

2nd Nordic Baltic Drying Conference 2017

NBDC 2017

June 7-9 in Hamburg, Germany



SECOND NORDIC BALTIC DRYING CONFERENCE

PROGRAM

7-9 June 2017
Hamburg, Germany

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June 7 to 9, 2017 – Hamburg, Germany

PRELIMINARY PROGRAM

Wednesday, June 7

12:00 **Registration** at the Conference venue (Hamburg University of Technology, Schwarzenbergstr. 93, 21073 Hamburg, Building H)

Lecture Hall H0.16	
NOVELTY DAY ON SUSTAINABLE ORGANIC FOODS - DRYING AND PROCESSING	
Chair	<i>Michael Bantle</i>
13:00	Opening of the Novelty Day at NBDC 2017 <i>O. Alves-Filho, S. Heinrich</i>
13:10	Welcome to the Workshop, General Information and Introduction to the SusOrganic Project <i>B. Sturm</i>
13:20	Market, Consumer and Technology Analyses on the Organic Sector in Five EU Countries <i>B. Sturm, G. von Gersdorff, L. Meriluoto, M. Bantle, R. Moscetti</i>
13:40	Quality and Drying Behaviour of Organic Fruit Products <i>R. Massanтини, R. Moscetti</i>
14:00	State Diagrams in Low Temperature and Atmospheric Freeze Drying of Organic Fruit Products <i>I. Tolstorebrov, M. Bantle</i>
14:20	Smart Drying: Use of Sensors and Machine Learning for the Supervision and Control of Drying Processes <i>R. Moscetti, R. Massanтини</i>
14:40	Coffee break
Chair	<i>Barbara Sturm</i>
15:00	Drying of Organic Hop and Herbs <i>B. Sturm, G. von Gersdorff, O. Hensel, S. Crichton</i>
15:20	Shelf Life Extension for Organic Meat and Fish Product by Applied Super-Chilling Methods <i>M. Bantle, I. Tolstorebrov</i>
15:40	Quality of Technological Functionality of Organic Vegetables upon Freezing <i>P. Pittia, V. Santarelli, L. Neri</i>
16:00	Challenges and Potential of Organic Meat Drying <i>G. Gersdorff, S. Retz, S. Crichton, B. Sturm</i>
16:20	Value Chain Analysis of Organic Meat and Fruits: Identifying Constraints and Opportunities <i>T. Bosona, G. Gebresenbet</i>
16:40	Life Cycle Assessment of Organic Apple Fruit Cultivated in Sweden: A Comparison of Fresh and Dried Apple Supply Systems <i>T. Bosona, G. Gebresenbet</i>
17:00	Closing Remarks

18:00 **Registration** at Hofbräu München Harburg, Lüneburger Tor 13, 21073 Hamburg

19:00 **Get together** at Hofbräu München Harburg, Lüneburger Tor 13, 21073 Hamburg

ORAL PRESENTATION

Quality and drying behavior of organic fruit products

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Abstract

Drying prevents food spoilage and decay through moisture removal due to simultaneous heat and mass transfer from food, which may be stored for long period with minimal deterioration occurring. However, drying technology is not always paired with good/excellent organoleptic, nutritional and/or functional properties of food. In fact, during drying the heat-sensitive substances are often destroyed and degradation processes may be exacerbated due to various and concurrent reaction mechanisms. Based on authors' best knowledge, drying degradation kinetics of biological materials are usually pseudo first-order or first order reactions (i.e. carotenoids degradation in carrots) and may be affected by the initial quality of the product itself. Authors refer to results from the impact of hot-water and microwave thermal pre-treatments on the drying behavior and the final quality of carrots (cv Romance) and apples (cv Gala), respectively. Pre-treatments significantly affect the hot-air drying periods, the final color, size, shape and texture. Results were useful to identify the drying phases as cluster by performing the unsupervised analysis of the state variables.

Keywords: hot-water blanching, microwave blanching, carrots, apples

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