

UMF Equipment - Differential Scanning Calorimeter

Mettler Toledo DSC3

Differential Scanning Calorimeter (DSC) measures enthalpy changes associated with transitions and reactions and the temperatures at which these processes occur. It measures the amount of heat absorbed (endothermic) or release (exothermic) to study kinetics parameters such as pre-exponential factor, activation energy and reaction order. Typical applications include the study of thermal effects such as melting, crystallization, chemical reactions, polymorphic transitions, vaporization, changes in heat capacity, glass transition and many other processes.

Features:

- Revolutionary MultiSTAR[®] FRS5 sensor has star-shaped arrangement of 56 thermocouples providing guaranteed flat baselines, high sensitivity and unprecedented temperature resolution
- Temperature range from -90 to 400 °C and heating / cooling rates from 0.1 to 300 °C /min
- Examples of thermal events and processes that can be determined by DSC
 - Melting behavior
 - Curing
 - Crystallization and nucleation
 - Stability
 - Polymorphism
 - Miscibility
 - Liquid-crystalline transitions
 - Effects of plasticizers
 - Phase diagrams and composition
 - Thermal history
 - Glass transitions
 - Heat capacity and heat capacity changes
 - Reactivity
 - Reaction and transition enthalpies
 - Reaction kinetics
 - Purity

Please refer to supplier information page:

https://www.mt.com/hk/en/home/products/Laboratory_Analytics_Browse/TA_Family_Browse/DSC/DSC_3.html

for further details of the system.

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