

Multiparameter Analyzer (pH/ORP/Conductivity/TDS/Resistivity/Salinity/°C) (21 CFR Part-11 Compliance)

Model:  $\mu$ MultiCal100 | Make: ANALAB | HSN Code: 90278990



Supplied with Combination Glass pH Electrode (0-70°C), Conductivity Cell K=1.0, Standard Buffer Tablets, Temperature Probe, Electrode Stand consists of Clamp, Base Plate & Rod, Dust Cover, DC Adaptor, ANALABsafe software, USB Interface Cable, Operational & Instruction Manual with SOP, Calibration Test Certificate (Without Traceability Document) and Warranty Card.



# **Technical Specification:**

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Range : -2.000 to 20.000 pH **Selectable Resolution** : **0.1/0.01/0.001 pH** 

Relative Accuracy :  $\pm 0.002 \, \text{pH}$ 

mV/ORP

Range – mV/RmV :  $\pm 2000.0$ 

ORP : EH auto calibration to standard hydrogen electrode

Resolution : 0.1

Relative Accuracy :  $\pm 0.2$  mV or 0.05%, whichever is greater.

Selectable Slope : 1) 80-120 %

2) 90-110 %

3) Customized slope (User adjustable)

Auto Buffer Recognition : 1) 4.01, 6.86 / 7.00, 9.18 / 10.01 pH @ 25°C for Three points

2) 1.68, 4.01, 6.86 / 7.00, 9.18 / 10.01 & 12.45 pH @ 25°C for five points

3) Ten pH Buffer, 6.86 / 7.00 @ 25°C for Multipoint Calibration.

Calibration Reminder Alarm : 0-99 hours

pH Result : Auto/Manual

pH Buffer Standard : US/NIST/EURO/DIN

Short Link : Provided to diagnose the problem either with Instrument OR Electrode.

Conductivity Range :  $0 - 20.00, 20 - 200.0, 200 - 2000 \mu \text{S/cm}$ 

2 - 20.000, 20 - 200, 200 - 2000 mS/cm for K=1.0

: 0-10.00, 10-100.0,  $100-1000 \mu$ S/cm,

 $1 - 10.000, 10 - 100, 100 - 1000 \,\text{mS/cm}$  for K = 0.5

: 0-2.00, 2-20.0, 20-200,  $200-2000 \mu \text{S/cm}$ ,

 $2 - 20.20 - 200 \,\text{mS/cm}$  for K = 0.1

(Range value change depending upon cell selection)

Conductivity Resolution :  $0.001, 0.01, 0.1 \mu \text{S/cm} \& 0.001, 0.01, 0.1, 1 \text{ mS/cm}$ 

TDS Range : 0 to 10, 100, 1000, 10000 ppm, 100ppt, 1000ppt

(Depending on TDS Factor)

TDS Resolution : 0.001, 0.01, 0.1 ppm & 0.001, 0.01, 0.1 ppt (1ppt=1000ppm)

Resistivity Range :  $20.00 \,\mathrm{M}\Omega$  to  $50.00 \,\mathrm{K}\Omega$ ,  $5.00 \,\mathrm{K}\Omega$ ,  $500.00 \,\Omega$ ,  $50.00 \,\Omega$ ,  $0.50 \,\Omega$ 

Resistivity Resolution : 0.001

Salinity : 0.01 to 80000.0 ppm NaCl



Number of Range : Six

Calibration Standard : Six Conductivity & TDS Standard - One Per Range

Calibration Factor : Six - One Per Range

Range Selection : Auto / Manual Suitable Cell Constant : 0.1, 0.5 & 1.0 K

Adjustable Cell Constant : 0.09 to 0.11 K, 0.45 to 0.55 K & 0.90 to 1.1 K

Conductivity to TDS Conversion: 0.40000 to 1.00000 (Adjustable Factor)

Temperature Coefficient : Six - 0-10.000 % per °C (Adjustable) - One Per Range

Reading : Conductivity at actual temperature and at 25°C, TDS, Resistivity &

Salinity with scrolling display.

Temperature Range : -5.0 to 130.0°C

Temperature Resolution : 0.1°C

Temperature Compensation : Auto/Manual

Temperature Calibration : In-built software and can be calibrated by users

Calibration & Analysis : pH Mode, ORP Mode, Conductivity Mode and TDS mode.

Error Message : "Wrong standard / Cell", "Cell Short", "Cell Open",

"Try Upper Range", "Try Lower Range", "Bad Buffer / Electrode",

"pH Over Range". "Temperature Probe Error",

"In-complete Calibration", "Calibration Due", & "Low Memory"

Display : 20 x 4 Line Alphanumeric Backlit LCD.

Keypad : Membrane waterproof polyester soft keypad compliance to UL/ROHS.

Calibration Data Storage : Non-Volatile Memory can store, print & view calibration details.

Analysis Data Storage : **More than 1000** analysis data can be stored with corresponding

calibration data, company name, analysis data, sample name, sample batch/ID, username etc. **Secondly,** analysis data can be print online.

Searching of data : With record number, batch number, date, date range and by scrolling.

Report Formation : As per GLP Compliance.

21 CFR Part-11 Compliance : • In-built with system for ease of operation without PC.

• 2 Admin, 10 Reviewers, 40 Users & 1 Manufacturer with individual Login ID & Passage

individual Login ID & Passcode.

Audit trail can store more than 5000 lines in instrument.

• Audit trail includes action taken, date & time, action taken by

whom.

 Audit trail can be transfer to PC through ANALABsafe software and can print on 40 / 80 column dot matrix printer for record.

Admins can set up operation permission of each Users &



#### Reviewers.

- Strict Admins control to audit and monitor usage and access.
- Audit trail record can be printed with Date, Date Range and by individual User's ID.
- Once Audit trail transfer to the PC or Printer, system will delete Audit trail records and before final deletion, the system will give warning twice.
- Data integrity with database capability to store Analysis Data,
  Calibration Data, Audit trail and Passcode in instrument.
- No direct access to data from outside the instrument, thereby creating a closed system.
- Audit traceability to ensure that the device and results are appropriately handled.
- Auto User's logout after defined Logout time.
- Auto Users & Reviewers block when password is entered incorrectly 3 consecutive times.

Printer Interface : Centronics Parallel Port / Serial (RS-232 C) Port

Printer : 40/80 Column Dot Matrix Printer (**Printer to be procure optionally**)

PC Interface : USB Type - B

PC Connectivity : By USB Interface Cable with Driver, **ANALABsafe** software to transfer

Analysis data in GLP format, Calibration data and Audit trail from

Instrument to PC in **non-editable format (Cannot be Deleted)** 

Power Supply : DC Adaptor



## **Optional**

## 1. IQ/OQ/PQ/DQ Documents

#### Note:

- a) Please provide Customer's Name & Address prior to dispatch.
- b) To perform onsite documentation, visit charge will be extra depending upon place of Installation.
- c) Traceability documents along with installation report.
- d) Standards / Chemicals / Buffers required to perform documents are in customer's scope.
- e) We don't send documents by email.

## 2. 40/80 Column dot matrix printer

## 3. Keypad Screen Guard

### **Other Models of Multiparameter Analyzer**

- Multiparameter Analyzer (pH/ORP/Cond./TDS/°C) Model: μMultiCal10 with Printing Facility
- Multiparameter Analyzer (pH/ORP/Cond./TDS/Resistivity/Salinity/°C) Model:  $\mu$ MultiCal50 with Printing Facility as per GLP Format
- Multiparameter Analyzer (pH/ORP/Cond./TDS/Resistivity/Salinity/°C) Model: μMultiCal100 with 21 CFR Part-11 Compliance
- Handheld Multiparameter Analyzer (pH/ORP/Conductivity/TDS/°C) Model: μMultiCalHandheld

#### Product Range

- •pH/mV/°C/ORP Analyzer •Conductivity/TDS/Resistivity/Salinity/°C Analyzer
- Multiparameter Analyzer (pH/ORP/Conductivity/TDS/Resistivity/Salinity/°C)
- Karl Fischer Titrator Auto Titrator Automatic Melting Point Apparatus
- Flame Photometer Friability Test Apparatus Tablet Dis-integration Test Apparatus
- Tap Density Test Apparatus Tablet Hardness Tester Leak Test Apparatus
- Tablet Dissolution Test Apparatus Electromagnetic Sieve Shaker Ultrasonic Bath
- (Sonicator) •Analytical Electronics Balance •Halogen Based Moisture Analyzer Visible & UV-Vis. Spectrophotometer •Nitrogen Gas Generator •Zero Air Gas
- Generator Combination Nitrogen / Zero Air Gas Generator Air Drying Unit for TOC Analyzer Dew Point Apparatus Gas Handling & Purification System Laboratory Furniture & Fume Hood Exhaust Hood for AAS/ICP.









# ANALAB SCIENTIFIC INSTRUMENTS PVT. LTD.

AN ISO 9001 : 2015 CERTIFIED CO. CIN: U33110GJ2005PTC046555

Plot No. 361, Sayajimarket,

N. H. No. 8 By-Pass,

At & Post: Sayajipura,

Vadodara - 390019, Gujarat, India.

+91 265 2514404, 9714503393

info@analab.co.in

www.analab.co.in, www.analabscientific.com