



**2<sup>nd</sup> International Congress of the  
Turkish Journal of Agriculture - Food Science and Technology**

**TURJAF 2021**

**CONGRESS BOOK**

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# 2<sup>nd</sup> International Congress of the Turkish Journal of Agriculture - Food Science and Technology

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**December 2021**



## FOREWORD

"II. International Journal of Agriculture - Food Science and Technology (TURJAF 2021) "was held in Gazimağusa / Cyprus between 25 and 29, October, 2021 with the participation of scientists working in agriculture and related disciplines to share scientific knowledge, to propose scientific solutions to international problems by international cooperations, and to establish the scientific outcomes that will benefit mankind by using economic international resources.

Congress participants came all the way from 26 different countries including Algeria, Azerbaijan, Benin, Côte d'Ivoire, Egypt, Ethiopia, Ghana, India, Iranian, Iraq, Jordan, Lebanon, Malaysia, Nepal, Nigeria, Pakistan, Rwanda, Saudi Arabia, Spain, Sri Lanka, Sudan, Tunisia, Turkey, Uganda, United Kingdom and Viet Nam. Approximately 268 papers were presented, including 202 oral presentations and 66 poster presentations. Invited speakers shared their scientific knowledge joining from 6 countries including Algeria, Egypt, Ethiopia, Pakistan, Sri Lanka and Turkey

The following topics were discussed by the participants in the Congress: original and advanced technologies related to agriculture and natural life, animal and crop production, aquaculture, food science and technologies, agricultural technologies, soil science, sustainable agriculture systems, agricultural economics, genetics, biology, agricultural ecology, landscape architecture and agricultural environment.

Congress organization secreteriat has undertaken important tasks during the organization of the congress and proper continuation of it. Ast. Prof. Mustafa Duman, Ast. Prof. Emre Aksoy, Ast. Prof. Burak Şen and Mustafa Özcan from the CNS Congress Organizations Ltd. undertook the congress organization.

We are grateful to all our stakeholders who have supported us for the successful realization of our Congress and to all the scientists who supported us by participating with their presentations.

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## Utilisation of Dried Pitaya (Dragon Fruit) Slices in a Breakfast Cereal Formulation \*

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### Abstract

Pitaya or commonly known as Dragon Fruit, is a tropical fruit that belongs to the Cactaceae family and edible fruit. It principally grown in South America, Malaysia and other tropical regions of the World due to it belongs to Cactaceae family. Dragon fruit, which is rich in micronutrient, has many great health benefits such as improving digestion, lowering cholesterol, strengthening the immune system and preventing cancer and heart disease. However, the short shelf life of Pitaya severely limits the development of this fruit's industry. After harvest, both the quality of the fruit and its commercial value decrease rapidly during the storage period, mainly due to fungal diseases, yellowing and physiological disorders. In this regard, it is aimed to use dragon fruit slices in breakfast cereals that are frequently used in daily life by drying them with different methods in this study. In this context, Pitaya (*Hylocereus* spp.) fruit, obtained from the local markets of Mersin with the same degree of maturity, were dried by using tray drier and freeze drier. Both dried and raw samples were analyzed for moisture content, color, texture, phenolic content, antioxidant activity and finally sensorial properties. The results obtained from this study showed that there is a color difference between the dragon fruit dried by the tray drier method and the dragon fruit dried by the freeze drier method. In addition, dried dragon fruit with the tray drier method has an elastic structure than the other method, and dried dragon fruit with the freeze drier method has crunchier structure than the tray dried samples. Besides, it was determined by the findings that red dragon fruit is richer in phenolic and antioxidant substances than white dragon fruit. As a consequence, it is thought that the use of dragon fruit slices dried by different methods in breakfast cereals will not pose a problem in terms of the quality and shelf life of the product according to the findings obtained from the study.

**Key Words:** *dragon fruit, breakfast cereals, drying, antioxidant, phenolic compounds*

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