



## 3<sup>rd</sup> Fruit & Vegetable Processing Symposium

24-25 November 2020 – Web conference

### Book of abstracts - Posters

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## **F&V Processing 2020**

### **A sustainable processing chain for high quality and healthy fruits and vegetables**

National and international food and health organisations recommend a high daily intake of fruit and vegetables. Processing stabilizes fragile fresh fruits and vegetables, offers convenience to consumers, yearlong availability and diversity.

How can processing of fruits and vegetables meet food health aspirations, while preserving the environment and having a positive social and economic impact?

The F&V processing 2020 conference meets this challenge. Senior and junior Scientists from around the world and involved in the all aspects of Fruit and Vegetable processing are invited to join the web conference and to exchange.

## **Topic 3**

### **Food systems and sustainability of F&V processing**

- Trends in consumption of processed F&V
- New products and processing, and consumer acceptability
- Organic F&V processing concepts and their consequences
- Circular economy in the F&V processing chain, rational use of co-products
- Which place for F&V processing in territorial food systems?
- Clean label and naturalness in F&V products: what and how
- Valorisation of by-products. Reduction of wastes and spoilage
- Bio-based materials from processed F&V

### 3 - Food systems and sustainability of F&V processing

#### **P3.9 - Consumer insights toward to dehydrated organic apples**

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Apples (*Malus domestica*) are considered the most consumed fruits in world [1] due to rich content in vitamins, minerals, and antioxidant compounds [2], for their taste and accessibility. Lately, organic apples are preferred and generally considered to be more healthier and safer than conventional ones, and for this reason consumers are more orientated to them [3]. The size, colour, flavour, texture, and the lack of defects are important indicators and mainly determine consumers general impression of minimally processed organic apples. The aim of this study is to establish which drying technology of organic apples is easily accepted by consumers and how they characterize the final product.

In order to accomplish the purpose of this study, three organic apples varieties 'Rubinola', 'Topaz' and 'Gemini' were harvested, in September 2019, from experimental orchard at our University and stored at 1°C and 95% relative humidity until were minimally processed and dehydrated. The processing (slicing and dehydration) was performed at the Institute of Research and Development for Industrialization and Marketing of Horticultural Products using a B.MASTER professional dryer with air distribution at two different temperatures (35°C and 50°C). Methods used in this study in order to observe consumer general impression regarding dehydrated apples was based on questionnaires with 4 questions about sensorial indicators like size, colour, flavour, texture and 2 questions about age and gender. Consumers general impression was determined in two tasting sessions within two scientific events.

Dehydrated organic apples were evaluated by consumers with ages between 22 and 66 years old, represented by 49% women and 41% men. At the question "Size of dehydrated fruit slice", 40-60% of consumers answered that it was "pleasant" for all apple varieties and only for 10-20% of consumers this attribute was evaluated as "unpleasant". The "color" was evaluated as pleasant for the 'Topaz' and 'Gemini' varieties, and very pleasant for 'Rubinola' variety. Taste was evaluated as "pleasant" and "very pleasant" by 72% of consumers for 'Gemini' apples dehydrated at 50°C, in comparison with 36% for 'Gemini' apples dehydrated at 35°C. Similar results were obtained regarding texture of all the organic apples evaluated. In conclusion the consumers general impression was oriented towards minimally processed organic apples dehydrated at 50°C.

The results obtained in the present study suggest that sensorial analysis plays an active part in choosing the drying technology to be further used, and more studies are necessary.

Keywords: acceptance, color, organic apples, slices, taste

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References:

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Web site: <https://symposium.inrae.fr/fruit-vegetable-processing2020>

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