



## High Speed Automatic Polarimeter ADP100CFR



## ADP100CFR

### High Speed Automatic Polarimeter

### Dual Wavelength

#### SALIENT FEATURES

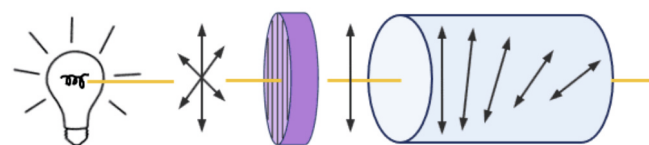
- ✦ GMP / GLP / FDA 21CFR PART 11
- ✦ Window Operating System
- ✦ Inbuilt Software, No need Separate PC
- ✦ State - of - Art Control Technology
- ✦ Dual Wavelength Polarimeter
- ✦ 3 Decimal point Precision
- ✦ 16GB data Storage
- ✦ Internal Peltier Temperature Control
- ✦ Working Wavelength 546 & 589 nm
- ✦ 8" Colour Touch Screen Display
- ✦ Multipoint Automatic Calibration
- ✦ Optical Rotation, Specific Rotation,
- ✦ Sugar, Concentration, User Define

#### About Optical Rotation

"When plane-polarized light passes through an optically active substance, the plane of polarization undergoes rotation by an amount specifically related to the substance it traverses.



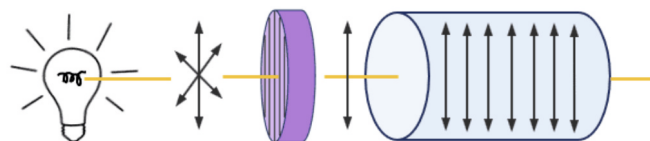
E - Catalogue



Light Source

Polarizer

Optically **active**



Light Source

Polarizer

Optically **inactive**

#### About 21CFR Part 11

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

## High Speed Automatic Polarimeter

HSN Code : 90275030

### SPECIFICATIONS

| MODEL                        | ADP100CFR                                                                         |
|------------------------------|-----------------------------------------------------------------------------------|
| Make                         | LABMAN                                                                            |
| Measuring Mode               | Optical Rotation, Specific Rotation, Sugar. Concentration, User Define            |
| Measuring range              | $\pm 90^{\circ}\text{C}$ Optical Rotation $\pm 259^{\circ}\text{Z}$ Sugar         |
| Frequently Used Method       | 300                                                                               |
| Light Source                 | Tungsten Halogen Lamp (20V )                                                      |
| Operational Wavelength       | 546 & 589nm                                                                       |
| Minimum reading              | 0.001°                                                                            |
| Accuracy                     | $\pm 0.004^{\circ}$                                                               |
| Repeatability                | $\pm 0.002^{\circ}$                                                               |
| Operation System             | Windows                                                                           |
| Software                     | In Built                                                                          |
| Min. transmission of samples | 0.1%                                                                              |
| Response Speed               | 8° /S                                                                             |
| Measurement time             | 6 times / 26s                                                                     |
| Sample temperature control   | Yes                                                                               |
| Temperature Control mode     | Peltier(In-Built)                                                                 |
| Temperature Control range    | 10°C-50°C                                                                         |
| Temperature Control accuracy | $\pm 0.2^{\circ}\text{C}$                                                         |
| Display                      | 8-inch colour Touchscreen                                                         |
| Calibration Method           | Multipoint - Automatic Calibration                                                |
| Memory                       | 16GB Database                                                                     |
| Compliance with Regulations  | GMP / GLP / FDA 21CFR PART 11                                                     |
| Length of Test Tube          | 100mm & 200mm                                                                     |
| Test tubes                   | 200mm 100mm(regular) 100mm(temp control)                                          |
| Interface                    | USB Keyboard / Mouse / VGA / Ethernet / Optical wireless card for internet access |
| Packing Dimension ( LxWxH )  | 865 x 515 x 470mm                                                                 |
| Gross Weight                 | 35kg                                                                              |

★ Specifications are subject to change without notice.

**STANDARD ACCESSORIES :** Main Instrument, 100mm Glass Test Tube, 200mm Glass Test Tube, Injection With Syringe, Fuse, Power Cable, Test Tube Accessories, Peltier Tube Accessories, Test Tube Cleaning Brush, Peltier Cleaning Brush, Touch Pen, Instruction Manual, Test Certificate

## ADP100CFR- Dual Wavelength High Speed Automatic Polarimeter

## Function & Features

Automatic polarimeter 22-09-2020 10:06:51

Menu TestRecord TestReport LocalFile Backup Restore Transmission

Export test record

Type of export file: ☒ PDF ☐ EXCEL

Path to export file: ☒ Local ☐ U Disk ☐ FTP

Export test record

Automatic polarimeter 07-01-2021 12:33:02

Menu TestRecord TestReport LocalFile Backup Restore Transmission

Test report

Test report

Sample information

Test number: 00000092 Sample name: test  
Tester: Debug Date: 05-01-2021

Test method

Instrument name: Polarimeter Instrument number: 811520040026  
User mode: GMP Test mode:  $\alpha$   
Cell length: 200 mm Wavelength: 589 nm  
Test times: 6

Test result

| No | Time     | Temp | $\alpha$ |
|----|----------|------|----------|
| 1  | 12:33:07 | 21.5 | 1.024    |

Test report

Automatic polarimeter 22-09-2020 10:08:23

Menu TestRecord TestReport LocalFile Backup Restore Transmission

Sign test report

Password:

Reason: ☒ Confirm ☐ Check ☐ Approve

Description: Personal confirmation

Electronic signature

Automatic polarimeter 22-09-2020 10:15:07

Menu TestRecord TestReport LocalFile Backup Restore Transmission

Transmission

Set up TCP transmission

Ip address:  Port:

☐ Send data to tcp server automatically Type: ☐ Text ☒ Xml

Set up UDP transmission

Ip address:  Port:

☐ Send data to udp server automatically Type: ☐ Text ☒ Xml

Set up Rs232 transmission

☐ Send data to Rs232 automatically Type: ☒ Text ☐ Xml

Data transmission

Automatic polarimeter 22-09-2020 10:17:41

Menu UserManage GroupManage

New user

Name: Test

Password: Te11111

Description: Test

Group: Administrator

Enable status: Enable

Login status: Normal

☐ Use Model:

Create a new user

Automatic polarimeter 22-09-2020 10:20:36

Menu AlarmManage

New alarm

Alarm name: Test

Range of measurement alarm

Min: -89.99900 Max: 89.99900 Max of std: 0.005

Range of transmittance alarm

Min: 0.05 Max: 100 %

Range of temperature alarm

Min: 10.0 Max: 50.0 °C

☐ Use Model:

Create a new user

Automatic polarimeter 22-09-2020 10:21:02

Menu PasswordPolicy UserLock ScreenLock ReportPara SystemTime FactorySettings

Minimum length: 6 characters Valid date: 90 days

History management times: 5

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

☒ Password must meet complexity requirements

Password policy

Automatic polarimeter 22-09-2020 10:21:31

Menu PasswordPolicy UserLock ScreenLock ReportPara SystemTime FactorySettings

ReportPara

| No. | Enable                              | Field name  | Null                     | Repeatable                          | Edit                                |
|-----|-------------------------------------|-------------|--------------------------|-------------------------------------|-------------------------------------|
| 1   | <input checked="" type="checkbox"/> | Sample name | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2   | <input type="checkbox"/>            |             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3   | <input type="checkbox"/>            |             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4   | <input type="checkbox"/>            |             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5   | <input type="checkbox"/>            |             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6   | <input type="checkbox"/>            |             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

Report Parameters



## ADP100CFR - Dual Wavelength High Speed Automatic Polarimeter Function & Features

Automatic polarimeter 22-09-2020 09:39:48

Self-checking Login

Start counts 1 Test counts 1 Error counts 0

Checking result Progress:

| No | Item                   | Result                              | Status |
|----|------------------------|-------------------------------------|--------|
| 1  | user database          | Database opened successfully        | ✓      |
| 2  | record database        | Database opened successfully        | ✓      |
| 3  | audit database         | Database opened successfully        | ✓      |
| 4  | delete database        | Database opened successfully        | ✓      |
| 5  | Serial port            | Serial port opened successfully     | ✓      |
| 6  | Temperature controller | Temp: 22.6                          | ✓      |
| 7  | High voltage           | value 1: 352 value 2: 387           | ✓      |
| 8  | Code wheel             | value 1: 00096615 value 2: 00985952 | ✓      |
| 9  | Motor                  | normal                              | ✓      |

Self-checking

Automatic polarimeter 22-09-2020 09:40:14

User login

Admin

Login

User Login

Automatic polarimeter 22-09-2020 09:40:40

Function menu

Debug ChangePw ChangeUser

Administrator Lock Exit

Test Data User Method

Alarm Setting Audit Help

Function Menu

Automatic polarimeter 22-09-2020 09:40:53

Change password

old password:

new password:

Enter new password again:

Ok Cancel

Change Password

Automatic polarimeter 22-09-2020 09:50:42

SampleTest DynamicTest InstrumentStatus AlarmSettings Calibration

GMP Wavelength: 589 nm Cell length: 100 mm

$\alpha$  34.575

$\alpha_1$ : 34.575  $\alpha_2$ : 34.575

$\alpha_3$ : 34.575  $\alpha_4$ : 34.575

$\alpha_5$ : 34.576  $\alpha_6$ : 34.575

Average: 34.575 Std: 0.000

Transmittance:

Timer 00:00:32

Preset temp 20.0 °C

Sample temp 23.0 °C

Measurement results in GMP mode

Automatic polarimeter 22-09-2020 09:53:26

SampleTest DynamicTest InstrumentStatus AlarmSettings Calibration

Map Table

| No | Date Time           | Temperature | Optical rotation |
|----|---------------------|-------------|------------------|
| 1  | 22-09-2020 09:52:08 | 23.1        | 34.575           |
| 2  | 22-09-2020 09:52:18 | 23.1        | 34.575           |
| 3  | 22-09-2020 09:52:28 | 23.1        | 34.574           |
| 4  | 22-09-2020 09:52:38 | 23.1        | 34.574           |
| 5  | 22-09-2020 09:52:48 | 23.1        | 34.574           |
| 6  | 22-09-2020 09:52:58 | 23.2        | 34.575           |
| 7  | 22-09-2020 09:53:08 | 23.1        | 34.574           |
| 8  | 22-09-2020 09:53:18 | 23.1        | 34.575           |

Measurement results in dynamic mode

Automatic polarimeter 22-09-2020 10:03:23

SampleTest DynamicTest InstrumentStatus AlarmSettings Calibration

Range of measurement alarm Range of transmittance alarm

Min: -89.99900 Max: 88.99900 Max of std: 0.005

Min: 0.05 Max: 100 %

Range of temperature alarm

Min: 10.0 Max: 50.0 °C

☐ Use alarm:

☐ Enable alarm ☐ Enable screenshot Save

Alarm Settings

Automatic polarimeter 22-09-2020 10:04:38

SampleTest DynamicTest InstrumentStatus AlarmSettings Calibration

GMP Wavelength: 589 nm Cell length: 100 mm

$\alpha$  Testing

Alarm Test Value: 34.569 > Max: 20.00000

Continue Remeasure Stop

Timer 00:00:08

Preset temp 20.0 °C

Sample temp 21.0 °C

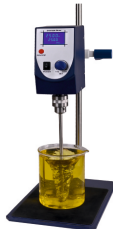
Transmittance:

Warning message

## LABMAN Product Range 2025-26

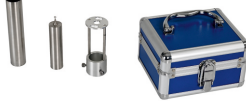
|                                                                       |                                                           |                                                      |                                                    |                                                        |
|-----------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|
| <p>LMFD61, 62, 63, 64</p> <p>Lyophilizer Freeze Dryer (-60°C)</p>     | <p>LMFD83, 84</p> <p>Lyophilizer Freeze Dryer (-80°C)</p> | <p>LMRE25</p> <p>Rotary Evaporator</p>               | <p>ADM3</p> <p>Automatic Density Meter</p>         | <p>MSOD6</p> <p>Microvolume Spectrophotometer</p>      |
| <p>NAE32</p> <p>Nucleic Acid Extractor</p>                            | <p>EMR4</p> <p>Elisa Microplate Reader</p>                | <p>GPTC96</p> <p>Gradient PCR Thermal Cycler</p>     | <p>HO30</p> <p>Hybridization Oven</p>              | <p>UVCL254</p> <p>UV - Crosslinker</p>                 |
| <p>TGH12, 24</p> <p>Tissue Grinder Homogenizer</p>                    | <p>PBH80T</p> <p>Paddle Blender Homogenizer</p>           | <p>TOC2NDir</p> <p>Total Organic Carbon Analyzer</p> | <p>TOC1CD</p> <p>Total Organic Carbon Analyzer</p> | <p>LMDS600, 1200</p> <p>Microwave Digestion System</p> |
| <p>HPLC1IS, HPLC2GS</p> <p>High Performance Liquid Chromatography</p> | <p>APT1800</p> <p>Automatic Potential Titrator</p>        | <p>KFT250VC</p> <p>Karl Fischer Titrator</p>         | <p>COD1500</p> <p>COD Analyzer with Digestor</p>   | <p>BOD4000</p> <p>BOD Analyzer</p>                     |
| <p>MTVM50</p> <p>Multi Tube Vortex Mixer</p>                          | <p>LMVM60D</p> <p>Vortex Mixer</p>                        | <p>OS20</p> <p>Orbital Shaker</p>                    | <p>TRM6</p> <p>Tube Roller Mixer</p>               | <p>DBNE12, 24</p> <p>Dry Bath Nitrogen Evaporator</p>  |

## LABMAN Product Range 2025-26

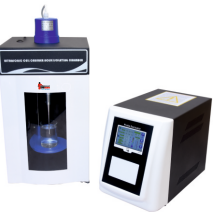
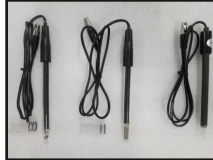
|                                                                                                                                               |                                                                                                                                               |           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



## LABMAN Product Range 2025-26

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

## LABMAN Product Range 2025-26

|                                                                                                                                             |                                                                                                                                  |                                                                                                                                                      |                                                                                                                                          |                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <p>LMMP30, 32</p>  <p>Multiparameter (7 in 1 / 9 in 1)</p> | <p>LMION40</p>  <p>Ion Meter</p>                | <p>LMDO50</p>  <p>Dissolved Oxygen Meter</p>                        | <p>LMHD60</p>  <p>Water Hardness Meter</p>             | <p>OPH11</p>  <p>Online pH Controller</p>               |
| <p>OCM21</p>  <p>Online Conductivity Controller</p>        | <p>LMTB200</p>  <p>Turbidity Meter</p>          | <p>RCB1010T, 1020T, 1030T</p>  <p>Refrigerated Circulating Bath</p> | <p>RCB620T</p>  <p>Refrigerated Circulating Bath</p>  | <p>RWC320</p>  <p>Recirculating Water Chiller</p>       |
| <p>LMDO4P</p>  <p>Portable DO Meter</p>                   | <p>LMPH1P</p>  <p>Portable pH / ORP Meter</p>  | <p>LMCM2P</p>  <p>Portable Conductivity / TDS Meter</p>            | <p>LMTB5P</p>  <p>Portable Turbidity Meter</p>        | <p>PRO656, 900, 1200, 1800</p>  <p>Probe Sonicator</p> |
| <p>PRO660R</p>  <p>Probe Sonicator with Remote</p>       | <p>PRO650</p>  <p>Probe Sonicator</p>         | <p>PROBE</p>  <p>Probe 2mm to 22mm</p>                            | <p>LMIF30T, 50T, 100T</p>  <p>Ice Flaker</p>        | <p>LMIF200T</p>  <p>Ice Flaker</p>                    |
| <p>LMIM15</p>  <p>Ice Maker</p>                          | <p>LMIM20C</p>  <p>Ice Maker with Crusher</p> | <p>ISE19, 62</p>  <p>Nitrate / Fluoride ISEs</p>                  | <p>ER SERIES</p>  <p>pH Electrode / DO Electrode</p> | <p>CC1, CC2, CC3</p>  <p>Conductivity Cell</p>        |