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Ensuring product stability, quality, and safety while introducing novel sustainable packaging solutions

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Abstract

The rapidly evolving consumer trends and rising awareness about the ecological impact of their products makes it vital for packaging, food and ingredient manufacturers to be capable of quickly adapting processes to meet the consumer demands. The most striking and discussed topic is most likely the concern about the use of non-recyclable packaging materials and their impact on the environment including waste in the oceans and sustainable use of resources. However, manifold attempts to remove or replace undesired ingredients or packaging materials, one often faces hurdles linked to product stability, quality and safety, particularly in products with a large overall surface area such as food powder. To overcome this drawback material-science driven approaches are required tackling all aspects of the value chain – modifying product recipes, processes, storage & distribution and packaging materials. In the present talk we will address the arising challenges in developing recyclable packaging materials with strong enough barrier properties as well as the impact of lowering the barrier properties (moisture transmission) on the product properties of food powders. Different approaches targeting recipe or process optimisations and adaptations of the storage and distribution will be highlighted aiming at improving the physical stability of the powders towards temperature and humidity changes. Such multi-functional challenges can only be addressed by material-science based investigations of the underlying degradation mechanisms and approaches aiming at optimising the functional behaviour of food powders while meeting the consumer demands going to more sustainable food production.

Biography:

Linda Bruetsch graduated from the ETHZ (Zurich) with a PhD in Food Process Engineering, in a collaboration with Buehler Group (Uzwil). As a scientist at Nestle Research in Lausanne, Switzerland since February 2018 she specializes in employing novel process technologies and ingredients to promote innovation across a variety of business units, most notably with an emphasis on plant-based dairy alternatives and ultra-affordable products.

Speaker Publications:

1. Linda Brütsch, Fiona J. Stringer, Simon Kuster, Erich J. Windhab and Peter Fischer, Food and Function, vol. 10: no. 8, pp. 4854-4860, Cambridge: Royal Society of Chemistry, 2019.
2. Linda Brütsch, Seline Rugiero, Stéphanie Spoerry Serrano, Christian Städeli, Erich J. Windhab, Peter Fischer and Simon Kuster, Journal of Agricultural and Food Chemistry, vol. 66: no. 46, pp. 12353-12360, Washington, DC: American Chemical Society, 2018.
3. Linda Brütsch, Liliane Tribolet, Stéphane Isabettini, Patrick Soltermann, Andreas Baumann and Erich J. Windhab, Food and Function, vol. 9: no. 5, pp. 2951-2961, Cambridge: Royal Society of Chemistry (RSC), 2018.
4. Linda Brütsch, Fiona J. Stringer, Simon Kuster, Erich J. Windhab and Peter Fischer, Food and Function, vol. 10: no. 8, pp. 4854-4860, Cambridge: Royal Society of Chemistry, 2019.
5. Linda Brütsch, Seline Rugiero, Stéphanie Spoerry Serrano, Christian Städeli, Erich J. Windhab, Peter Fischer and Simon Kuster, Journal of Agricultural and Food Chemistry, vol. 66: no. 46, pp. 12353-12360, Washington, DC: American Chemical Society, 2018.

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