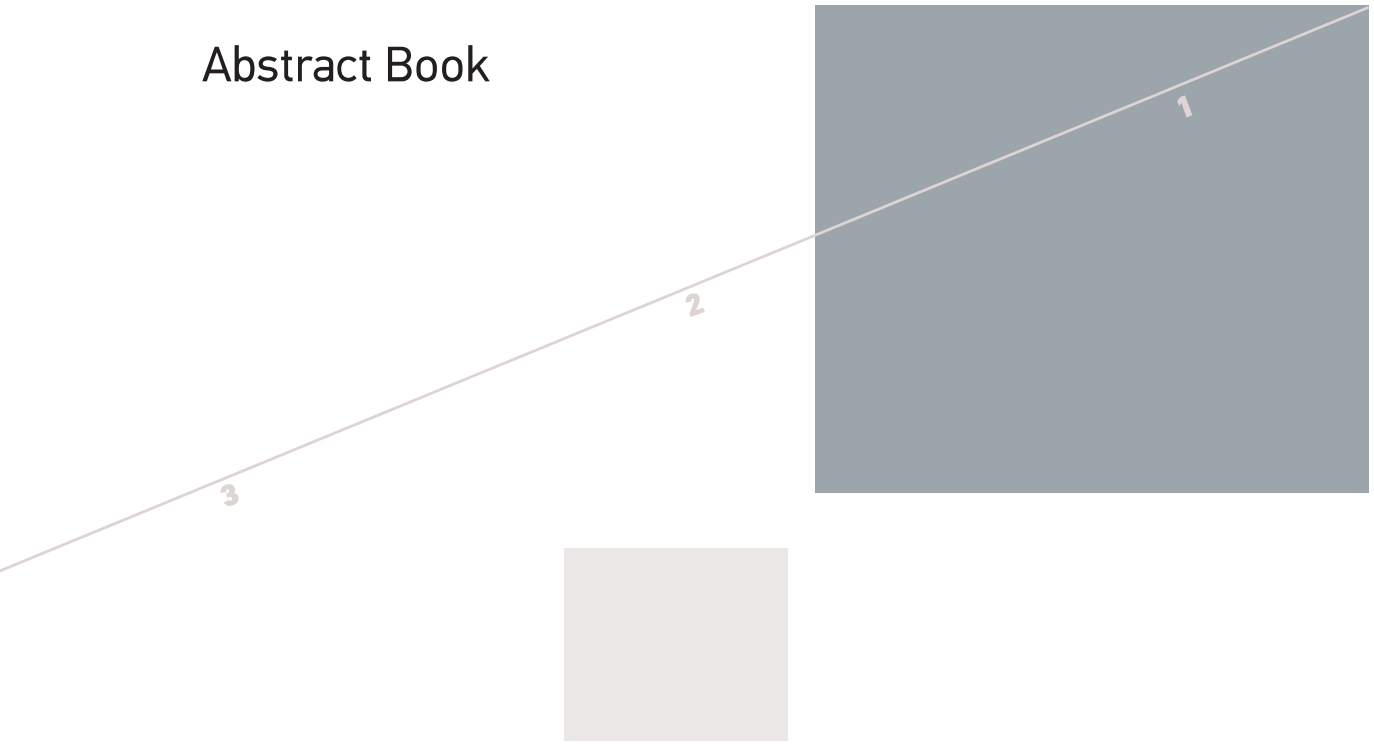
12th Baltic Conference on Food Science and Technology

Food R&D in the Baltics and Beyond

FoodBalt – 2018

Abstract Book



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Kaunas University of Technology

Department of Food Science and Technology

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"Food R&D in the Baltics and Beyond"

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Poster presentations

Session I

Bioactive food constituents and functional food / Development in agromaterials for food/ Novel food and nutrition / Chemistry behind sensorial, flavor and textural properties

Agrio et Emulsio – development of new products with vinegar and sweet potatoes

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Agrio et Emulsio project (POCI-01-0145-FEDER-023583) develops in vinegar and food emulsions areas. In line *Agrio,* vinegar technological ability enables the development of multiple products, by fermentative and non-fermentative prototyping. Articulating technological, laboratory and sensory tests and inspired both by the marinades in wine or vinegar of the Mediterranean gastronomy and in the traditional Portuguese recipe of "drunk" pear in red wine, two prototypes are undergoing final development, using sweet potato cultivars (*Ipomoea batatas*) as main ingredient. A sweet and sour "drunk" pickle has been developed by fresh pack pickling technology (without fermentation), using a spicy red wine vinegar with cinnamon and black pepper, sweetened with brown sugar and added Gin. The marinade was designed to be a ready-to-eat vegan product, with tofu and sweet potato previously salted in brine and then submerged in the marinade liquid. The marinade matrix is a diluted blend of red wine vinegar and regional liqueur wine from Ribatejo, flavored with red pepper, herbs and spices. Pre-salting in brine, maturation and the final heat treatment are fundamental for the quality and safety of both prototypes that were designed to provide innovation and convenience: new products with long shelf life, aims the preservation of seasonal/surplus raw materials.

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Keywords: *marinade, pickles, sweet potato, vinegar*

Agrio et Emulsio – development of fruity mustard creams

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Agrio et Emulsio project (POCI-01-0145-FEDER-023583) presents an proposal in the areas of vinegar products and food emulsions. Combining technical features with mediterranean traditions and *Nouvelle Cuisine*, two prototypes of fruity mustards are undergoing final development, valuing regional raw materials and profiling into the gourmet/vegan/veggie markets. Mustard creams are oil-in-water emulsions but its practice is linked to vinegar traditions since the thirteenth century, in France, with the foundation of the first confraternity of *Maîtres Vinaigrier-Moutardier*. Thus, by applying the ancestral practice, mustard (seeds, fragments, powder) was first submitted to maturation studies, varying the type of vinegar and the time of immersion/contact. Maturation reached equilibrium on the 16th day, but pH evolution shows a practically stationary state from the 7th. Best results were obtained with seeds and powdered mustards in red wine vinegar, 4 %(m/v) acidity. The assays were carried out at room temperature using *Sinapis Alba* (*Linnaeus*) mustard species. Prototyping articulated technical, analytical (physicochemical, rheological, microbiological) and sensory tests. Each final prototype has a distinct profile of ingredients, mustard, fruits (raspberry and beet or blueberry), olive oil, water, salt, sugar, honey and spices. Both creams retain the *sui generis* taste of mustard tinted with the fruit flavour plus an innovative pink colour.

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Keywords: *beet, berries, mustard, vinegar*

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