

Digital refractometer KERN ORF-E



Transport and storage case



Rear view, screw-on battery compartment cover

Digital measurement of refraction index for universal application
 ► ECO refractometer

Features

- The KERN ORF refractometers are accurate and universal maintenance free digital handheld refractometers
- The large display is easy to read. Mistakes in reading are avoided
- The typical and practical design is suitable for a quick and convenient everyday use and is characterized by its easy-using and robustness
- The large, easy-to-read display with integrated temperature display supports the user to reliably determine the measurement
- The integrated automatic temperature compensation (ATC at ORF 45BE), avoids the manual conversion of the measurement. This allows a quick and efficient usage of the instrument
- Due to the fact that the refractometer has been calibrated at the factory, this guarantees that it can be used immediately for accurately measuring your sample.
- The following accessory-parts are included:
 - Calibration liquid
 - Pipette
 - Storage box
 - 2 × AAA batteries
 - Leather bag
 - Small screwdriver
 - Cleaning tissue

Technical data

- Measurement temperature: 10 °C – 40 °C
- Overall dimensions W×D×H 145×67×40 mm
- Net weight approx. 200 g
- Power supply: 2 × AAA (1,5 V)
- Lifetime of the battery: approx. 5.000 measurements
- ATC (Automatic Temperature Compensation), does not apply to the refraction index scale
- Minimum sample volume: 2-3 drops
- Automatic energy management (AUTO-OFF after 90 seconds)

! Now also available with calibration certificate, see page 116!

STANDARD



ORF 45BE

Model	Scales	Measuring range	Accuracy	Division	
KERN					
ORF 45BE	Brix	0 - 45 %	± 0,2 %	0,1 %	
ORF 45RE	Refractive index	1,3330 - 1,4098 nD	± 0,0003 nD	0,0001 nD	

Pictograms

360° rotatable microscope head	Fluorescence illumination for compound microscopes With 3 W LED illumination and filter	WLAN data interface For transmitting of the picture to a mobile display device
Monocular Microscope For the inspection with one eye	Phase contrast unit For a higher contrast	HDMI digital camera For direct transmitting of the picture to a display device
Binocular Microscope For the inspection with both eyes	Darkfield condenser/unit For a higher contrast due to indirect illumination	PC software To transfer the measurements from the device to a PC
Trinocular Microscope For the inspection with both eyes and the additional option for the connection of a camera	Polarising unit To polarise the light	Automatic temperature compensation For measurements between 10 °C and 30 °C
Abbe Condenser With high numerical aperture for the concentration and the focusing of light	Infinity system Infinity corrected optical system	Protection against dust and water splashes IPxx The type of protection is shown by the pictogram
Halogen illumination For pictures bright and rich in contrast	Zoom magnification For stereomicroscopes	Battery operation Ready for battery operation. The battery type is specified for each device
LED illumination Cold, energy-saving and especially long-life illumination	Parallel optical system For stereomicroscopes, enables fatigue-proof working	Battery operation rechargeable Prepared for a rechargeable battery operation
Incident illumination For non-transparent objects	Integrated scale In the eyepiece	Mains adapter 230V/50Hz in standard version for EU. On request GB, AUS or USA version
Transmitting illumination For transparent objects	SD card For data storage	Power supply Integrated in microscope. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request
Fluorescence illumination for stereomicroscopes	USB 2.0 digital camera For direct transmitting of the picture to a PC	Package shipment The time required to manufacture the product internally is shown in days in the pictogram
Fluorescence illumination for compound microscopes With 100 W mercury lamp and filter	USB 3.0 digital camera For direct transmitting of the picture to a PC	

Abbreviations

C-Mount Adapter for the connection of a camera to a trinocular microscope	LWD Long Working Distance	SWF Super Wide Field (Field number at least \varnothing 23 mm for 10 \times eyepiece)
FPS Frames per second	N.A. Numerical Aperture	W.D. Working Distance
H(S)WF High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)	SLR camera Single-Lens Reflex camera	WF Wide Field (Field number up to \varnothing 22 mm for 10 \times eyepiece)

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