



## Refractive index measurement for pharmacy, laboratories and industry

### Features

- The KERN ORT refractometers are universal analog Abbe refractometers
- The handy and robust design allows the easy, efficient and sustainable use in everyday life
- The integrated scale allows the use in different applications and provides the best possible security to read the measurement results accurately
- The scope of delivery includes:
  - Calibration solution
  - Calibration block
  - Pipette
  - Small screwdriver
  - Cleaning tissue
  - Digital thermometer
- Accessories are available as options

### Technical data

- Measurement temperature: 20 °C
- Overall dimensions W×D×H  
180×90×240 mm
- Net weight approx. 1950 g

STANDARD

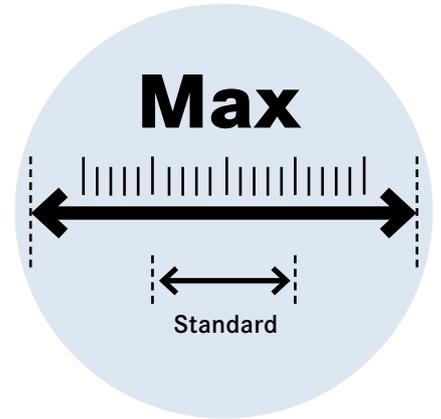


**Scope of application: Industry/Pharmacy/Laboratory**

The following model is a simple yet highly reliable Abbe refractometer with a digital thermometer. Liquid, solid and pasty samples can be evaluated. This refractometer is robust, accurate and easy to use. Optionally a solide aluminium case for transport and storage is available. It measures the refractive index (nD).

The main scope of applications is:

- Sugar industry: for example cane sugar
- Pharmacy
- Beverage industry
- Food industry
- Chemical industry
- Oil industry/Refinery
- Laboratories
- Training



| Model          | Scales                   | Measuring range                | Accuracy               | Division            |   |
|----------------|--------------------------|--------------------------------|------------------------|---------------------|---|
| <b>KERN</b>    |                          |                                |                        |                     |   |
| <b>ORT 1RS</b> | Brix<br>Refractive index | 0 – 95 %<br>1,3000 – 1,7000 nD | ± 0,1 %<br>± 0,0002 nD | 0,25 %<br>0,0005 nD | ↓ |

↓ Price reduction



ORT 1RS

**Accessory parts: Abbe refractometer – ORT**

| Model            | Description   |   |
|------------------|---|---|
| <b>KERN</b>      |   |   |
| <b>ORA-A1102</b> | Aluminium suitcase<br>Dimension: 310×120×240 mm, weight: 1300 g                       | ↓ |
| <b>ORA-A2266</b> | Digital thermometer (0 °C/50 °C) (Spare part)   |   |
| <b>ORA-A2267</b> | Calibration block for ORT 1RS   |   |
| <b>ORA-A1107</b> | Contact liquid – Alpha-Bromonaphthalene (Refractive index: 1,65 nD)<br>Volume: 2,5 ml |   |
| <b>ORA-A3001</b> | Contact liquid – Diiodomethane “Pro” (Refractive index: 1,79 nD)<br>Volume: 2 ml      | ↓ |

↓ Price reduction



Transport and storage case  
ORA-A1102



Calibration block  
ORA-A2267

Relationship overview – refractometer calibration (Abbe)

| Model refractometer | Calibration value                | Calibration liquid                   | Article number liquid | Calibration block | Article number calibration block |
|---------------------|----------------------------------|--------------------------------------|-----------------------|-------------------|----------------------------------|
| <b>ORT 1RS</b>      | engraved on the block (nD value) | Alpha-Bromnaphthalene<br>CAS 90-11-9 | ORA-A1107             | yes               | ORA-A2267                        |

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

## Abbreviations

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

## Your KERN specialist dealer: