

DIFFERENTIAL THERMAL ANALYSIS

Differential Thermal Analysis (DTA) is the most common thermal analysis method due to its wide range of information provided. The TSP high temperature DTA is designed to deliver highest calorimetric sensitivity, short time constants and a condensation free sample chamber. These features guarantee superior resolution, baseline stability over the entire instrument lifetime. Thus providing an indispensable tool for material development, R&D and quality control.

The modular concept of the DSC -Differential Scanning Calorimeter- and DTA systems allows the use of different furnaces with a temperature range from 25 up to 1500°C, different DSC / DTA measuring systems as well as many different crucibles. Additionally the systems can be coupled to a MS or FTIR.



Advantages

- Purity measurements
- Melting point determination (onset / offset)
- Energy content of explosives

Feature

- Temperature range 25°C up to 1500°C
- Low heat capacity measuring head
- Different furnaces available / 25°C up to 1500°C
- Static and dynamic gas atmospheres
- MS Windows 32 Bit Software



Applications

- Polymers
- Organics
- Ceramic / Glass / Building Materials
- Metals / Alloys
- Inorganics
- Thermal Insulation Materials
- Thermoelectric Materials
- Adhesives and Sealants
- Batteries
- Photovoltaic
- Research / Development, Academia
- Polymer Manufacturing and - Processing
- Foods and Cosmetic Industries
- Chemical Industry
- Vehicle Construction
- Electronics Industry
- Metal Industry
- Ceramics, Glass, and Building Materials Industries
- Nuclear Industry
- Pharmaceutical Research, Development and Quality Assurance



Specifications

DTA system

Temperature range	RT - 1500 °C
Sensor temperature	RT - 1650 °C
Atmospheres	inert , static , vacuum
Vacuum	< 0.1 mbar
Gas	one inlet for N2 gas
MFC range	0 to 200 ml/min.
MFC resolution	1 ml/min.
Scanning rate	0.01 up to 50 °C/min.
Temperature accuracy	0.5 °C
Time constant	7 sec.
Resolution	0.1 µV
Measuring range	50 - 1000 µV
Power requirements	220 V , 50 Hz

DSC system

Temperature range	RT - 1500 °C
Sensor temperature	RT - 1650 °C
Atmospheres	inert , static , vac.
Scanning rate	0.01 up to 50 °C/min.
Temperature accuracy	0.5 °C
Time constant	5 sec.
Resolution	0.2 mW
Measuring range	± 40 mW
Interchangeable DSC & DTA heads	