

TAL 797 – Seminário

13/03/2024

Hybrid systems: how to increase protein interactions?

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Over the past years, consumer demand for products with high amounts of proteins has increased. In this context, many companies in the dairy industry are developing several products with high protein content through the incorporation of milk-derived proteins. However, the production of these proteins is considered expensive and responsible for several damages to the environment, such as the contribution to deforestation and ozone layer destruction. Furthermore, with increasing world population, a risen demand for animal proteins is expected, making their production even more unsustainable due to the need for more resources, such as land and water. Therefore, replacing animal proteins with proteins from other sources, such as vegetable proteins, has emerged as a strategy to mitigate these environmental issues. Indeed, vegetable proteins production has been considered by many reports to be cheaper and more sustainable compared to animal proteins, making them suitable for protein enrichment in dairy products. However, their combination with dairy proteins could cause alterations in structure and stability of these products, such as yogurts. Therefore, favoring the interaction between these proteins has been considered a method to improve product structure and stability. To obtain a better protein interaction some alternative technologies can be applied, such as ohmic heating (OH). OH is an advanced heating technology, highly energetic and time-efficient which does not require fossil energy. Its application in food industry can be used for several reasons, such as microbial and enzyme inactivation, and protein structure modification, among others. Thus, the application of this technology in hybrid systems of dairy and plant proteins may improve their interactions, promoting the development of products

rich in proteins, and reducing environmental issues.

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