DSC-800

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.

technical parameter

DSC range	0～±200mW	data interface	USB standard interface and supporting software
heating rate	0.1～50℃/min	temperature resolution	0.01℃

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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 scanning	Atmosphere control	Gas mass flowmeter
display mode	24bit color, 7-inch touch screen	working power supply	AC220V 50Hz/60Hz
Overall dimension (w*d*h)	42*38*27cm	Net weight	17KG
Packing size (w*d*h)	58*45*40	Gross weight	20KG
temperature range	Room temperature ~ 800℃		
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. DSC series 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.

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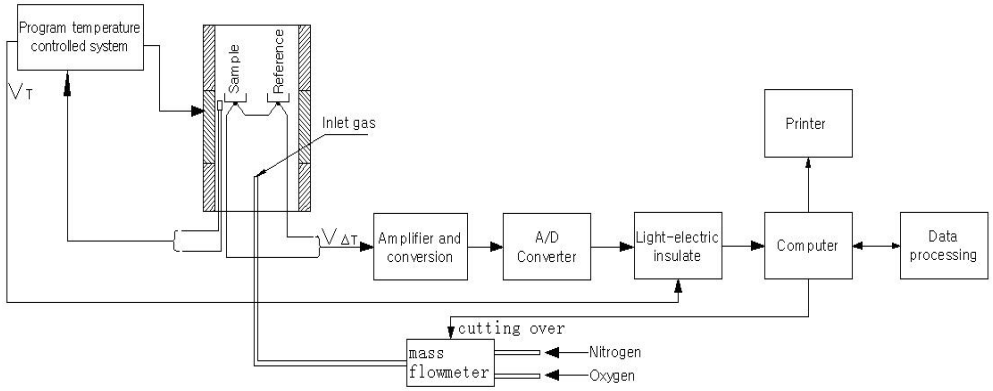
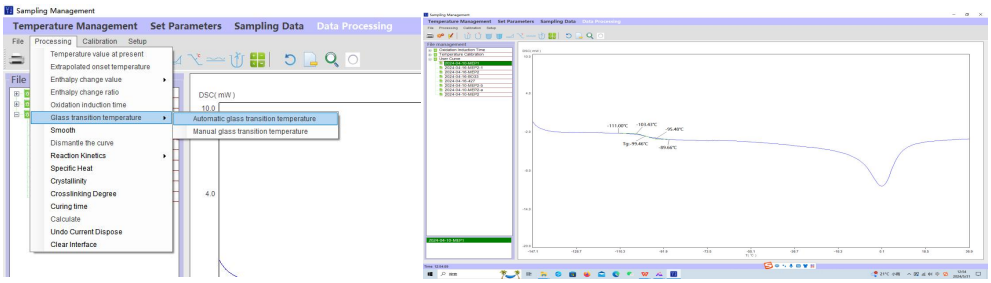
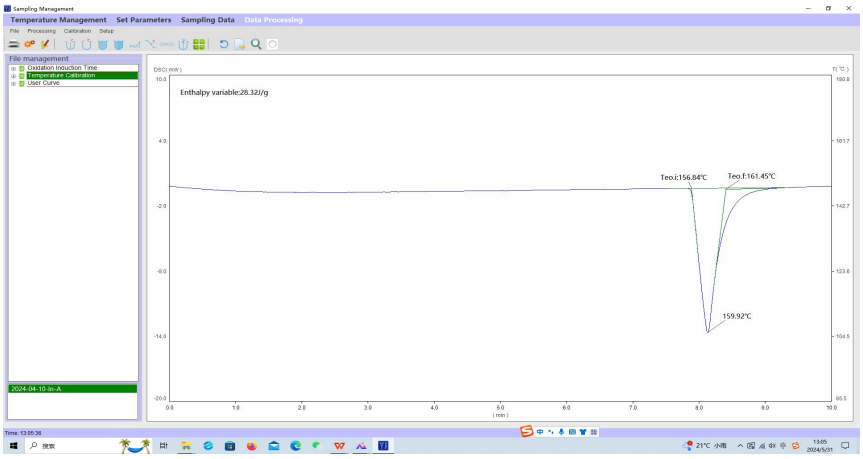


Experimental atlas



Interface of automatic calculation results of glass transition temperature



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

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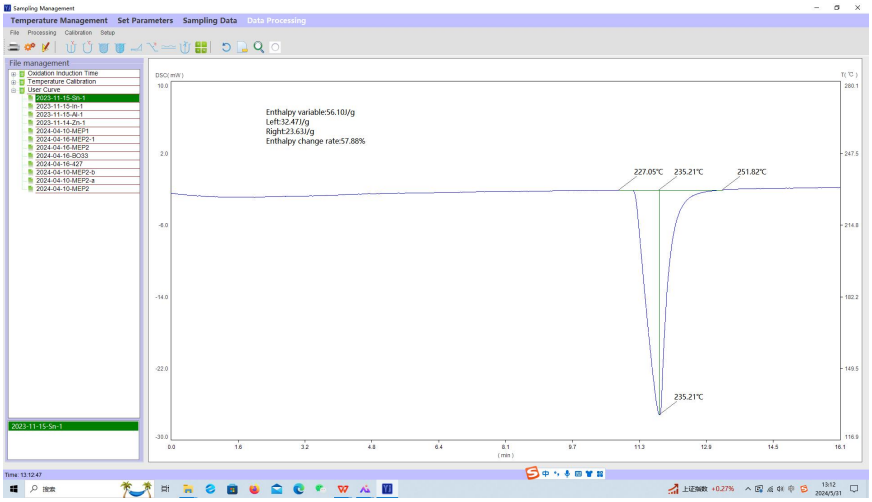
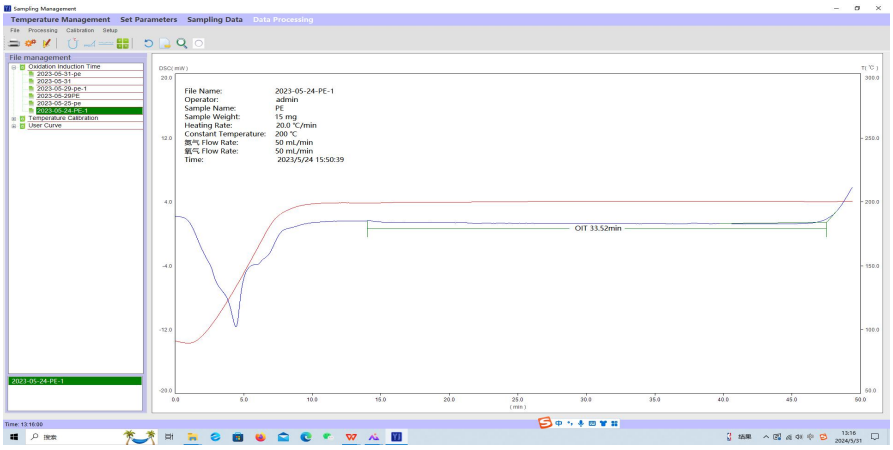


Enthalpy change ratio calculation result interface



Interface of calculation results of oxidation induction period

List of accessories for DSC-800

serial number	Nominal name	quantity
1	Heating furnace and main cabinet	one
2	U disk of differential scanning calorimeter working program	one
3	feed cable	one
4	signal cable	one
5	Glass tube fuse (3A)	four
6	tweezers	one
7	Sample spoon	one

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8	certificate	one
9	Pressure reducing valve connector	2
10	Ventilation joint	four
11	Aluminium crucible	200
12	Alumina crucible	200
13	Standard samples (In, Sn, Zn, Al,)	0.5g each
14	Instructions for differential scanning calorimeter	one
15	Ventilation plastic pipe (blue)	3 meters
16	Ventilation plastic pipe (orange)	3 meters
17	Software encryption dog	one