

Structural improvements of dairy products through high intensity ultrasound treatment

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Aim and Description:

High-intensity ultrasound (HIU) has the potential to improve the quality of dairy products and reduce production costs. Enhancing formation of lipid crystallization in cream for butter production to decrease production time will be investigated as will the improvement of yoghurt texture properties. Ultrasound technology will be optimized for these processes taking into account that off-flavour development is a potential risk.

The objectives are

- 1) to understand the effect of high intensity ultrasound on fat crystallization,
- 2) clarify ultrasonic application in building protein networks in dairy products and
- 3) to recommend how potential off-flavour can be avoided when using ultrasound treatment for dairy products