

Composition and process approaches underpinning the mechanical properties of oleogels

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January 7, 2022

Abstract

Consumers are becoming aware of the relevance of eating low levels of trans and saturated fats in processed foods. In addition, many countries are adopting regulatory measures on the use of these ingredients. For this reason, the exploration of new technologies capable of producing structures that trap liquid oil (composed of unsaturated fatty acids, considered healthier) has been widely investigated in order to replace saturated and trans fats in food products. One of the most promising technologies is the so-called oleogels, which present a great challenge to mimic sensory attributes related to the texture of processed foods based on saturated fats. In this review, we discuss how the different approaches used in the production of oleogels, direct or indirect methods, as well as compositional variables, such as oleogelators and mixing ratio, can directly influence the mechanical properties of these structures. An overview of the parameters that can interfere with these properties contributes to a better understanding of the building of the oleogels and their possible applications.

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