

One Click™ Refractive Index Accurate, Intuitive, and Modular



Accurate and reliable results

Brix, refractive index and more: Our refractometers master measurements of a wide variety of challenging samples with high repeatability and an accuracy of up to 5 decimal places.



One Click operation

The large touchscreen terminal with the intuitive One Click user interface minimizes training and operator influence. Simply press on the pre-programmed shortcut to run your analysis. The instrument status light will show you if it is ready, busy, or waiting for operator interaction.



Immediate QC results

Set up a range of acceptable limits for your samples: Results that fall within this range are color-coded, enabling instant identification of accepted and rejected samples.



Seamless modularity

Refractive index and density are frequently determined for the same sample. Our space-saving system enables you to combine a density meter with a refractive index cell to measure both parameters in one go.



Performance Meets Simplicity

Developed for a wide range of applications, our intuitive Excellence Refractometers will measure almost any sample. The instruments feature a high accuracy and repeatability and can be further enhanced with the following solutions:

- Powerful autosamplers for viscous and difficult samples
- Simultaneous determination of refractive index, density, pH/conductivity and color
- LabX PC software for compliance with 21 CFR Part 11
- Wide range of accessories

Refractive Index and More

Save time and increase data quality: Excellence Refractive Index cells can be added to a multiparameter system that combines refractive index measurements with density, pH, color, titration, and more to prevent the alteration of samples between individual analyses. Increase throughput and automate your workflow while ensuring that all steps are performed the same way each time.



Technical and Functionalities Specifications

Excellence Refractometers		R4/RX4 ¹⁾	R5/RX5 ¹⁾
Refractive Index (nD)	Measuring range	1.32–1.70	1.32–1.58
	Accuracy	±0.0001	±0.00002 around adjustment point ±0.00004 entire range
	Repeatability	±0.00005	±0.00001
	Resolution	0.0001	0.00001
Brix (% w/w)	Measuring range	0–100	
	Accuracy	±0.05 ²⁾	±0.014
	Repeatability	±0.05	±0.01
	Resolution	0.01	0.01
Temperature (°C)	Temperature range	5–100 (41–212 °F)	5–75 (41–167 °F)
	Accuracy	±0.1 (from 5 °C to 100 °C)	±0.03 (from 15 °C to 50 °C) ±0.05 (from 5 °C to 75 °C)
Measurement scales	Integrated concentration tables and functions	nD, Zeiss (14.45), Zeiss (15.00), acid/base scales, salt, chemicals, freezing point scales Sugar: Brix, HFCS 42/55, Invert Sugar, Oechsle Up to 30 user-defined concentration tables (can be entered as tables or formulas)	
Internal results storage		Maximum number of results: 200	
Color-coded results identification		Yes	
User management		Yes	
Password protection		Yes	
Languages		English, Chinese, German, Spanish, French, Italian, Portuguese, Russian, Polish	
Display/User interface		7" display with color touchscreen	
Connectivity		3 × USB host (printer, memory stick, barcode reader, hub, keyboard, mouse); USB client (PC Software); Ethernet (Network and PC Software); RS232 (Automation units); CAN (Multiple LevelSens); HDMI (Terminal)	
PC software		LabX® PC Software	
Dimensions (W × H × D) mm		208 x 193 x 226	
Weight		4.8 kg	
Standard compliance		▶ www.mt.com/dere-norms	

¹⁾ RX4 and RX5: Refractive index cells for multiparameter measurement, without terminal.

²⁾ 0.04 at 80% to 0.07 at 10%

Instruments and Accessories

Material Description	Material Number
Refractometer Excellence R4	30474903
Refractometer Excellence R5	30474904
Refractive index cell RX4	30474905
Refractive index cell RX5	30474906
LabX PC software – Express	11153130
LabX PC software – Server	11153131
LabX PC software – Instrument license	11153250
Infrared motion sensor – ErgoSens™	11132601
Finger print reader – LogStraight™	51192107
Handheld barcode scanner	21901297

Material Description	Material Number
USB-P25 printer	11124301
USB-P25 printer (US and Canada only)	11124321
P-56RUE printer	30094673
P-58RUE printer	30094674
Refractometer press for pasty products	51337155
Refractometer foil stamp set	30384986
Certified standard – Water	51338010
Certified standard – Dodecane	51338012
Certified standard – Dichlorotoluene	51338013
Certified standard – Bromonaphthalene	51338014

METTLER TOLEDO Group
Analytical Division
Local contact: www.mt.com/contacts

www.mt.com/Refractometry-Excellence

For more information

Subject to technical changes
© 05/2018 METTLER TOLEDO. All rights reserved
30475551
Group MarCom 2501 BM/JK