DSC-500L

Differential scanning calorimeter

Differential scanning calorimetry (DSC), as a classical thermal analysis method to control the thermal effect at programmed temperature, has been widely used in research and development, process optimization, quality control and failure analysis in various fields of materials and chemistry. Using DSC method, we can study the phase transition of inorganic materials, the melting and crystallization process of polymer materials, the polymorphism of drugs, the solid/liquid ratio of foods such as oils and fats, etc.

main feature

- Simple operation, no testing experience, only a small amount of training.
- The software is suitable for computer screens with different resolutions.
- Double temperature probes ensure high accuracy and repeatability.
- During the experiment, there is no need for personnel supervision.
- Digital gas mass flowmeter automatically switches two gas flows.
- Software can be upgraded online for free.
- Seven-inch LCD display, the map and curve are clear at a glance.
- Liquid nitrogen refrigeration, the lowest temperature can reach -150℃

technical parameter

DSC range	0～±200mW	Temperature range DSC-500L	-150～500℃
heating rate	0.1～30℃/min		
Refrigeration	Liquid nitrogen refrigeration	temperature resolution	0.01℃
Temperature accuracy	±0.1℃	Temperature repeatability	±0.1℃
DSC accuracy	±2%	DSC resolution	0.001mW
DSC resolution	0.001mW	Temperature control mode	Full automatic control
Curve scanning	Heating and cooling scanning	Atmosphere control	Digital gas mass flowmeter
display mode	24bit color, 7-inch touch screen	working power supply	AC220V 50Hz/60Hz
Size (w*d*h)	46*35*38cm	Net weight	23KG
Packing size (w*d*h)	58*45*40	Gross weight	26KG

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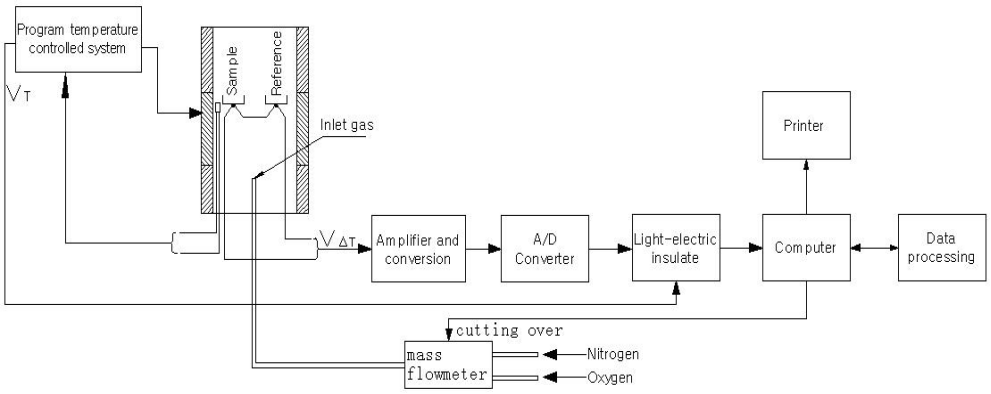
Computer configuration requirements	**Minimum hardware configuration** ● Celeron dual core ● 2GB system memory ● Resolution 1366*768 pixels or higher. ● Hard disk 500G	**Minimum software configuration** ● Win10/11 ● Adobe PDF reader

application example

Measure physical and chemical changes related to heat, such as glass transition temperature, melting point, melting temperature, crystallization and crystallization heat, phase transition reaction heat, thermal stability of products, curing/crosslinking, oxidation induction period, reaction kinetics, specific heat, etc. Note: the thermal stability test during oxidation induction period is applicable to G B/T 1 7 3 9 1-1 9 9 8.

Instrument principle

Differential scanning calorimetry (DSC) is a technique to measure the power difference between substance and reference under the control of programmed temperature. Differential scanning calorimeter is mainly composed of heating furnace, host, microvolt amplifier, A/D converter, data acquisition system, gas flow control system, computer, printer and other components, supplemented by the switching of two channels of atmosphere, and the measurement results are processed by computer data processing system.



Experimental atlas

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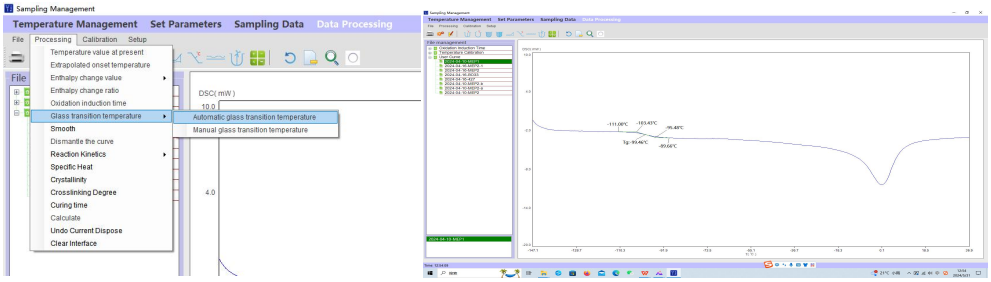
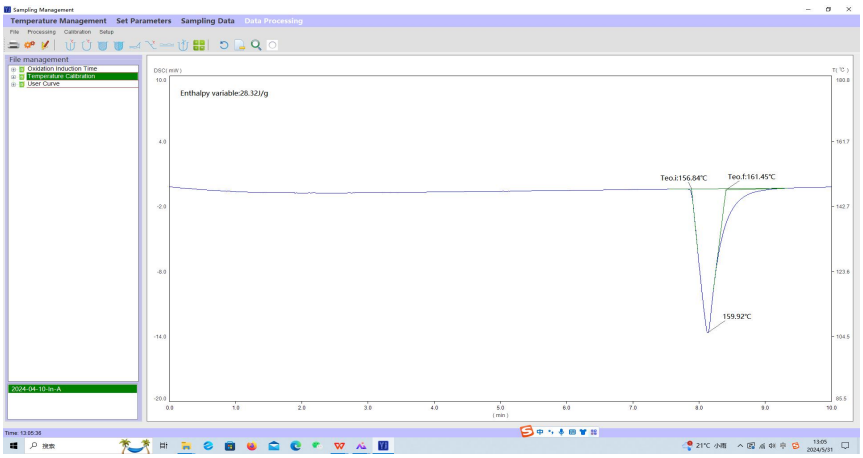
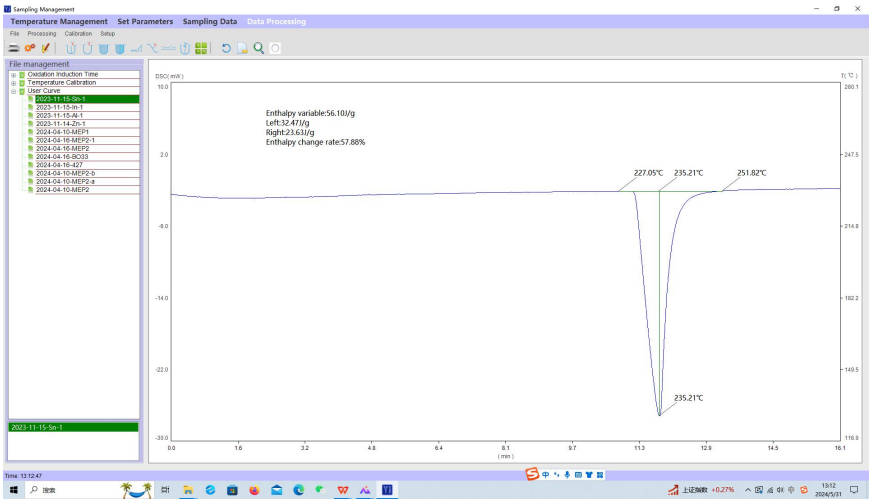


Interface of automatic calculation results of glass transition temperature



Enthalpy variable, epitaxial starting point, melting point calculation result interface



Enthalpy change ratio calculation result interface

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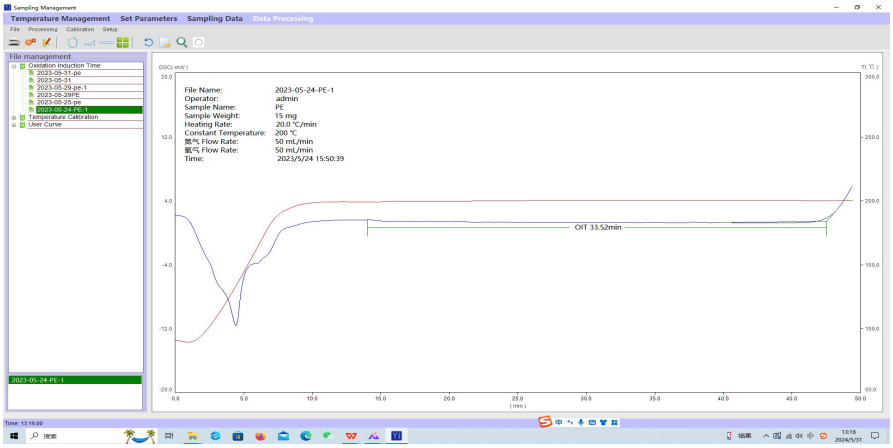

Interface of calculation results of oxidation induction period

List of accessories of DSC-500L series

1	DSC-500L heating furnace and main cabinet	1 set
2	U disk of differential scanning calorimeter working program	1 piece
3	Software encryption dog	1
4	Liquid nitrogen hose	2 pieces
5	Liquid nitrogen flow control unit	1 set
6	feed cable	1 root
7	Signal cable (USB)	1 root
8	Glass tube fuse (5A)	4.
9	tweezers	1 branch
10	Sample spoon	1 branch
11	certificate	1 copy
12	Ventilation joint	4.
13	Aluminum crucible (ϕ Φ6.7×3 mm)	400
14	Standard samples (In, Sn, Zn)	0.5g each
15	Description of DSC-500L Differential Scanning Calorimeter	1 copy
16	Ventilation plastic pipe (blue)	3 meters
17	Ventilation plastic pipe (orange)	3 meters

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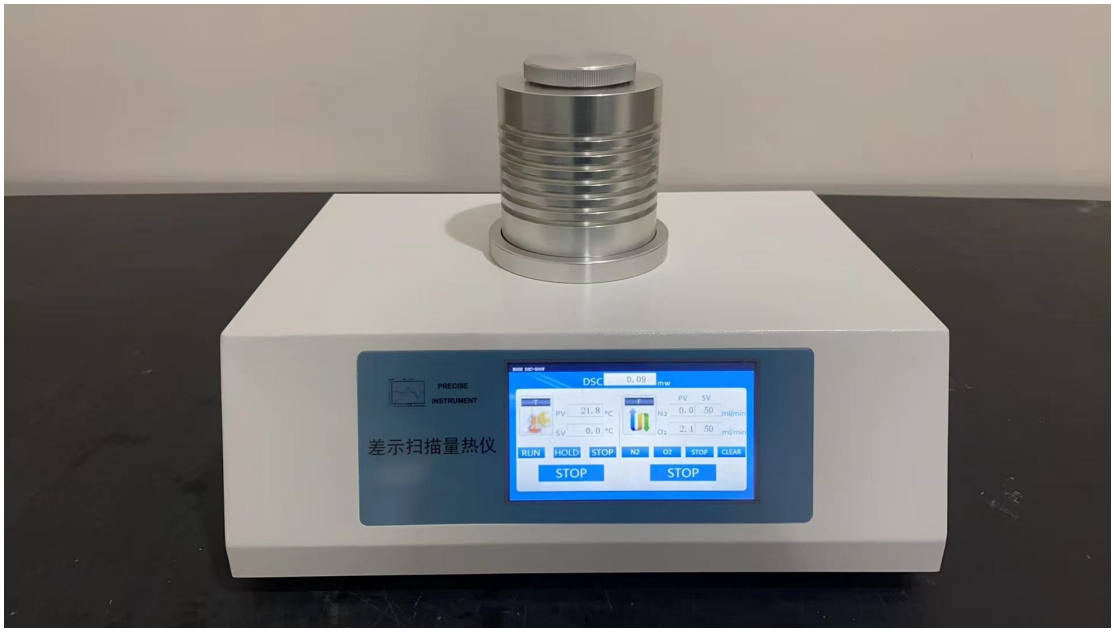

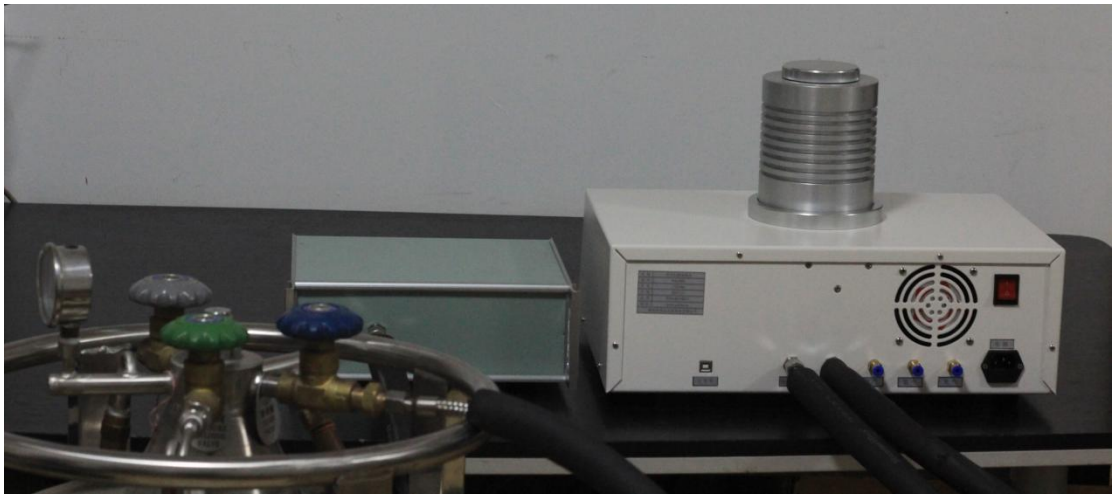

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