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# **6<sup>th</sup> International ISEKI-Food Conference**



*“Sustainable Development Goals in Food Systems:  
Challenges and Opportunities for the Future”*

## **BOOK OF ABSTRACTS**

23 – 25 June, 2021

ONLINE

# **6<sup>th</sup> International ISEKI-Food Conference**

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## **Sustainable Development Goals in Food Systems: Challenges and Opportunities for the Future**

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### **BOOK OF ABSTRACTS**

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## **#286: A fruit snack including grape and tomato pomaces – assessment of the effect of temperature on drying characteristics and quality during storage**

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A fruit snack bar was created, composed of 36.4% of tomato and grape pomaces and other foods like oats, chia, and quinoa. Grape pomace is rich in dietary fibre and is a source of protein, and tomato pomace has a great nutraceutical value since it has a high content of carotenoids. The snack was developed, taking into consideration the comments of a focus group that attended three questionnaire sessions.

The fruit snack was processed in a convective tray dryer using an air velocity of 0.54 m/s and three different temperatures of 50°C, 60°C and 70°C. After drying, the samples consisted of a sheet of 20 x 30 cm and were cut uniformly in bars of 3 x 10 cm.

Several models were attempted to adjust to the experimental drying data, with the best fit being presented by the Midilli-Kucuk model.

The snack bars were packaged with a 0.04 mm foil of reversible metalized polypropylene in envelopes of approximately 5 x 12 cm and stored for 5 weeks. The following quality parameters were evaluated over storage: water activity (aw), total colour difference (TCD), and texture (hardness, cohesiveness, springiness, chewiness, and resilience). It was concluded that drying temperature did not influence the quality of the final product, as the water activity and texture parameters measured were stable along with storage. Consequently, it was assessed that the fruit snack was stable over the 5 weeks of storage.

This fruit snack contributes to the transition to a sustainable circular economy by decreasing food waste. It incorporates by-products from the food industry, simultaneously offering economical and ecological benefits.

### **Keywords**

by-products, tomato and grape pomaces, fruit snack, convective air drying, quality

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