LiquiPhysics™ Meters

One Click® RI and Brix Measurement
with Built-in Quality Control

One Click® operation
Measure your products with One Click! The color touchscreen allows quick, simple and direct access to all routine tasks utilizing shortcut buttons to start routine tasks immediately. Every operator has a personalized home screen with shortcuts and his own operation language.

U8003: Brix & pH	Tasks
Sample ID: Orange Juice	
End of task	
Brix comp. 20°C [% w/w]	**10.13**
pH	**2.85**
RM	Tset [°C] **20.00** Tcell [°C] **20.00**
Calculated results	OK

Immediate QC results
For each product lower and upper result limits can be defined. Measured products are automatically verified with the limits, and the color of the result(s) indicates if specifications are met: black = passed, red = failed. Results can be displayed in nD, Brix, HFCS 42/55, Invert Sugar or user-defined concentrations.

Easy sampling
With the FillPal™ sampling pump the determination of Brix or other values is blindingly easy: just immerse the suction tube into the sample container and click on the product shortcut. Also cleaning is much easier or can even be skipped when working with a FillPal™.

LiquiPhysics™ Excellence
The straight way to reliable results

- Product database: no methods to select and no results to judge – just One Click on the product shortcut
- Easy-mountable presser for pasty samples
- Tailored measuring procedures even for very particular needs thanks to flexible method structure, conditions, formula editor and user tables
- Full SOP user guidance
- Certified standards
- Advanced user management including biometric instrument protection
- LabX® PC Software

METTLER TOLEDO

LiquiPhysics™ Excellence

Product	Order Number
Refractometer RM40	10376203
Refractometer RM50	10376204

Specifications

	Refractometer RM40	Refractometer RM50
Measuring range	1.3200–1.7000 [nD] 0–85% Brix as per ICUMSA, extrapolated to 100%	1.32000–1.58000 [nD] 0–85% Brix as per ICUMSA, extrapolated to 100%
Resolution	0.0001 0.01 °Brix	0.00001 0.01 °Brix
Repeatability (S.D. n = 10)	0.00005 0.05 °Brix	0.00001 0.01 °Brix
Limit of error	0.0001 0.1 °Brix (0–85%)	0.00002 (around adjustment points) 0.00004 (entire range) 0.014 °Brix (0–85%)
Temperature range	5–100 °C	5–75 °C
Temperature resolution	0.1 °C	0.01 °C
Limit of error temperature	0.1 °C	0.03 °C (15–50 °C) / 0.05 °C (5–75 °C)
Thermostat	Built-in Peltier thermostat	
Temperature compensation for °Brix	To 20 °C as per ICUMSA	
Built-in result units / concentration tables	nD, Zeiss (14.45), Zeiss (15.00) Brix, HFCS 42/55, Invert Sugar, Oechsle Up to 30 user-defined concentration tables (can be entered as tables or formulas)	
Sample volume	Minimum 0.5 mL	
Measure duration	Approximately 15 seconds (depending on sample)	
Automatic error detection	Verification of stored product limits, multiple measurement with definable max. S.D.	
Materials	In contact with sample: Sapphire prism, stainless steel SUS316, perfluoroelastomer	
Dimensions and weight	208 x 372 x 193 mm / 8.19 x 14.65 x 7.60 in (W x L x H). 5.41 kg / 11.93 lbs	

User Management

Number of users	30 (to each user a role with different rights can be assigned)	
Languages	en, de, fr, it, es, pt, zh, ru (can be set individually for each user)	
Shortcuts	8 (individually for each user) for One Click® start of measurements, adjustments, tests etc.	
Password protection	Yes. Also biometric protection possible with LogStraight™ fingerprint reader	

Data Handling

Printer	Compact strip printer USB P-25, lightfast paper (normal or adhesive)	
Results export	Automatic or manual export to USB stick (CSV), export to RS-232 (XML), LabX® LiquiPhysics: automatic storage in database and optional LIMS / ERP export	
Import / export	Share between instruments	

Pumps

Sampling pump	FillPal™ Food (aqueous products), FillPal™ Chem (acids, bases, solvents)	

Other Options

Certified standards	Water (nD = 1.33…), dodecane (1.42…), dichlorotoluene (1.55…), bromonaphthalene (1.66…)	

www.fishersci.com/mettlertoledo

For more information