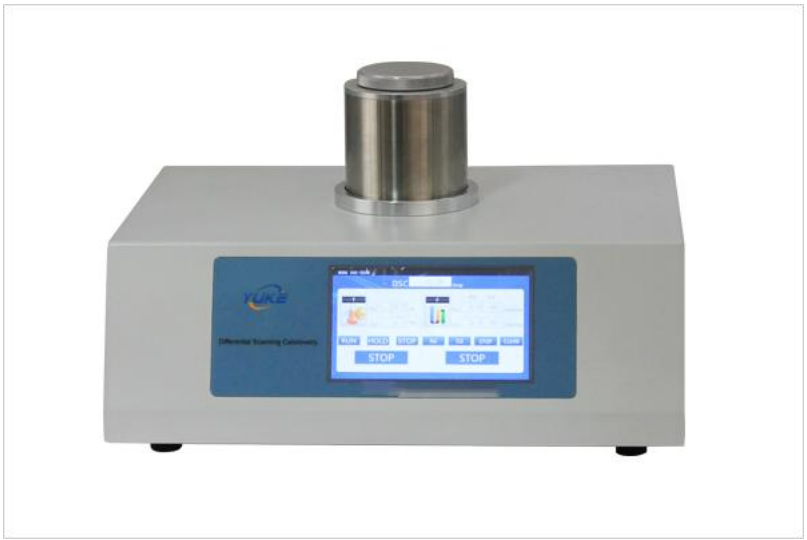
DSC-500B

Differential Scanning Calorimeter



Differential Scanning Calorimetry (DSC), as a classical thermal analysis method of thermal effects at controlled programmed temperatures, has long been widely used in today's research and development, process optimization, quality control and failure analysis of various materials and chemical fields. Using DSC, we can study the phase transition of inorganic materials, the melting and crystallization process of polymer materials, the polycrystalline phenomenon of drugs, the solid/liquid phase ratio of fats and oils and other foodstuffs, and so on.

Main features

- Simple to operate, no testing experience required, only a small amount of training required
- Software for computer screens of all resolutions
- Dual temperature probes to ensure high accuracy and repeatability
- Experimental process, no need for supervision
- Digital gas mass flow meter automatically switches between two gas flows
- Software can be upgraded online for free
- Seven-inch large screen LCD display, graphs and curves at a glance

Technical Parameters

DSC range	0 to ±200mW	temperature range	Room temperature ～ 500℃
heating rate	0.1～50℃/min	Temperature resolution	0.01°C
Temperature Accuracy	±0.1°C	Temperature Repeatability	±0.1°C

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DSC Accuracy	±2%	DSC Resolution	0.001mW
DSC resolution	0.001mW	Temperature control method	Full automatic control
curve scan	temperature rise scan	Atmosphere control	Gas Mass Flow Meters
Display mode	24bit color, 7" touch screen	Operating power	AC220V 50Hz/60Hz
Dimensions (w*d*h)	46*35*27cm	Net weight	14.5KG
Package size (w*d*h)	58*45*40	gross weight	18KG
transducers	Domestic high sensitivity		
Computer Requirements	**Minimum hardware configuration** ● Celeron Duo ● 2GB system memory ● Resolution 1366*768 pixels or higher ● Hard disk 500G	**Minimum software configuration** ● Win10/Win11 or higher ● Adobe PDF Reader	

Examples of applications

Measurement of physical and chemical changes related to heat, such as glass transition temperature, melting point, melting temperature, crystallization and heat of crystallization, solidification, heat absorption and exothermic peaks, heat of reaction of phase transition, thermal stability of the product, curing/cross-linking, oxidation-induced period, reaction kinetics, specific heat and so on. Note: The thermal stability experiment of oxidation induction period applies to the national standard GB/T17391-1998, GB/T19466.6-2009, GB/T19812.1-2017, SH/T1750-2005 and so on.

Instrument Principle

Differential scanning calorimetry (Differential scanning calorimetry) is a technique to measure the power difference between the substance and the reference under the program temperature control with the change of temperature.DSC-500 series differential scanning calorimeters are mainly composed of heating furnace, main unit, micro-volt amplifier, A/D converter, data acquisition system, gas flow control system, computer, printer and other components, and supplemented by two-way atmosphere switching, the measurement results are processed by the computer data processing system.

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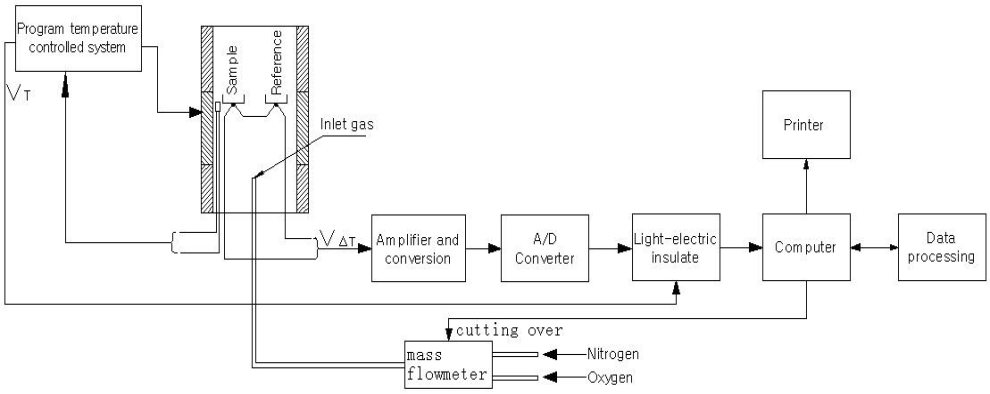
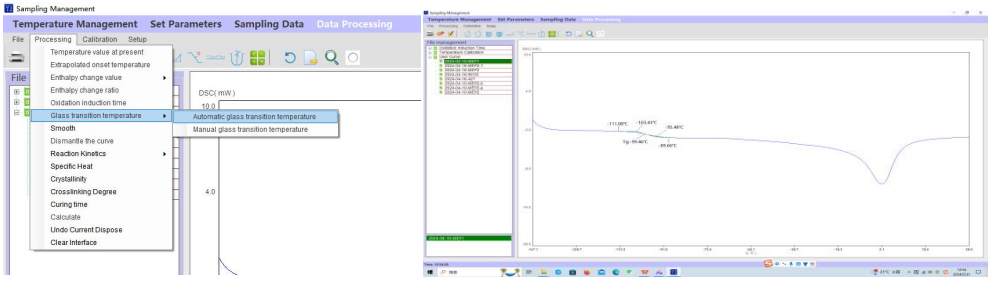
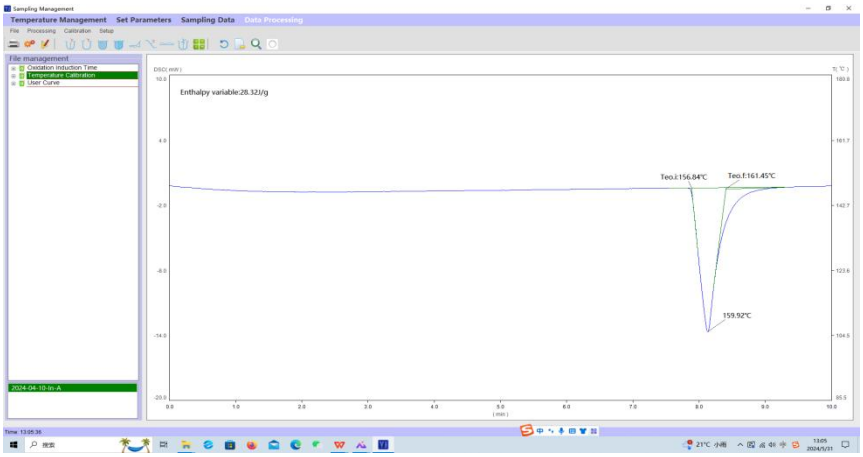


experimental atlas



Interface of automatic calculation results of glass transition temperature



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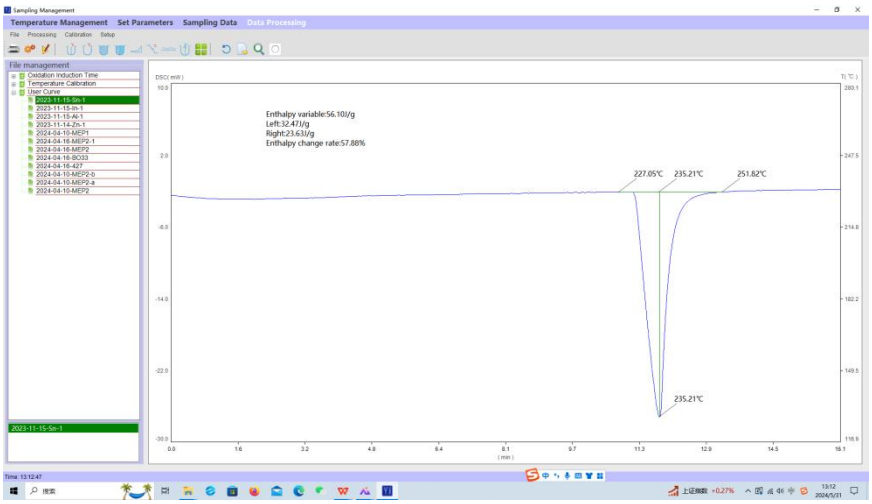
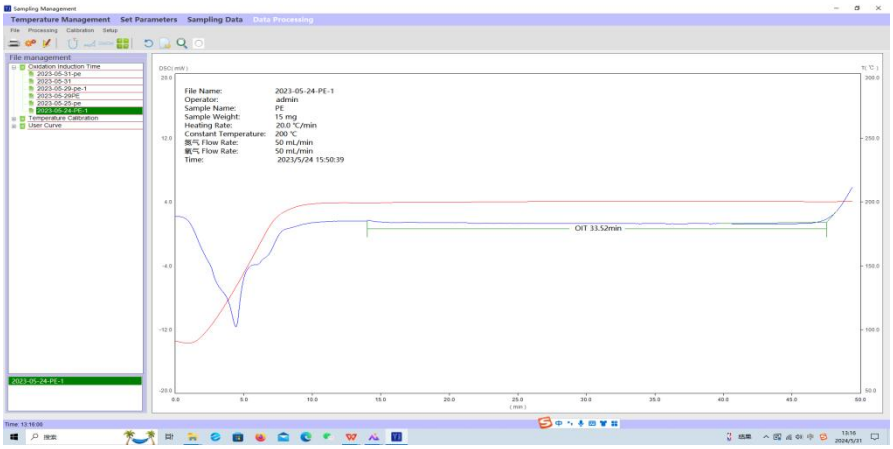
Enthalpy variable, epitaxial starting point, melting point calculation result interface



Enthalpy change ratio calculation result interface



Interface of calculation results of oxidation induction period

DSC-500 Series Accessories List

No.	Name	Quantities
1	DSC-500 heating furnace and main chassis	1
2	DSC-500 Differential Scanning Calorimeter Working Program U disk	1
3	power cable (of an appliance etc)	1
4	signal cable	1
5	Glass tube fuse (3A)	4
6	tweezers	1

7	spoon	1
8	certificate of conformity	1
9	Pressure Reducing Valve Fitting	2
10	air vent	4
11	Aluminum crucible (Φ6.7×3mm)	400
12	Standard samples (In, Sn, Zn)	0.5g each
13	DSC-500 Differential Scanning Calorimeter Specifications	1
14	Ventilation plastic tube (blue)	3 meters
15	Ventilation plastic tube (orange)	3 meters
16	software dongle	1

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