

HMZX-1A Auto Image-analysis & Video Melting Point Apparatus

PILOT of second-generation (image-analysis) video melting point apparatus.

Two National Invention Patent. Realizing automatic measurement of almost all special samples such as opaque, deep color, and thermal decomposition.

For examples,

- Ursodesoxycholic acid (drug, slow decomposition after heating)
- Cortisone acetate (drug, rapid decomposition after heating)
- Rebamipide (drug, bubble decomposition after heating)
- Peramivir (drug, bubble decomposition after heating)
- Dry Film Photoresist (PCB packaging material, deep color and opaque)
- Antioxidant H (plastic additive, deep color and opaque)



Excellent Measuring Performance

- 1, It can measure 4 samples synchronously and efficiently at a temperature of up to 320°C;
- 2, It includes six melting point judgment modes such as decomposition, deep color, etc. It is suitable for difficult-to-measure samples;
- 3, It has ultra-wide heating rate of 0.1°C~20°C/minute and infinite speed regulation;
- 4, The innovative three-level filter depth design meets the equilibrated demand of efficiency and accuracy;
- 5, Automatic measurement with machine vision can display melting video and curve in real time;
- 6, Visual measurement: HD video storage and playback, making melting details clearly visible!
- 7, 7-inch tablet screen which is touch-sensitive, can be connected with mouse and keyboard to operate;
- 8, 1~9 points automatic temperature calibration which has better linearity to ensure the accuracy of the full range;

Perfect User management Module

- 1, Up to 32 users, group management, function authorization, 1~32 levels of flexible permissions;
- 2, Administrators can customize "operation permissions and data permission levels" for each user;
- 3, Support independent passwords and system-level protection against electronic signatures being signed on behalf of others;

Remarkable Data Center Management Module

Support data tracing, audit tracing; Data is shared or isolated by the permissions of user group.

- 1, Supports predefined 64 kinds of measuring methods which can be shared and invoked quickly.
- 2, Auto generate and store measurement reports, and auto calculate the mean value and standard deviation.
- 3, Measurement report support to eliminate outliers and automatically generate modification records, support remarks.
- 4, Three-level e-signature: report can be signed by creator, auditor, approver.
- 5, Database paging management effectively improves query efficiency, which support backup and restore.
- 6, Conform to ChP, EP, JP, FDA 21 CFR Part 11 and GMP/GLP.

Full Automatic Detection/0.2 Grade

The melting point of a substance is the temperature at which the material changes from a solid to a liquid state. In organic chemistry, melting point determination is not only the basic approach to determine the nature of material, but also an important method to obtain the purity of a substance. Therefore, melting point apparatus is widely used in the chemical industry and the medical research, and it's a must-have instrument in the manufacturing of medicine, spices, dyes and other organic crystal substances.

Huazhi second generation auto Image analysis & video melting point apparatus abandons the first-generation photoelectric detection technology, innovates the sampling method of melting point determination, and adopts the leading AUTO-ROI® technology (image analysis in advanced machine vision) to gain insight into all the melting details of the sample, and automatically determine the melting point. It is realizing a new leap in technology.

Main Technical Parameters	
Model	HMZX-1A
Test Method	Image analysis AUTO-ROI® measure + Visual Measurement
Sample Loading Way	Capillary Tube Method
Temperature range	Ambient ~ 320°C
Min. Temperature	0.01°C
Ramp Rate&Error	0.1°C~20°C/min infinite speed regulation, Error ≤5%
Accuracy	±0.2°C (< 200°C) ±0.4°C (≥200°C)
Reproducibility	0.1°C (ramp rate 0.2°C/min); 0.2°C (ramp rate 1.0°C/min)
Heat/Cool time	≈4mins/5mins (50~320°C)
Characteristics	General Mode, Std-Sample mode, Deep mode, Decomposed mode, Learning mode, Customized mode; 3 level filter depth.
Number of	4pcs, Φ1.4mm ext. dia., Φ1.0mm inner dia., 90mm lengths.
Fill height	3mm~5mm
Display	7" True color (1024x600) touch tablet screen
Screen	Display melting video, curve and measuring results in real time
User Management Module	Up to 32 users managed in groups(departments) Administrator can add, delete, edit, authorize, reset and lock users; User group can be added, deleted, revised and searched, and functions can be authorized with 1~32 levels of permission settings; Support user independent passwords and system-level protection of electronic signatures from being signed on behalf of others.
Data Center Module	Data, such as measuring methods, report and logs are shared or isolated by user group privilege.
*Preset Meas. Methods	64 measuring methods can be built, shared and invoked.
*Measurement Reports	Auto generate reports, auto calculate mean value and standard deviation; Support to eliminate outliers of measuring report, automatically generate modification records, and support remarks; Support 3-level signature: creator, auditor, approver; Report can be exported as Excel&PDF and printed, and cannot be deleted;
*Video Report	500mins(optional with 1000mins) record;
*Calibration Report	Auto generate report, expiration date management, expiration reminder, data export as PDF;
*Compliance with	ChP, EP, JP, FDA 21 CFR Part 11 and GMP/GLP.
*Database	Support data tracing, audit tracing; Support backup and restore;
Calibration	Authorize calibration, 1~9 points temp cal(auto+manual input)
Communication port	USB A*2+USB B+RS232+Ethernet+WIFI(optional)
Power supply	220±10%V AC, 50/60Hz/135W
Dimensions&Weight	345(L)X245(W)X215(H)mm; About 5kg