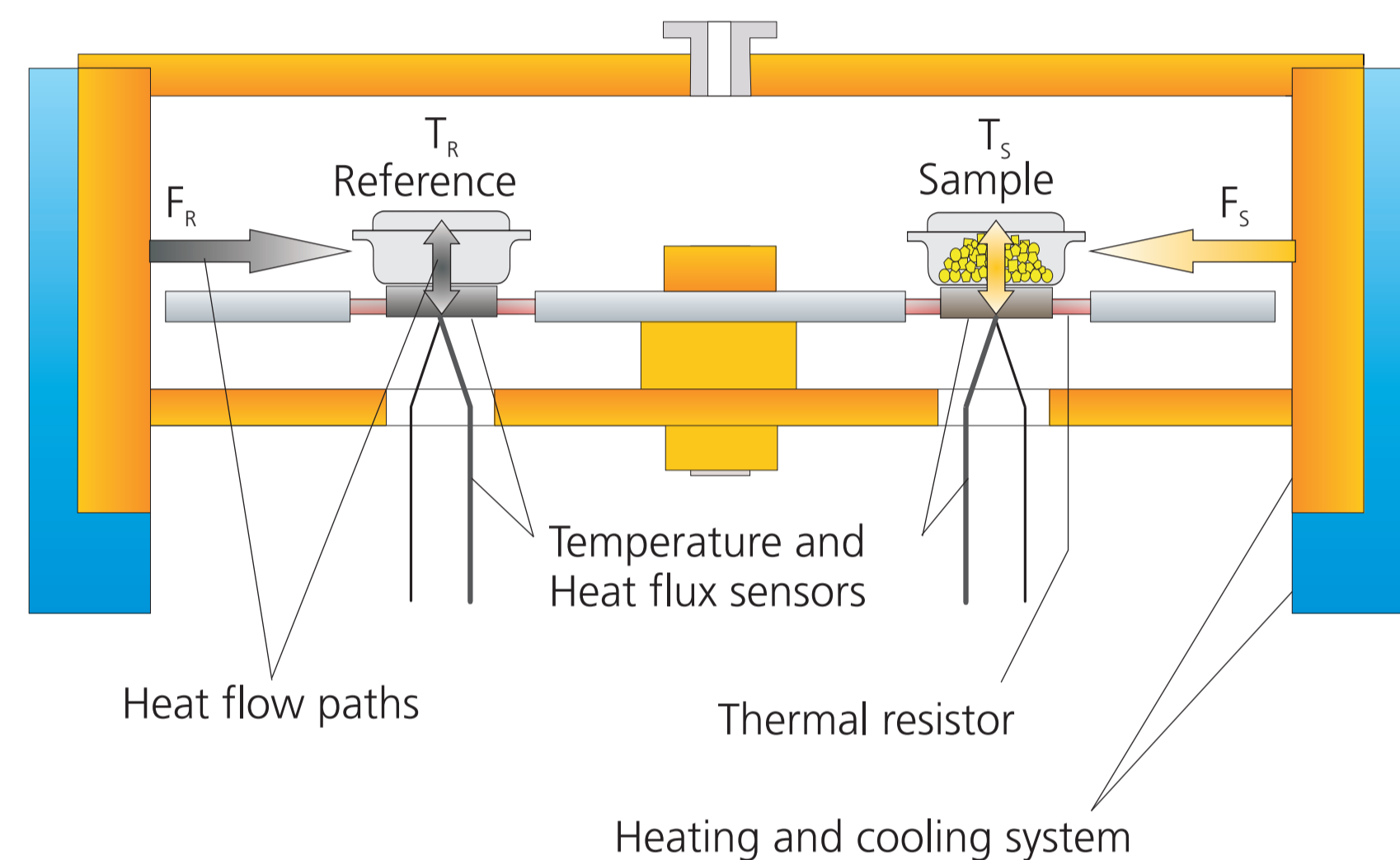


Leading Thermal Analysis.

DSC 204 F1 Phoenix[®] - one fits all

Differential Scanning Calorimetry (DSC)

A technique in which the difference in energy input into a substance and a reference material is measured as a function of temperature, while the substance and reference material are subjected to a controlled temperature program. (ICTAC, ASTM E 473-85, ISO 11357)



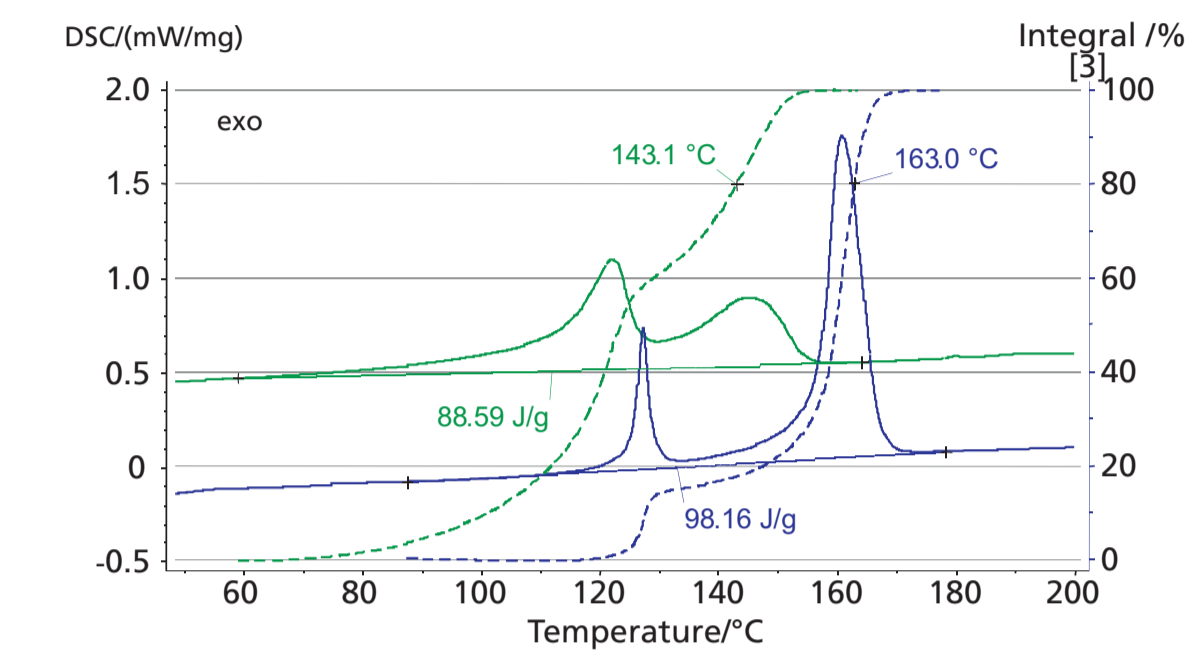
DSC-features

- Determination of onset, peak, inflection and end temperatures
- Automatic peak search
- Transformation enthalpies: analysis of peak areas (enthalpies) with selectable baseline and partial peak area analysis
- Evaluation of crystallization
- Comprehensive glass transition analysis
- Automatic baseline correction
- Specific heat determination
- BeFlat[®] for optimized baselines through a multi-dimensional, temperature and heating rate dependent polynomial
- Optional TM-DSC (temperature modulation) for separation of reversing (thermodynamic) and non-reversing (kinetic) effects
- Sector-specific software solutions for conformance to e.g. GLP, GMP and 21CFR Part 11



DSC 204 F1 Phoenix[®] ASC

Application



The Proteus[®] software's integral analysis provides an exact measurement for solid-liquid ratio at every temperature. The comparison of two PE-PP blends shows that one sample is 80% melted already at 143°C, the other only at 163°C.

Sensors



-Sensor

Due to the high conductivity of the silver carrier plate, the -Sensor greatly improves the response time for heat flow differences, thus leading to top performance through the separation of overlapping effects in the DSC curve.



μ-Sensor

The μ-Sensor's design is based on a specially doped silicon wafer used as a sensor disk. Along with the sensitive temperature sensors, the μ-sensor offers a level of calorimetric sensitivity that had been considered impossible in DSC until now.

Specifications

- Temperature range: -180°C ... 700°C
- Wide range of heating rates: 0.001 K/min ... 200 K/min
- Fast cooling: max. 200 K/min
- Very short time constant with -sensor
- Extremely high sensitivity with μ-sensor
- Base line optimization through BeFlat[®]
- Gas tight measuring cell, ideal for coupling to FTIR or MS
- Gas control for 2 sample gases and 1 protective gas through integrated mass flow controller and software
- Compressed air cooling: RT ... 700°C
- Intracooler for the extended range: -85°C ... 600°C
- Automatically controlled liquid nitrogen cooling: -180°C ... 700°C
- Automatic sample changer: DSC 204 F1 Phoenix[®] ASC for 64 samples and reference crucibles (option)
- Temperature modulated DSC (TM-DSC) Software option