One Click™ Refractive Index
Precise, Simple and Versatile

Simplicity
Automatically convert and display your results in predefined industrial units such as Brix, HFCS or any customized table you have specified.

Confidence
A high-resolution optical sensor measures the total reflection of light from the LED. Built-in Peltier temperature control provides both reliable temperature stability and rapid heating/cooling rates. The inert sapphire prism facilitates measurement of thin, highly volatile, dark or viscous liquids. The removable top section provides ease of cleaning with simple tap water without the need for tools.

Ease-of-use
One Click™ shortcuts streamline workflows by allowing you to initiate your most frequent methods with a single tap of an icon on the color touchscreen. Elegant ergonomic design, customizable user settings and multilingual support make the RM family of instruments appealing and easy to use by a wide variety of operators.

LiquiPhysics™ Excellence
RM Series Benchtop Refractometers

- **Precise** – Accurate to 0.00001nD, 0.1% Brix
- **Succinct** – One Click™ user-defined shortcuts optimize workflows
- **Flexible** – Modular system is adaptable to changing needs
- **Secure** – Barcodes, certified standards, user management and optional biometric user recognition ensure traceability and security
- **Automatic** – Different levels of available automation enable high-throughput multiparameter analysis of even the most challenging samples
- **Seamless** – Optional LabX™ Software provides data/SOP management and facilitates integration into diverse IT environments
- **Compliant** – EQPac (IQ, OQ, PQ) qualification services help satisfy regulatory requirements

METTLER TOLEDO

Excellence Refractometers

Technical Data

Measuring cell		RM40	RM50
Density	Measuring range nD [-] Brix [%]	1.3200 – 1.7000 0 – 85% as per ICUMSA extrapolated to 100%	1.32000 – 1.58000 0 – 85% as per ICUMSA extrapolated to 100%
	Limits of error nD [-] Brix [%]	0.0001 0.1 (0 – 85%)	0.00002 (around adjustment points) 0.00004 (entire range) 0.014 (0 – 85%)
	Repeatability (SD) nD [-] Brix [%]	0.00005 0.05	0.00001 0.01
	Resolution nD [-] Brix [%]	0.0001 0.01	0.00001 0.01
Temperature (Peltier)	Range [°C]	5 - 100	5 - 75
	Limits of error [°C]	0.01	0.03 (15-50) 0.05 (5 – 75)
	Resolution	0.01	0.01
	Compensation (for Brix)	Up 20 °C, in the range from 10 to 40 °C as per ICUMSA	
Built-in Unit Conversion Tables		Brix, HFCS42, HFCS55, Oechsle, Invert Sugar, Zeiss	
Measuring Principle		Optical measurement of the total reflection angle on CCD. Light source: LED, wavelength 589.3 nm	
Display		5.7″ VGA Color touchscreen	
Languages Supported		English, Spanish, Chinese, German, French, Italian, Russian and Portuguese	
User Management		Up to 30 users with individual administrative rights	
One Click™ Shortcuts		Up to 8 per user (Global maximum of 30 stored methods, 100 products and 5 series)	
Data Export		Printer, USB storage device, PDF, network/LIMS, LabX™	
Required Sample Volume		Approximately 0.5 mL	
Typical Measuring Time		Approximately 15 seconds	
Materials in Contact with Sample		Sapphire prism, stainless steel SUS316, perfluoroelastomer	

Multiparameter Analysis

Expand your scope of measurement by adding parameters such as pH, color, and density to your refractive index or Brix readings. Simply connect a compatible SevenCompact™ pH or conductivity meter, colorimeter, or DX refractive index cell to the RM module and define the method.

Optional LabX™ Server software captures and manages all data points of these parameters under a single platform. LabX™ Server also fully supports your 21 CFR part 11 requirements, audit trail, flexible data export options (including seamless LIMS integration) and customized reports. LabX™ Express offers data and SOP management for standalone systems in less regulated environments.

www.mt.com/refractometry

For more information