



## **REFRACTOMETERS**

HR Series - HRD Series

# Refractometers - HR & HRD Series



OPTIKA offers a wide range of hand refractometers to ensure incredibly rapid and convenient measurement of concentration in liquid and semi-solid samples, combining **accurate performance with excellent repeatability.**

The refractive index of a substance is related to its specific density; a refractometer is used to measure the purity or the concentration of a sample when mixed.

Refractometers are suitable for a wide range of applications, which includes the control of blend ratios in light industrial applications (such as glycols, battery acid, heat exchange fluids, coolants, quenchant and hydraulic oils) and represents the ideal solution for users working in the food industry (fruit, beverages, confectionery, jam, honey and other sugar based products).

- » **Value for money solution**
- » **Easy operation**
- » **Built-in LED illumination**
- » **Brix or scale specific (including ATC)**
- » **Sturdy construction with rubber handgrip**



Fruit



Fruit juice



Veterinary industry



Battery fluids



Honey



Wine



Clinical industry



Salinity



Confectionery/Jam



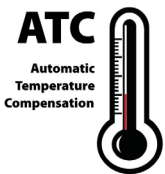
Grape must



Coolants/Antifreeze



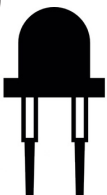
Food industry



**ATC - Automatic Temperature Compensation**  
No need to worry about temperature change during your measurement.



**LED**



**LED**  
Scale reading has never been so easy, also in case of low light conditions.



# HR Series - Hand Refractometers

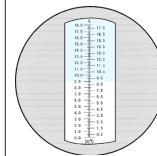
## HR-110N - Hand refractometer, 0-20% Brix

Measuring range:

0-20% Brix.

Resolution:

0.1% Brix.



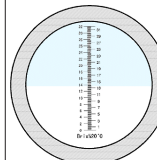
## HR-130N - Hand refractometer, 0-32% Brix

Measuring range:

0-32% Brix.

Resolution:

0.2% Brix.



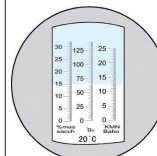
## HR-140N - Hand refractometer, 0-32% Brix, triple scale

Measuring range:

0-32% Brix, 0-140° OE (Oechsle), 0-27° Babo (KMW).

Resolution:

0.2% Brix, 1° OE (Oechsle), 0.2° Babo (KMW).



## HR-150N - Hand refractometer, 0-80% Brix, double scale

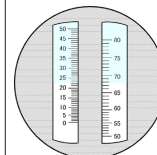
Measuring range:

0-80% Brix.

Resolution:

1% Brix.

Without ATC.



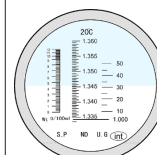
## HR-160N - Hand refractometer, for urine and serum

Measuring range:

Serum Protein 0-12g/dl, Specific Gravity 1.000-1.050sg, Refractive Index: 1.330RI-1.360RI.

Resolution:

Serum Protein 0.2g/dl, Specific Gravity 0.005sg, Refractive Index: 0.0005RI.



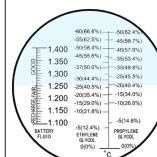
## HR-170N - Hand refractometer, for battery and antifreeze

Measuring range:

Ethylene Glycol -50°C (66.6%)-0°C (0%), Propylene Glycol -50°C (62.4%)-0°C (0%), Battery 1.15-1.30sg.

Resolution:

Ethylene Glycol 5°C, Propylene Glycol 5°C, Battery 0.01sg.



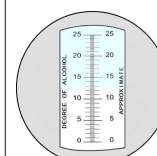
## HR-180N - Hand refractometer, for wine and grape

Measuring range:

Alcohol 0-25% vol, 0-40% Brix.

Resolution:

0.2% Alcohol, 0.2% Brix.



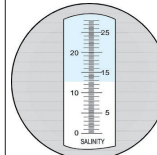
## HR-190N - Hand refractometer, for salinity

Measuring range:

0-28% Salinity.

Resolution:

0.2% Salinity.



# HRD Series - Digital Refractometers

## HRD-300N - Digital refractometer, Brix

Brix Measuring range: 0-50%.

Refractive index: 1.3330-1.4200.

Precision of temperature measurement: 0.5°C, 0.9°F.

Alarm of low battery.

Resolution: 0.1% Brix.

Resolution: 0.0001.

Resolution: 0.1°C.



## HRD-400N - Digital refractometer, Brix and salinity

Brix Measuring range: 0-50%.

Salinity range: 0-28%.

Specific gravity range: 1.000-1.217.

Refractive index: 1.3330-1.4200.

Precision of temperature measurement: 0.5°C, 0.9°C.

Alarm of low battery.

Resolution: 0.1%.

Resolution: 0.1%.

Resolution: 0.001.

Resolution: 0.0001.

Resolution: 0.1°C.



## HRD-500N - Digital refractometer, clinical use (urine, serum and RI)

Specific gravity range: 1.000-1.050.

Serum protein range: 0-12g/dl.

Refractive Index: 1.3330-1.3900.

Precision of temperature measurement: 0.5°C, 0.9°F.

Alarm of low battery.

Resolution: 0.001.

Resolution: 0.1g/dl.

Resolution: 0.0001.

Resolution: 0.1°C.





# WolfLabs

**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.