

Thermogravimetry Analysis and Differential Scanning Calorimetry Analysis (TGA/DSC)



Thermogravimetry (TGA) is a technique that measures the change in weight of a sample as it is heated, cooled or held at constant temperature. Its main use is to characterize materials with regard to their composition. Application areas include plastics, elastomers and thermosets, mineral compounds and ceramics as well as a wide range of analyses in the chemical and pharmaceutical industries.

If you want to simultaneously measure heat flow (DSC) in addition to weight change, the DSC sensor consists of six thermocouples and the heat flow is determined from the calculated or measured temperature difference.

LABORATORY FACILITY METTLER TOLEDO TGA/DSC1

TGA with the top-of-the-line METTLER TOLEDO ultra-micro balance with unique built-in calibration weights ensures unbeatable accuracy.

Features and Capabilities of the TGA/DSC 1:

- ultra-microgram resolution over the whole measurement range
- measures small and large sample masses and volumes
- analyze samples from ambient to 1100 °C
- rely on the balance technology leader
- for simultaneous detection of thermal events
- ensures a properly defined measurement environment

APPLICATIONS

- Adsorption and desorption of gases
- Quantitative content analysis (moisture, fillers, polymer content, materials, etc.)
- Identification of decomposition products
- Thermal stability
- Melting behavior, Crystallisation, Glass transitions
- Heat capacity