UNIVERSIDAD CENTRAL

TECHNICAL SERVICE

Failure Analysis of Plastic Materials

MATERIAL BEHAVIOR UNDER CRITICAL VARIABLES

KEY WORDS

MATERIAL FAILURES,
PERFORMANCE,
TECHNICAL TESTS

CONTACT US

direccioninvestigacionytc@ucentral.edu.co

Universidad Central

DESCRIPTION

The service offers a comprehensive analysis of structural, degradation, and chemical bonding properties using Fourier Transform Infrared Spectroscopy (FTIR) to support the challenge of ensuring the quality of post-consumer recycled (PCR) plastic for its efficient and safe reintroduction into new products. This allows the producing company to understand and control chemical, physical, thermal, mechanical, and rheological properties for the intended reuse applications. Furthermore, these procedures provide data and indicators for producing a functional, stable, safe, and compliant material.

AVAILABLE TECHNIQUES AND/OR EQUIPMENT

- Fourier Transform Infrared Spectroscopy (FTIR)
- Injector
- Measurement of injection variables in pressure, temperature, and time
- Mold design
- Plastic injection molding machine
- Thermoforming machine

APPLICATIONS

- Extended producer responsibility (EPR)
- Producers of containers, packaging and plastic items