capillary melting point apparatus with stainless steel body

Capillary melting point apparatus is a kind of instrument used to accurately measure the melting point of solid substances, which is widely used in chemical analysis, pharmaceutical industry and quality control process.

The melting point is the temperature at which a substance changes from a solid to a liquid, and is commonly used to characterize the purity and quality of a chemical substance as well as its stability at high temperatures. This capillary melting point apparatus adopts advanced technology and innovative design, combining capillary method and modern optical technology, which can provide accurate melting point data in a shorter time.

Features

1. Stainless Steel Shell: The instrument shell is made of stainless steel, which has the advantages of corrosion resistance, high temperature resistance, easy cleaning, etc., and enhances the durability of the instrument and the modern appearance.

2. Support capillary method: The instrument adopts capillary method for melting point testing, which is suitable for all kinds of chemical and pharmaceutical samples, providing accurate melting point data.
3. Three-sample testing: The sample chamber of the instrument can hold three samples, which allows users to test multiple samples at the same time, enhancing experimental efficiency.
4. High-precision temperature control: The measurement range is from room temperature to 400°C, and the resolution of temperature setting and display is 0.1°C.
5. Rapid temperature rise function: The instrument is able to set a rapid stage of temperature, with a rise rate of 20°C per minute, which is suitable for quickly reaching and accurately controlling the target temperature.
6. Optimized Optical Path System: The improved optical path design can provide a brighter and clearer display, avoid scattering or blurring, and improve the readability of the measurement results.
7. Temperature hold and overshoot prevention: When the rapid stage temperature is reached, the temperature will be automatically held to avoid overshoot, and the user can set the temperature close to the melting point to save measurement time.
8. Beep alert: When the device reaches the rapid stage temperature, the instrument will beep to remind the user, to ensure that the user will not miss the operation of the timing.
9. automatic reading and heating synchronization: through the “read” button, the device can be heated at the same time and display the melting point data, to help users easily distinguish between the melting point of multiple samples, eliminating the need for frequent operation.

10. built-in fan cooling system: the device has a built-in fan, can quickly reduce the temperature after the completion of the test, shorten the waiting time.
11. dual display: dual display function makes the temperature and melting point readings can be displayed at the same time, easy for users to compare and view the test results.
12. Handheld Read Button: Provides a handheld read button to increase operational flexibility, allowing the user to access data in real time whenever needed.
13. Tilting Design: The tilting rear foot design allows for a wider and clearer viewing angle of the display, optimizing operating comfort.

Working Principle

The working principle of capillary melting point apparatus is based on the melting temperature change of the sample. First, the user loads the sample into a capillary tube and places the capillary tube in the sample chamber of the instrument. The device begins to heat up and the temperature gradually increases. As the sample begins to melt, the optical system detects the change in morphology of the sample (e.g., a solid substance transforming into a liquid) and records the temperature at this point. The instrument's heating system provides precise control of the temperature rise and fall, while the optical system provides a clear display so that the user can read the melting point accurately. The rapid temperature rise function of the device improves the efficiency of the test, while the temperature hold function ensures the accuracy of the test results and avoids temperature overshoot.

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Model	**MP10T**
Housing material	stainless steel
Display	LED
Temperature range	ambient to 400°C
Temperature accuracy	±0.5°C
Temperature resolution	0.1°C
Readout and temperature hold	yes
Calibration	yes
Number of samples	3
Fast Stage Rate	fixed 20 °C per minute
Slow Stage Rate	0.2°C to 10°C per minute, adjustable with 0.1
Cool Down Rate	25°C per minute

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Model	**MP10T**
Internal Temperature Visible	yes
Handheld Read Button	yes
Data Logging	yes
Power supply	120Vac, 230Vacm 50Hz, 75W
Dimensions	160x220x170mm
Weight	1.8kg