KERN **ORL 94AL**

Digital refractometer with pre-installed scales for refractive index measurements and applications in the alcohol industry



Date of creation: 24.10.2026

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

Measuring System	
Scale Oechsle France	✓
Percentage by volume	0-80%(v/v) @ 1%(v/v) ± 1%(v/v)
Scales	Refractive index Brix Oechsle KMW (Babo) Masspercentage Volume percent Stammwürze (Bier) Plato
Measurement temperature [Max] (°C)	40 °C
Measurement temperature [Min] (°C)	0 °C
Readabilites [d]	0,0001 nD 0,1 % 1 °Oe 0,1 °KMW 1 %(w/w) 1 %(v/v) 0,001 SG Wort 0,1 °P
Measuring range volume percentage I [Max]	22 %
Readout volume percentage I	0,1 %
Precision	0,0002 nD 0,1 % 2 °Oe 0,2 °KMW 1 %(w/w) 1 %(v/v) 0,002 SG Wort 0,3 °P
Measuring range volume percentage I [Min]	0 %
Measuring method	Total reflection
Automatic temperature compensation (ATC)	✓
Accuracy volume percentage I	±0,2 %
Measuring range Oechsle France [Max]	230 °Oe
Readout Oechsle France	1 °Oe
Scale volume percentage	✓
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
Scale for Refractive index	✓
Measuring range KMW (Babo) [Min]	0 °KMW
Measuring range KMW (Babo) [Max]	25 °KMW
Readout KMW (Babo)	0,1 °KMW
Accuracy KMW (Babo)	±0,2 °KMW
Measuring range percent by mass [Min]	0 %
Measuring range percent by mass [Max]	72 %
Readout percent by mass	1 %
Accuracy percent by mass	±1 %
Measuring range Oechsle [Min]	0 °Oe
Measuring range Oechsle [Max]	150 °Oe
Scale KMW (Babo)	✓
Readout Oechsle	1 °Oe
Accuracy Oechsle	±2 °Oe
Measuring range Plato [Min]	0 °P
Measuring range Plato [Max]	31 °P
Readout Plato	0,1 °P
Accuracy Plato	±0,3 °P
Scale percent by mass	✓

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Scale Oechsle	✓
Scale Plato	✓
Measuring range original hopped wort (specific gravity) [Min]	1,000
Measuring range original hopped wort (specific gravity) [Max]	1,130
Readout original hopped wort (specific gravity)	0,001
Accuracy original hopped wort (specific gravity)	±0,002
Scale original hopped wort (specific gravity)	✓
Measuring range volume percentage [Min]	0 %
Measuring range volume percentage [Max]	80 %
Readout volume percentage	1 %
Accuracy volume percentage	±1 %
Measuring ranges	1,3330 nD - 1,5290 nD 0 % - 94 % 0,0 °Oe - 150,0 °Oe 0,0 °KMW - 25,0 °KMW 0 %(w/w) - 72 %(w/w) 0 %(v/v) - 80 %(v/v) 1,000 SG Wort - 1,130 SG Wort 0,0 °P - 30,5 °P
Area of application	Alcohol
Accuracy Brix	±0,1 %
Readout Brix	0,1 %
Measuring range Brix [Min]	0 %
Measuring range Brix [Max]	94 %
Brix scale	✓
Measuring range Oechsle France [Min]	0 °Oe
Accuracy Oechsle France	±2 °Oe

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

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

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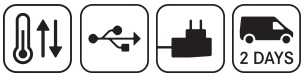
Shipping weight	1 kg
Shipping volume weight	0,9 kg

Product information

GTIN/EAN number	4045761489431
Trade number	90275000
Warranty Time	36 mon
REACH classification	no prohibited substances

Pictograms

STANDARD



OPTION

