

# HANDHELD REFRACTOMETERS – DR101-60, DR201-95, DR301-95 AND HR SERIES

## DIGITAL HANDHELD REFRACTOMETERS

The mobile measurement with a digital handheld refractometer saves time as random checks or the regulation of mixing ratios can be carried out directly on the site. The measurement results are determined at the touch of a button and shown on the display. Unlike in the case of the analogue handheld refractometers, the digital determination of reproducible measurement results does not depend on the user's interpretation.

The devices measure the refractive index and the sugar content with automatic temperature compensation. The sample tray made of stainless steel and the measurement prism made of optical glass is formed in such a way for the devices that they can be easily and quickly filled and cleaned. For consistent measurement results we recommend a daily calibration with distilled water. For the adjustment we offer various certified and traceable calibration standards.



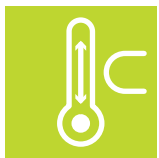
DR201-95



DR301-95



DR101-60



TEMP. COMPENSATION

### DR101-60

### DR201-95

### DR301-95

	DR101-60	DR201-95	DR301-95
SCALES	Refractive index (nD) concentration of sucrose, glucose, fructose and invert sugar [%Brix]		Refractive index (nD) concentration of sucrose, glucose, fructose and invert sugar [%Brix], salinity [%], User-defined
MEASUREMENT RANGE	nD 1.3330–1.4419 0–60%Brix	nD 1.3330–1.5318 0–95%Brix	nD 1.3330–1.5318 0–95%Brix
MEASUREMENT ACCURACY	nD ±0.0005 ±0.35%Brix	nD ±0.0003 ±0.2%Brix	nD ±0.00015 ±0.1%Brix
RESOLUTION	nD 0.0001 0.1%Brix	nD 0.0001 0.1%Brix	nD 0.0001 0.1%Brix
TEMP. MEASUREMENT RANGE	10–40°C		
TEMPERATURE ACCURACY	±0,5°C		
TEMPERATURE COMPENSATION	10–40°C		

### DR101-60

As an entry-level model for the digital refractometry, the DR101-60 covers the measurement ranges between nD 1.3330–1.4419 and 0–60% Brix. Thanks to the automatic temperature compensation for the Brix scale, you can achieve reproducible measurement results even under changing environmental conditions. As a water-tight device, the DR101-60 meets the IP65 standard and can be cleaned under running water.

### DR201-95

The compact handheld refractometer DR201-95 offers an extended measurement range of the refractive index and the sugar content of nD 1.3330–1.5318 and 0–95% Brix. The automatic temperature compensation for the Brix scale helps the user with the measurements of beverages and sugary confectionary products. The device is splash-proof and meets the IP64 standard.

### DR301-95

As a mobile handheld device or digital tabletop unit, the DR301-95 can measure the refractive index or the sugar content within a measurement range of nD 1.3330–1.5318 or 0–95%Brix. In addition, the device measures the salinity and allows for the use of two additional freely definable scales. The automatic temperature compensation for the Brix scale can be optionally connected.

An alarm option can be set up for monitoring the limit values in production processes. The provided mains adaptor turns the DR301-95 into a small lab refractometer; for a mobile use it is operated with a 9 V monobloc battery.

## HANDHELD REFRACTOMETERS

Hand refractometers are barely bigger than a torch and can be used anywhere in mobile applications. They are especially easy to use, very robust and require no batteries. The devices differ mainly in the selectable scales, e.g. for the determination of the salinity, water content in honey, serum protein content, Oechsle, Brix and potential alcohol content as well as ethylene- and propylene glycol content. No manual conversion is required thanks to the scales and application errors are ruled out.

The majority of our handheld refractometers are equipped with an automatic temperature compensation. The measured values are therefore already corrected to 20°C when taking a reading. For a consistent measurement accuracy, we recommend to calibrate the devices daily with distilled water; you can use the provided calibration bodies and contact fluids for the adjustment.

You will find the range of our HR series together with the technical specifications on page 30.

