

## Automatic Programmable Melting Point Apparatus

Model:  $\mu$ ThermoCal50 | Make: ANALAB | HSN Code: 90278990



Supplied with Melting Capillary One End Sealed (Pack of 100 Nos.), Boiling Tube, Sample Tapping Rod, Two Melting Standards 49°C and 238°C, Forceps, Power Cord, Operational & Instruction Manual with SOP, Calibration Test Certificate (Without Traceability Document) and Warranty Card.



## Technical Specification:

Temperature Controller	: Microcontroller Based
Detection Principal of Melting Point	: Automatic by Silicon Photodiode
Heating Media	: By Aluminum Block
Temperature Range	: +5°C above ambient to 350°C
Temperature Accuracy	: A) 10°C above ambient to 100°C ..... ± 0.2°C B) 101°C to 200°C ..... ± 0.4°C C) 200°C to 400°C ..... ± 0.5°C
Readability	: 0.1°C
<b>Overheating Protection</b>	: <b>In-built - Set by user in method parameter</b>
Heating Before EMP*	: Automatic heating depending upon temperature difference
<b>Heating Rate</b>	: <b>0.2, 0.5, 1.0, 2.0, 3.0 &amp; 5.0 °C/min - Selectable</b>
Maximum Heating Time	: Around 6 minutes from 50°C to 350°C
Maximum Cooling Time	: Around 6 minutes from 350°C to 50°C
Detection of Melting	: A) Melting Point B) Melting Range
Type of Detection	: Auto / Manual ( <b>Color sample can be analysed by Manual detection.</b> )
<b>Melting Point Average Reading</b>	: <b>For three same sample</b>
Melting Capillary Ports	: Three - one sample at a time
Detection of Boiling Point	: Manually by viewing in TFT Display
Boiling Tube	: One
Calibration	: Eight Calibration Standards (Six as per Pharmacopeia AND / OR Customer's known standards)
Method	: 40 methods for Melting sample, 10 for Boiling sample and 1 for unknown sample with View, Print & Delete facility.
Temperature Sensor	: Duplex PT-100, One for internal use and One for calibration purpose by external Source.
Glass Melting Capillary	: OD: 1.4 to 1.6mm   ID: 1.0mm   Length: 100mm   One End Sealed
Sample Filling Height	: 3mm
<b>Magnification</b>	: <b>5x</b>
<b>Viewing of Capillary</b>	: <b>Camera with TFT Display for viewing Melting Capillary and Boiling Tube in CAPillaryVIEW</b>
Display	: 20 x 4 Line Alphanumeric Backlit LCD

- Keypad : Membrane waterproof polycarbonate soft touch keypad compliance to UL/ROHS
- Calibration Data Storage : Non-Volatile Memory which can store, print & view calibration date & time, company name, standard name with temperature, actual reading of standard temperature, calibration done by, instrument serial number, instrument ID, model number etc.
- Analysis Data Storage : **More than 750** analysis data can be stored with corresponding calibration data, analysis date & time, record number, Batch number / ID, sample name, username, assigned method number, MP1 (**On set temperature**) & MP2 (**Clear temperature**) reading of all three reading, instrument ID, serial number, model number, make, etc. **Secondly**, analysis data can be print online without saving in Instrument.
- Searching of data : With record number, batch number/ID, date, date range and by scrolling.
- Report Formation** : **As per GLP Compliance**
- Password Protection** : **Date & Time, Calibration Mode, Analysis Mode, Delete Stored Analysis Data, Method Data and Restore Factory Set Calibration Data.**
- Printer Interface : Centronics Parallel Port/ Serial (RS-232 C) Port
- Printer : 40 / 80 Column Dot Matrix Printer (**Printer to be procure optionally**)
- Power Supply : 230 VAC  $\pm$ 10%, 50 Hz

\* EMP : Expected Melting Point

## Optional

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

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

### 2. Calibration Standard Kit for Melting Point Apparatus - (ANALAB Certified)

**Consist of 07 Melting Standards as specified bellow, Melting Capillary One End Sealed 100 mm Long (Pack of 100) – 02 Pack, Boiling Tube – 02 Nos., Sample Tapping Rod, Forceps, Glass for Heating Block – 02 Nos., Glass for Camera – 02 Nos.**

#### Melting Standards :

- |                                      |   |                  |
|--------------------------------------|---|------------------|
| a) Benzophenone - Melting Range      | : | 47 - 49 °C       |
| b) Vanillin - Melting Range          | : | 81 - 83 °C       |
| c) Benzoic Acid - Melting Range      | : | 121.5 - 123.5 °C |
| d) Sulfanilamide - Melting Range     | : | 164 - 167 °C     |
| e) Caffeine - Melting Range          | : | 235 - 238 °C     |
| f) Phenolphthalein - Melting Range   | : | 258 - 262 °C     |
| g) Potassium Nitrate - Melting Range | : | 334 – 336 °C     |

**Note:** Melting Range / Melting Point specified on standard bottle is re-pack based on the values of batch number specified by manufacturer and their COA.

### 3. GMP Enclosure made up of Stainless Steel

### 4. Keypad Screen Guard

### 5. Traceability Documents

#### Available other Models of Melting / Boiling Point Apparatus


- Microcontroller Based Melting/Boiling Point Apparatus Model: ThermoCal - Resolution: 1.0°C & Temp.: 300°C with Silicon Oil
- Microcontroller Based Melting/Boiling Point Apparatus Model:  $\mu$ ThermoCal10 Resolution: 0.1°C & Temp.: 300°C with Silicon Oil
- Programmable Melting/Boiling Point Apparatus Model:  $\mu$ ThermoCal25 Resolution: 0.1°C & Temp.: 300°C with Silicon Oil & Printing Facility as per Non-GLP Format
- Automatic Programmable Melting Point Apparatus Model:  $\mu$ ThermoCal25+ with Manual Boiling Point, Block Technology, Resolution: 0.1°C, Temp.: 350°C & Printing Facility as per Non-GLP Format
- Automatic Programmable Melting Point Apparatus Model:  $\mu$ ThermoCal50 with Manual Boiling Point, Block Technology, Resolution: 0.1°C, Temp.: 350°C & Printing Facility as per GLP Format
- Automatic Programmable Melting Point Apparatus Model:  $\mu$ ThermoCal100 with Manual Boiling Point, Block Technology, Resolution: 0.1°C, Temp.: 400°C, Printing Facility as per GLP Format & 21 CFR Part-11 Compliance


#### 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.

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