



Automatic Digital Refractometer RFM100CFR



Touch Screen Automatic Digital Refractometer RFM100CFR

SALIENT FEATURES

- ✦ GMP / GLP / FDA 21CFR PART 11
- ✦ Windows Operating System
- ✦ Inbuilt Software, No need Separate PC
- ✦ Multiple measurement modes
- ✦ Easy to clean Prism, It is made of artificial sapphire,
- ✦ 5 Digit Decimal point Precision
- ✦ 16GB data Storage
- ✦ In Built Peltier for Temperature Control
- ✦ Fast measurement, needs a small amount of samples.
- ✦ 8" Colour Touch Screen Display
- ✦ High-resolution CCD detection system
- ✦ Electronic Signature, Password Management

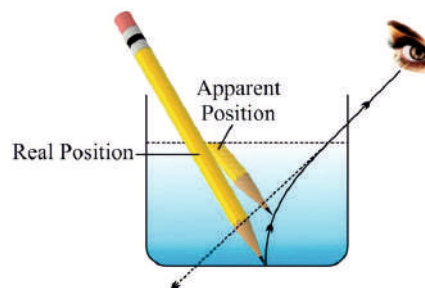
About 21CFR Part 11

21CFR Part 11 defines the requirements for submitting documentation in electronic form and the criteria for approved electronic signatures

About Refractive Index

When light passes from one medium to another, the speed at which the light travels will change depending on the parameters of the materials.

This principle can be observed when looking at a pencil in a beaker, as shown in the photo.



The ratio of the change in the speed of light is called the refractive index, and instrument that measure it is called refractometer. The refractive index of a liquid is related to its concentration and so a refractometer can display the concentration in suitable units, such as °Brix (sucrose), glucose, etc



E - Catalogue

Automatic Digital Refractometer Touch Screen

HSN Code : 90275020

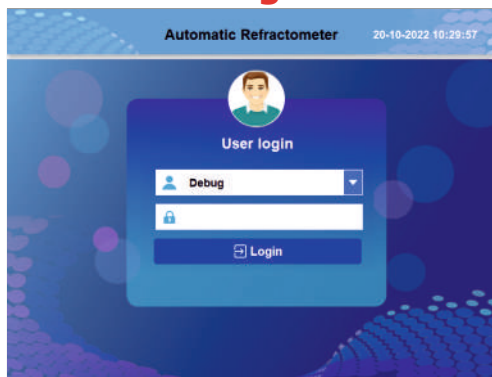
SPECIFICATIONS

Model	RFM100CFR
Make	LABMAN
Operating System	WINDOWS
Software	Inbuilt
Refractive index measurement range (nD)	1.30000 - 1.70000
Measurement error (nD)	±0.0002
Measurement resolution (nD)	0.00001
Measurement accuracy (nD)	±0.00001
°Brix Measuring range (° BX)	0- 100%
Measurement error (° Brix)	±0.1%
Measurement resolution (° Brix)	0.01%
Measurement accuracy (° Brix)	±0.1%
Temperature Control mode	Peltier (In-Built)
Temperature display range	0°C - 100°C
Temperature control range (at 20°C room Temperature)	5°C - 85°C
Temperature resolution	0.01°C
Temperature control accuracy (semiconductor Peltier)	±0.02°C
Display	8" colour Touch Screen
Compliance with Regulations	GMP / GLP / FDA 21CFR PART11
Memory	16GB
Prsim	Sapphire Type
Electronic Signatures	Yes
Built-in measurement modes/ methods	12 Types
Interface	USB Keyboard / Mouse / Ethernet / Optional WLAN
Power supply	AC 220V, 50/60Hz
Packing Dimensions (L x W x H) mm	570 x 470 x 300mm
Gross Weight	9kg

★ Specifications are subject to change without notice.

STANDARD ACCESSORIES : Main instrument, Fuse, SS Knob for Sample Chamber, Power Cable, Touch Pen, Instruction Manual, Test Certificate

Automatic Digital Refractometer Touch Screen RFM100CFR Function & Features



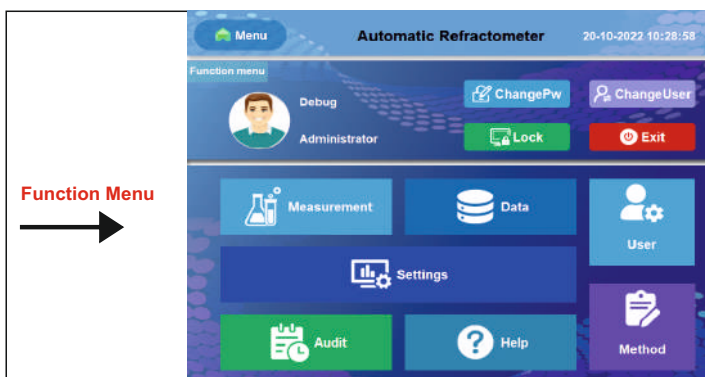
Automatic Refractometer 20-10-2022 10:29:57

User login

Debug

Login

User Login



Automatic Refractometer 20-10-2022 10:28:58

Function menu

ChangePw ChangeUser

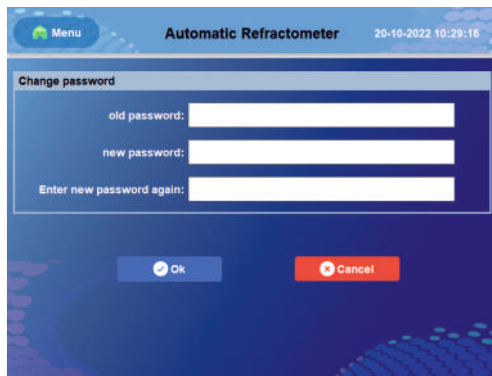
Lock Exit

Measurement Data User

Settings

Audit Help Method

Function Menu



Automatic Refractometer 20-10-2022 10:29:16

Change password

old password:

new password:

Enter new password again:

Ok Cancel

Change Password



Automatic Refractometer 20-10-2022 10:40:08

Sample Test Test Menu Calibration Debug

Set temperature 20 °C

Sample temperature 20.00 °C

Temp control

Test

nD

Brix: Wave length: 589.3 nm

Sample name:

Test mode: nD Refractive index

Temperature Control Completed



Automatic Refractometer 20-10-2022 10:32:36

Sample Test Test Menu Calibration Debug

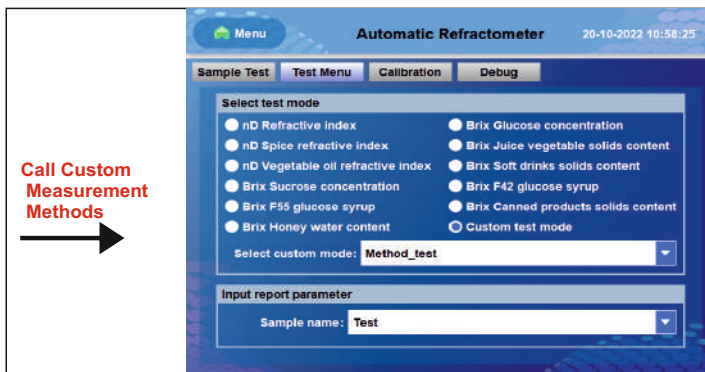
Select test mode

nD Refractive index nD Spice refractive index nD Vegetable oil refractive index Brix Sucrose concentration Brix F55 glucose syrup Brix Honey water content Brix Glucose concentration Brix Juice vegetable solids content Brix Soft drinks solids content Brix F42 glucose syrup Brix Canned products solids content Custom test mode

Input report parameter

Sample name:

Measurement Menu



Automatic Refractometer 20-10-2022 10:58:25

Sample Test Test Menu Calibration Debug

Select test mode

nD Refractive index nD Spice refractive index nD Vegetable oil refractive index Brix Sucrose concentration Brix F55 glucose syrup Brix Honey water content Brix Glucose concentration Brix Juice vegetable solids content Brix Soft drinks solids content Brix F42 glucose syrup Brix Canned products solids content Custom test mode

Select custom mode: Method_test

Input report parameter

Sample name: Test

Call Custom Measurement Methods



Automatic Refractometer 20-10-2022 11:05:39

Sample Test Test Menu Calibration Debug

User-selected sample calibration

Sample type: distilled water Other

Refractive index: 1.33299

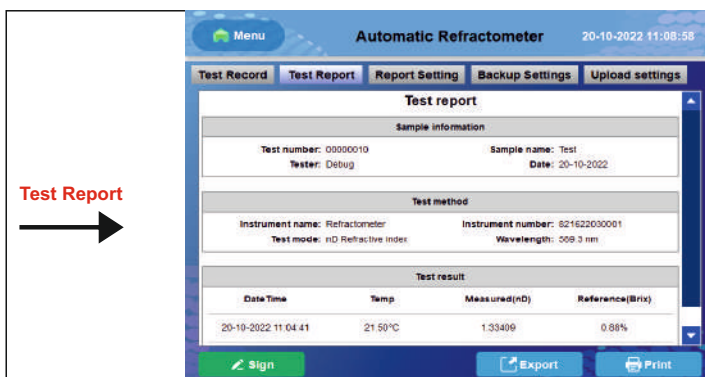
Calibration

Standard sample calibration

Password:

Enter calibration

Sample Calibration



Automatic Refractometer 20-10-2022 11:08:58

Test Record Test Report Report Setting Backup Settings Upload settings

Test report

Sample information

Test number: 00000010 Tester: Debug Sample name: Test Date: 20-10-2022

Test method

Instrument name: Refractometer Instrument number: 821622030001 Test mode: nD Refractive index Wavelength: 589.3 nm

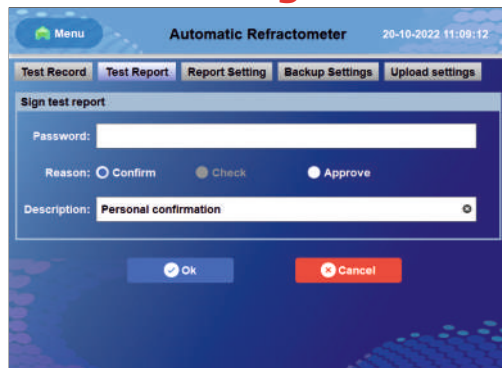
Test result

Date/Time	Temp.	Measured(nD)	Reference(Brix)
20-10-2022 11:04:41	21.50°C	1.33409	0.88%

Sign Export Print

Test Report

Automatic Digital Refractometer Touch Screen RFM100CFR Function & Features



Menu Automatic Refractometer 20-10-2022 11:09:12

Test Record Test Report Report Setting Backup Settings Upload settings

Sign test report:

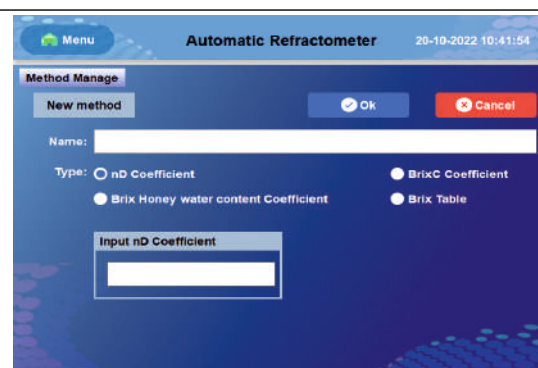
Password:

Reason: ☐ Confirm ☐ Check ☐ Approve

Description:

Electronic Signature

Create nD Coefficient Method



Menu Automatic Refractometer 20-10-2022 10:41:54

Method Manage

New method

Name:

Type: ☐ nD Coefficient ☐ Brix°C Coefficient

☐ Brix Honey water content Coefficient ☐ Brix Table

Input nD Coefficient:



Menu Automatic Refractometer 20-10-2022 10:42:15

Method Manage

New method

Name:

Type: ☐ nD Coefficient ☐ Brix°C Coefficient

☐ Brix Honey water content Coefficient ☐ Brix Table

Input Brix°C Coefficient

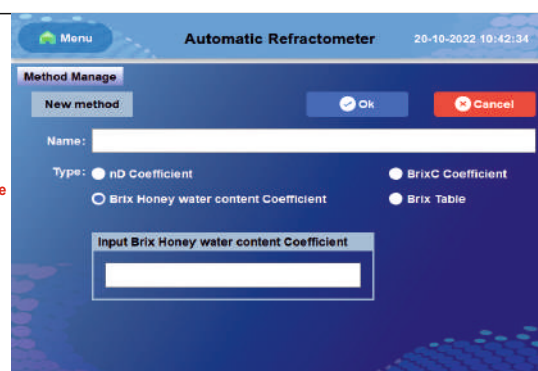
A: B:

C: D:

E: F:

Create Brix°C Coefficient Method

Create Honey Moisture Content Method



Menu Automatic Refractometer 20-10-2022 10:42:34

Method Manage

New method

Name:

Type: ☐ nD Coefficient ☐ Brix°C Coefficient

☐ Brix Honey water content Coefficient ☐ Brix Table

Input Brix Honey water content Coefficient:



Menu Automatic Refractometer 20-10-2022 10:42:54

Method Manage

New method

Name:

Type: ☐ nD Coefficient ☐ Brix°C Coefficient

☐ Brix Honey water content Coefficient ☐ Brix Table

Input nD-Brix

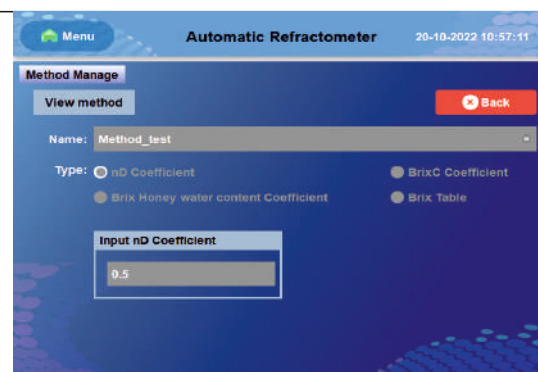
nD: Brix:

nD-Brix table

Check	nD	Brix (%)

Create Brix Table Method

View Measurement Method



Menu Automatic Refractometer 20-10-2022 10:57:11

Method Manage

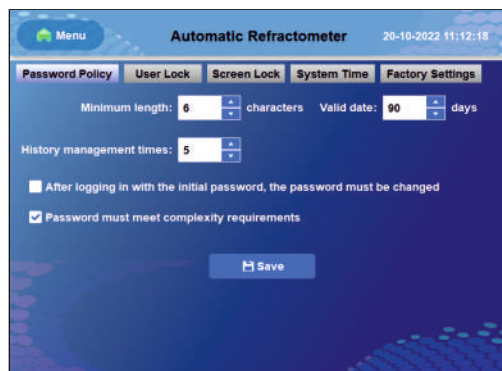
View method

Name:

Type: ☐ nD Coefficient ☐ Brix°C Coefficient

☐ Brix Honey water content Coefficient ☐ Brix Table

Input nD Coefficient:



Menu Automatic Refractometer 20-10-2022 11:12:18

Password Policy User Lock Screen Lock System Time Factory Settings

Minimum length: characters Valid date: days

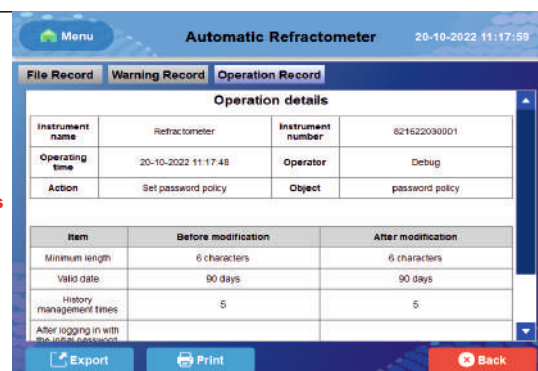
History management times:

☐ After logging in with the initial password, the password must be changed

☒ Password must meet complexity requirements

Password Policy

Operation Details



Menu Automatic Refractometer 20-10-2022 11:17:59

File Record Warning Record Operation Record

Operation details

Instrument name	Instrument number	Operating time	Operator
Refractometer	821622030001	20-10-2022 11:17:48	Debug

Action	Object
Set password policy	password policy

Item	Before modification	After modification
Minimum length	6 characters	6 characters
Valid date	90 days	90 days
History management times	5	5

After logging in with the initial password

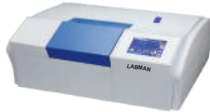
LABMAN Product Range 2025-26

LMFD61, 62, 63, 64 Lyophilizer Freeze Dryer (-60°C)	LMFD83, 84 Lyophilizer Freeze Dryer (-80°C)	LMRE25 Rotary Evaporator	ADM3 Automatic Density Meter	MSOD6 Microvolume Spectrophotometer
NAE32 Nucleic Acid Extractor	EMR4 Elisa Microplate Reader	GPTC96 Gradient PCR Thermal Cycler	HO30 Hybridization Oven	UVCL254 UV - Crosslinker
TGH12, 24 Tissue Grinder Homogenizer	PBH80T Paddle Blender Homogenizer	TOC2NDIR Total Organic Carbon Analyzer	TOC1CD Total Organic Carbon Analyzer	LMDS600, 1200 Microwave Digestion System
HPLC1IS, HPLC2GS High Performance Liquid Chromatography	APT1800 Automatic Potential Titrator	KFT250VC Karl Fischer Titrator	COD1500 COD Analyzer with Digestor	BOD4000 BOD Analyzer
MTVM50 Multi Tube Vortex Mixer	LMVM60D Vortex Mixer	OS20 Orbital Shaker	TRM6 Tube Roller Mixer	DBNE12, 24 Dry Bath Nitrogen Evaporator

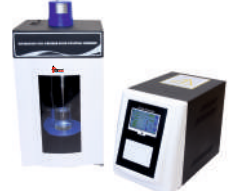
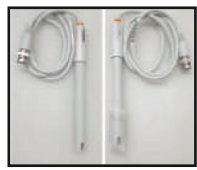
LABMAN Product Range 2025-26

DBI11T  Dry Bath Incubator	DBI15SH, DBI16SC  Dry Bath Incubator	IRS14, 35  Infrared Sterilizer	GGA200  Air Generator	GGA301, 302  Hydrogen Generator
GGN303  Nitrogen Generator	GHA304  Hydrogen Air Generator(2 in 1)	LMVP10  Vacuum Pump	LMVP20  Vacuum Pump	LMCO1  Column Oven
LMIO6  Mini Thermostatic Incubator	GHP400  Graphite Hotplate	LOBMS5  Oil Bath Magnetic Stirrer	LMMS4LC, 20LC  Ceramic Hotplate Magnetic Stirrer	LMMS300  Hotplate Magnetic Stirrer
MMS15S  Multiposition Magnetic Stirrer	MMS12H  Multiposition Magnetic Stirrer	WBMS3  Water Bath Magnetic Stirrer	LMWB2H, 4H, 6H, 8H  Digital Water Bath	HOS20L  Overhead Stirrer
LMHH160  Hand Held Homogenizer	PS1565  Peltier / Sipper System	LUV6HG  PMT Spectrophotometer	LUV2000T, 2100T  Single / Double Beam UV-Vis. Spectrophotometer with 21CFR	LMSPUV SERIES  Double Beam UV-Vis. Spectrophotometer

LABMAN Product Range 2025-26

LMSPUV1200  UV-Vis. Single Beam Spectrophotometer	LMSPV320, 325  Visible Spectrophotometer	ADP100CFR, 95CFR  Automatic Digital Polarimeter with CFR	ADP45, 50  Automatic Digital Polarimeter (±45°)	ADP75, 90  Automatic Digital Polarimeter (±90°)
ADP40  Automatic Digital Polarimeter	LMPM180  Manual Polarimeter	MAR100  Manual ABBE Refractometer	RFM100CFR  Digital Refractometer CFR	RFM950, 970  Digital Refractometer
LMAR1317T  ABBE Refractometer	LMDV300H  Digital Viscometer with Thermosel	LMDV60, 100, 200  Digital Viscometer (L Series)	LMDV400R  Digital Viscometer (R Series)	LMKV2  Krebs Viscometer
LMDV111, 222  Digital Viscometer with SSA	LVA30  Low Viscosity Adaptor	LMCR80F  Visual Colorimeter	LMUC2D  Ultrasonic Cleaner	LMUC3D, 6D, 9D, 12D, 25D  Ultrasonic Cleaner - Degas
LMUC50, 100  Industrial Ultrasonic Cleaner	LMPH15  pH Meter with Printer	LMPH12, LMPH10H  pH Meter	LMPH9  pH Meter - Basic	LMCM20H  Conductivity / TDS Meter

LABMAN Product Range 2025-26

LMCM20H  Conductivity / TDS Meter	LMMP30, 32  Multiparameter (7 in 1 / 9 in 1)	LMION40  Ion Meter	LMDO50  Dissolved Oxygen Meter	LMHD60  Water Hardness Meter
OPH11  Online pH Controller	OCM21  Online Conductivity Controller	LMTB200  Turbidity Meter	RCB1010T, 1020T, 1030T  Refrigerated Circulating Bath	RCB620T  Refrigerated Circulating Bath
RWC320  Recirculating Water Chiller	LMDO4P  Portable DO Meter	LMPH1P  Portable pH / ORP Meter	LMCM2P  Portable Conductivity / TDS Meter	LMTB5P  Portable Turbidity Meter
PRO656, 900, 1200, 1800  Probe Sonicator	PRO660R  Probe Sonicator with Remote	PRO650  Probe Sonicator	LMIF30T, 50T, 100T  Ice Flaker	LMIF200T  Ice Flaker
LMIM15  Ice Maker	LMIM20C  Ice Maker with Crusher	ISE19, 62  Nitrate / Fluoride ISEs	ER SERIES  pH Electrode / DO Electrode	CC1, CC2, CC3  Conductivity Cell