

# TG-DTA (Thermo Gravimetric- Differential Thermal Analytical)

열중량-열시차 동시분석법

Thermogravimetric - differential scanning calorimeter (TG-DSC) is a powerful thermo-analytical technique that combines a DSC and a TGA into one instrument that performs TG and DSC ,DTA on the same sample at the same time.

The resulting DSC and TGA curves are simultaneously plotted on a dual Y-axis graph so the DSC's fingerprint and the TGA's weight loss/gain characteristics are directly compared as the test sample is heated.

## Model

Q600 (TA Instrument, US)

## Specifications

- Sample Capacity : 200 mg
- Balance Sensitivity : 0.1  $\mu\text{g}$
- Temperature Range : Ambient to 1500  $^{\circ}\text{C}$
- Heating Rate : Ambient to 1500  $^{\circ}\text{C}$
- 0.1  $^{\circ}\text{C}$  to 25 /min
- DTA Sensitivity : 0.001  $^{\circ}\text{C}$
- Calorimetric Accuracy/Precision:  $\pm 2\%$

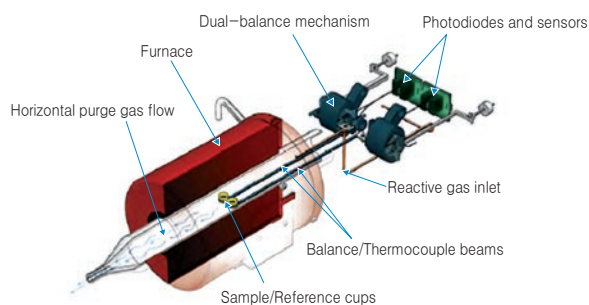
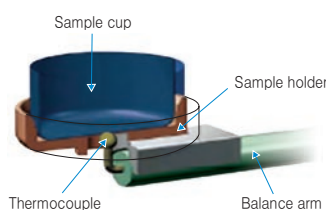
## Applications

- Analysis of melting temperature( $T_m$ ), Specific heat, Decomposition effects, phase transformation, reaction kinetics
- Analysis of thermal stability and compositional analysis, oxidative stability



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## Diagram of TGA/DSC



## Graph of TGA/DSC

