

# Differential Scanning Calorimetry—DSC

## DSC-301 LT

Differential Scanning Calorimetry (DSC) is one of the most frequently used techniques in the field of thermal characterization of solids and liquids. Many international norms such as ISO 11357, ASTM D3417, ASTM D3418 and ASTM E793, ASTM E794 describe this technique and the exact procedure in detail.



**DAMA Pajouh Arvin** DSC301-LT is a complete, compact, easy to use, bench top system comprised of furnace (for variety of temperature range, including sub-ambient), a changeable sample holder system, a furnace controller data acquisition system (stores temperature and DSC signal data)

DSC 301 provide a powerful tool for determination of Transformation enthalpies.

Further application examples are the evaluation of glass transition, degree of crystallinity, Oxidative stability.

DSC 301 are frequently used for R&D and Quality Control of solids, Liquids, Powder and pastes to determine their:

- Melting / Crystallization behavior ( $T_m$ )
- Determination glass transitions ( $T_g$ )
- Oxidative stability
- Phase changes
- Decomposition study
- Degree of crystallinity
- Purity determination

### DSC 301 are typically used in:

- Polymer industry
- food industry
- Cosmetic industry
- Aerospace industry
- Metal/Powder industry
- New material research
- Automotive industry
- Polymer industry

### Technical Specification:

- Furnaces:  $-170 \dots 600^\circ\text{C}$
- Heating Rate: 0.1 to 50 K/min
- Temp. accuracy: 0.1 K
- Enthalpy accuracy:  $< 1\%$
- Cooling options: Forces air (up to Rt)  
LN2 (up to  $-170^\circ\text{C}$ )



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