

## **Tuning Fat blend Functionality for Ice Cream and Encapsulation**

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Fats have multiple functions in food products, giving it texture and taste, delivering essential nutrients and carrying a wide spectrum of aromas.

In this contribution, fats are investigated as texturizers in two types of applications: encapsulation of salt by spray chilling, and in ice cream production.

In spray chilling, the fat blend composition determined the quality and the size of the fat particles. We were able to obtain fat particles in the size range of 5 to 100 micrometer. Furthermore, we show that the release of encapsulated salt can be influenced by the use of emulsifiers.

Next, we show that in ice cream preparation the interaction between fat blend and emulsifier can be used to control ice cream properties. Two types of fat blends in combination with three types of emulsifiers were evaluated. It was found that the microstructure of the pre-emulsion depended largely on the type of emulsifier. Remarkably, the type of fat blend had little influence on the texture-related sensory characteristics of the ice cream as tested by an internal panel, although the melting behavior and flavor were different.