



Differential Scanning Calorimeter

Thermal analysis of PS



Chip-DSC 1

Introduction

Thermal analysis is a very useful tool for the analysis of various compounds. Differential Scanning Calorimetry (DSC) gives information about phase changes and chemical reactions.

The Chip-DSC is a powerful tool to identify and evaluate polymers like PS.

Information

Using a DSC for analysing materials is a common technique. In this application, the Chip-DSC was used for measurements of PS granules.

PS, the short form for Polystyrene is a naturally white thermoplast. It is very common used for safety packaging but also food packaging because it is cheap and usable for food contact. The glass transition T_g appears at ~ 100 °C. In this studie, three different batches were investigated to compare quality of raw materials. The glass transitions were nearly identical.

Table 1. Experimental Conditions

Instrument	Chip-DSC 1
Heating rate	50 K/minute
Sample Mass	approx. 15 mg
Sample Pan	open aluminum pans
Gas	Static air

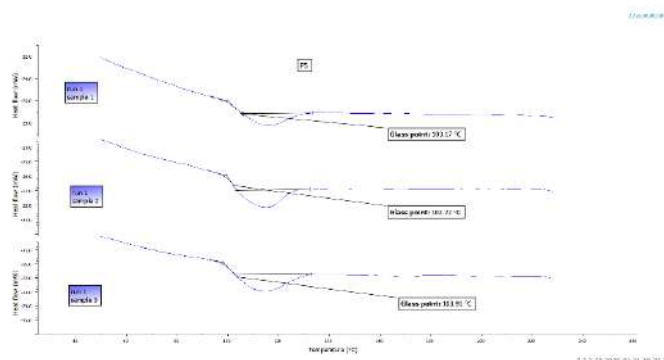


Fig 1: PS granule, 3 samples