



## Dairy Foods

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# Chapter 11 - Application of differential scanning calorimetry to dairy foods

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## Abstract

This chapter first familiarizes the reader with the principles of differential scanning calorimetry (DSC) analysis as a technique used to measure the temperature and heat flux associated with transitions in samples as a function of time and temperature. Likewise, the main thermal events observed in a thermogram and the interpretation of the data obtained are analyzed. The main objective of the chapter is to discuss the application of DSC analysis in dairy products, based on the relationship between the thermal properties of the majority components of milk (fat, protein, and lactose) and the functional properties and quality of dairy products. For this, an analytical review of various studies (establishing conditions and parameters used) of fat, protein, and lactose from milk and dairy products is presented to establish their behavior and subsequently highlight the practical application of the data derived from the DSC analysis in the dairy industry.

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