

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 could not be simpler: 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™.



Modular system

Multiple parameters with One Click: a stand-alone RM Refractometer can be easily customized and upgraded to measure several parameters simultaneously (density, refractive index, pH/conductivity and color). Sampling, cleaning and drying of the whole system is done completely automatically with the powerful SC automation units.



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
- Powerful automation even for viscous and difficult samples (e.g. highly volatile)
- 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: ERP/LIMS connectivity, result database, customized reports, secure traceability and 21 CFR 11 support
- Simultaneous determination of refractive index, density, pH/conductivity and color

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: Methods, Products, Tables, User Management etc.

Automation / Pumps

Sampling pump	FillPal™ Food (aqueous products), FillPal™ Chem (acids, bases, solvents)
Automation units	Fully automatic sampling, rinsing and drying of all cells and tubes: Single sample: SC1. Up to 30 samples: SC30

Multi-parameter

Density	DX40, DX45 DeltaRange™ or DX50 Density Cell Modules
pH / conductivity	SevenCompact™ pH S220 / conductivity S230
Color	Konica Minolta CM-5 / CR-5, Tintometer Lovibond PFXi 880/950/995
Others	RS-232 controlled instruments: send and receive commands and results

PC Software

Single PC	LabX® LiquiPhysics Express (installation on a single PC, up to 3 instruments)
Client / server	LabX® LiquiPhysics Server (for installation for a client server system, up to 30 instruments)

Other Options

Barcode reader	Hand-held or built-in for SC30. SmartCodes™: sample data entry and automatic selection of method
Sensors	ErgoSens™: infrared optical sensor to start measurement without touching anything LevelSens™: level sensor to avoid waste container spillage
Certified standards	Water (nD = 1.33...), dodecane (1.42...), dichlorotoluene (1.55...), bromonaphthalene (1.66...)
Services	IPac (Initial Qualification Package): fast and easy qualification solution EQPac (Equipment Qualification Package): supports most stringent needs for regulatory compliance EduPac (Education Package): get completely familiar with the instrument



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