



Centre for Research in Nanotechnology & Science  
Sophisticated Analytical Instrument Facility  
IIT Bombay

## "Theory and Instrumentation of DSC and TGA and its applications"



**Abstract:** Differential scanning calorimetry (DSC) and thermogravimetric analysis (TGA) are two of the most widely used thermal analysis techniques in the characterization of crystalline and amorphous pharmaceutical materials. This webinar will help to understand the instrumentation of DSC and TGA. DSC measures various thermal transitions associated with a material when it is heated or cooled in a controlled manner. Such transitions include melting, the glass transition, crystallization etc. TGA measures mass change in a sample, and it is used to detect evaporation, decomposition, oxidation and other effects of temperature change that cause mass changes. DSC and TGA have diverse applications in the field of polymers, composites, pharmaceuticals, foods, energy, petroleum, inorganic and organic chemicals.

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