



Topical Research Meeting on Physics in Food Manufacturing

(P7) Assessing comminution processes for fat based suspensions: effects on particle properties and rheology

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Comminution operations, despite their prevalence and the incentives for their optimisation, remain difficult to analyse due to the range of materials and processing methods in use in the food industry and a relative scarcity of published data. For this study, concentrated fat based suspensions of sugar and wafer have been produced to model a confectionery filling via two distinct means of size reduction: using a roll refiner and using a butchery bowl cutter. We aim to examine the effect that the choice and parameterisation of processing method has on the particulate properties of the suspensions' solid content and the rheology of the systems. Hitherto collected data is presented, demonstrating significant differences in particle size and resulting viscometric behaviour.