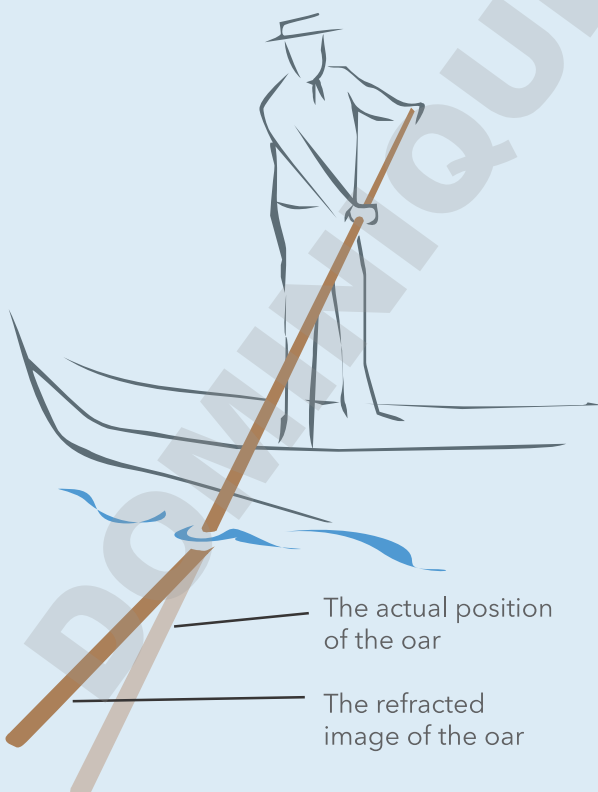
With over a 100 years of experience, Bellingham + Stanley has developed pioneering optical technology which is used all around the world, enabling customers to expertly and reliably measure and control throughout the world's food, drinks, pharmaceutical, chemical and petroleum industries.

Portable and precise

Handheld refractometers can be used in a large variety of applications from fruit ripeness to air-conditioning and heat transfer fluids.

Bellingham + Stanley created the Eclipse optical refractometer featuring high quality optics and are manufactured using a robust "all-metal" design with rubber handgrip and replaceable polyurethane illuminator flap

Handheld refractometers from Bellingham + Stanley come with predefined scales, selectable from over 100 variations and are supplied with a unique Certificate of Calibration.

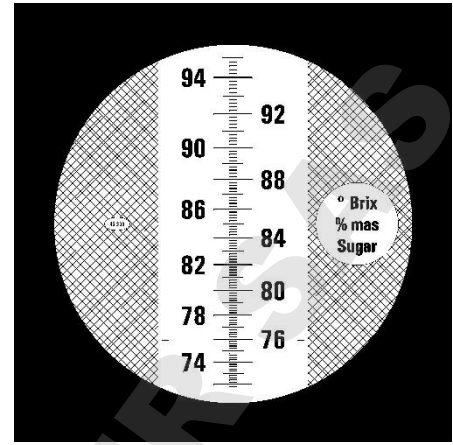


Eclipse Optical Refractometers

Manufactured in the UK using only the highest quality optical components and the most modern manufacturing practices, the Eclipse refractometer is the ultimate optical handheld refractometer on the market today.

A comprehensive choice of scale types offers versatility across a wide application scope from testing fruit ripeness in the field to monitoring industrial fluids in harsh machine shop environments.

Eclipse refractometers have a number of unique features and are supplied complete with a foam carry case, instruction manual and a Certificate of Calibration showing traceability to International standards.



Clear, easy-to-read scale



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Certified with UKAS reference materials

Eclipse refractometers are supplied with a Certificate of Calibration as standard. Eclipse refractometers are verified using UKAS Certified Reference Materials manufactured in accordance with EN ISO IEC 17025:2005.

Wide rubber coated body for safe handling in harsh environments

Metal prism housing quickly stabilises hot samples

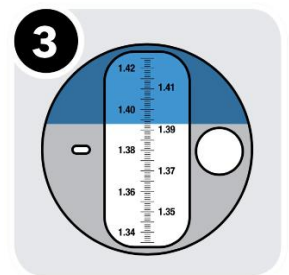
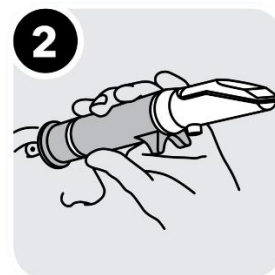
Smooth focusing eyepiece seals against moisture ingress

Snap-on illuminator flap facilitates easy replacement

As easy as 1, 2, 3

Taking a reading with an Eclipse refractometer is simple.

1. Apply the sample
2. View the scale
3. Take the reading



Eclipse Refractometers FOR THE FOOD & BEVERAGE INDUSTRY

Scale Description	Range	Scale Division	Code
Sugar % (°Brix)	0-15	0.1	45-01
Sugar % (°Brix)	0-30	0.2	45-02
Sugar % (°Brix)	0-50	0.5	45-03
Sugar % (°Brix)	28-65	0.2	45-08
Sugar % (°Brix)	45-80	0.2	45-05
Sugar % (°Brix)	72-95	0.2	45-06
Wine - °Zeiss (ABV)	10-135	1	45-22
Water in Honey (%)	10-30	0.2	45-27
Low Volume (Nectar <1-micro-litre)	0-50	0.5	45-81
Low Volume (Nectar <1-micro-litre)	45-80	0.2	45-82

Eclipse Refractometers FOR INDUSTRIAL USE

Scale Description	Range	Scale Division	Code	
Starch (%)	0-30	0.2	45-26	
Refractive Index	1.33-1.42	0.001	45-41	
Antifreeze	- °C Protection (EG/PG)	0 to -40	5	45-44
	- Battery acid SG	1.1-1.35	0.05	
Antifreeze	- % Ethylene Glycol (EG)	0-60	2.5	45-46
	- % Propylene Glycol (PG)	0-60	2.5	
Salinity (% NaCl)	0-28	0.2	45-65	

Eclipse Refractometers ACCESSORIES & SPARE PARTS

Scale Description	Code
Spare illuminator Flap (pack of 5)	45-003
Hydrometer for ABV use	44-839
Hydrometer Jar	44-838



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