KERN **ORL 94LM**

Digital refractometer with pre-installed scales for refractive index measurements and the food application area



Date of creation: 24.10.2026

Category

Brand	Optics
Product category	Refractometer
Product group	Digital refractometer
Product family	ORL-B

Measuring System

Scales	Refractive index Brix Fruktose (Fruchtzucker) Glukose (Traubenzucker) Laktose (Milchzucker) Maltose (Malzzucker) Dextran Salt (NaCl) Salz (NaCl) ‰ spec. gravity
Measurement temperature [Max] (°C)	40 °C
Measurement temperature [Min] (°C)	0 °C
Readabilites [d]	0,0001 nD 0,1 % 0,1 % 0,1 % 0,1 % 0,1 % 0,1 % 0,1 % 1 ‰ 0,001 sg
Precision	0,0002 nD 0,1 % 0,2 % 0,2 % 0,2 % 0,2 % 0,2 % 0,2 % 2 ‰ 0,002 sg
Appropriate calibration liquid	0 % (distilled water)
Measuring method	Total reflection
Automatic temperature compensation (ATC)	✓
Measuring range refractive index [Min]	1,3330 nD
Measuring range refractive index [Max]	1,5290 nD
Readout refractive index	0,0001 nD
Accuracy refractive index	±0,0002 nD
Measuring range dextran [Min]	0 %
Measuring range dextran [Max]	11 %
Readout dextran	0,1 %
Accuracy dextran	±0,2 %
Scale for Refractive index	✓
Measuring range fructose (fruit sugar) [Min]	0 %
Measuring range fructose (fruit sugar) [Max]	69 %
Readout fructose (fruit sugar)	0,1 %
Accuracy fructose (fruit sugar)	±0,2 %
Measuring range glucose (fruit sugar) [Min]	0 %
Measuring range glucose (fruit sugar) [Max]	60 %
Scale for dextran	✓
Readout glucose (fruit sugar)	0,1 %
Accuracy glucose (fruit sugar)	±0,2 %
Scale for fructose (fruit sugar)	✓
Measuring range lactose (milk sugar) [Min]	0 %
Measuring range lactose (milk sugar) [Max]	17 %
Scale for glucose (fruit sugar)	✓
Readout lactose (milk sugar)	0,1 %
Accuracy lactose (milk sugar)	±0,2 %
Measuring range maltose (malt sugar) [Min]	0 %

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Measuring range maltose (malt sugar) [Max]	16 %
Readout maltose (malt sugar)	0,1 %
Accuracy maltose (malt sugar)	±0,2 %
Scale lactose (milk sugar)	✓
Scale maltose (malt sugar)	✓
Measuring range salinity (NaCl) % [Min]	0 %
Measuring range salinity (NaCl) % [Max]	28 %
Readout salinity (NaCl) %	0,1 %
Accuracy salinity (NaCl) %	±0,2 %
Measuring range salinity (NaCl) ‰ [Min]	0 ‰
Measuring range salinity (NaCl) ‰ [Max]	280 ‰
Readout salinity (NaCl) ‰	1 ‰
Accuracy salinity (NaCl) ‰	±2 ‰
Scale salinity (NaCl) %	✓
Measuring range salinity (spec. weight) [Min]	1,000
Measuring range salinity (spec. weight) [Max]	1,220
Scale salinity (NaCl) ‰	✓
Readout salinity (spec. weight)	0,001
Accuracy salinity (spec. weight)	±0,002
Scale salinity (spec. weight)	✓
Measuring ranges	1,3330 nD - 1,5290 nD 0 % - 94 % 0,0 % - 68,9 % 0,0 % - 59,9 % 0,0 % - 16,5 % 0,0 % - 15,6 % 0,0 % - 10,6 % 0,0 % - 28,0 % 0 ‰ - 280 ‰ 1,000 sg - 1,220 sg
Area of application	Food
Accuracy Brix	±0,1 %
Readout Brix	0,1 %
Measuring range Brix [Min]	0 %
Measuring range Brix [Max]	94 %
Brix scale	✓

Construction

Dimension (W×D×H)	180×100×55 mm
Refractometer type	Desktop refractometer
Scale - Display type	Digital
Prism lid	✓
Material prism	Sapphire

Functions

IP protection - complete device	IP43
Auto-off interval(s) in battery mode/rechargeable battery mode	3 min
Automatic temperature compensation	✓
Supported operating systems	Win 10 Win 11
Color display	✓
Averaging measurement	✓
Averaging measurement amount	15
System requirements CPU	Intel Core i3 or higher AMD Ryzen 5 or higher
System requirements clock speeds	2.8 GHz

Interface

Interfaces	USB 2.0

Power Supply

Supplied power supply	Power supply unit
Power supply type	USB including power supply
Plug-in power supply / adapter for countries - included with the delivery	EURO
Plug-in power supply / adapter for countries - optional	EURO UK
Input voltage power supply / power [Max]	100 - 240 V AC 50/60 Hz 0,35 A
Power supply cable removable	removable
Input voltage device / power [Max]	5 V DC 2,0 A
Power socket for mains adapter	USB B
Battery connection	Pad + Spring

Environmental conditions

Storage temperature [Min]	-5 °C
Storage temperature [Max]	40 °C

Services (optional)

Article number for factory calibration	961-290

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Packing & Shipping

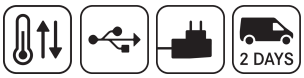
Dimensions transport container (W×D×H)	300×150×100 mm
Delivery time	2 d
Dimensions packaging (W×D×H)	300×150×100 mm
Shipping method	Parcel service
Net weight approx.	0,40 kg
Gross weight approx.	1,00 kg
Shipping weight	1 kg
Shipping volume weight	0,9 kg

Product information

GTIN/EAN number	4045761489455
Trade number	90275000
Warranty Time	36 mon
REACH classification	no prohibited substances

Pictograms

STANDARD



OPTION

