



14th Baltic Conference on Food Science and Technology

# FoodBalt2021

“Sustainable Food for Conscious Consumer”

**Book of abstracts**



Tallinn 2021



**Center of Food and Fermentation Technologies**

**14th Baltic Conference on Food Science and Technology**

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**“Sustainable Food for Conscious Consumer”**

**Book of abstracts**

**Tallinn, Estonia**

**2021**



**Latvia University  
of Life Sciences  
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# **NEW APPROACHES TO VALORIZATION**

## AGRIO ET EMULSIO – DEVELOPMENT OF FRUITY MUSTARD CREAMS WITH BEETS AND BERRIES

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The project *Agrio et Emulsio* (POCI-01-0145-FEDER-023583) presents a proposal on Food Design & Technology, in the areas of vinegar products (*Agrio*) and food emulsions (*Emulsio*). One of the goals was the development of new mustard creams with innovative colours and flavours. Mustard creams are oil-in-water emulsions, but the practice is linked to medieval french vinegar traditions, introduced by the confraternity of *Maîtres Vinaigrier-Moutardier*. In the classic process, mustard grains are matured by immersion in vinegar; the phenomenon combines acid and enzymatic actions and solid-liquid extraction to mild the bitter/pungent taste. Thus, applying this ancestral practice, mustard (seeds, fragments, powder) was first submitted to maturation studies. Best results were obtained with seeds and powdered mustards in red wine vinegar, 4%(m/v) acidity. Maturation reached equilibrium on the 16th day, but pH evolution showed a practically stationary state from the 7th. The assays were carried out at room temperature using *Sinapis Alba (Linnaeus)* mustard species. The prototyping assays articulated technical, analytical (physical-chemical, rheological, microbiological) and sensory tests, predicting a future scale-up to industrial production. The panel of tasters selected, as final prototypes, a mustard cream with beet and raspberry and one with raspberry and blueberry, both submitted to stability tests and food pairing tests (2018), and later, a third prototype with strawberry and blackberry (2019). Each prototype has a distinct ingredients profile, mustard, fruits, olive oil, water, salt, sugar, honey and spices. The creams retain the *sui generis* taste of mustard tinted with the fruity flavour, plus an innovative purple rose colour.

**Keywords:** berries, mustard, vinegar

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