



# High-pressure Thermal Analysis

## HIGH-PRESSURE DIFFERENTIAL SCANNING CALORIMETRY (HP-DSC)

### KEY WORDS

HP-DSC,  
OXIDATIVE STABILITY,  
HIGH PRESSURE

### DESCRIPTION

The thermal behavior of materials is studied under high pressure conditions. This technique is especially useful for determining the oxidative stability of a material by measuring the Oxidation Induction Time (OIT). It allows for the evaluation of the effectiveness of antioxidants in polymers, oils, and lubricants, and the study of pressure-affected reactions, such as the curing of certain compounds.

### AVAILABLE TECHNIQUES AND/OR EQUIPMENT

- High-pressure differential scanning calorimeter

### APPLICATIONS

- Oxidative stability of polyolefins (PE, PP)
- Quality control of oils, greases and lubricants
- Evaluation of antioxidant additives
- Studies of rubber vulcanization
- High-pressure curing kinetics

### CONTACT US

[labiq\\_fiqbog@unal.edu.co](mailto:labiq_fiqbog@unal.edu.co)

[Universidad Nacional de Colombia](http://www.unal.edu.co)