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Physical and chemical properties of some hazelnut varieties grown in Portugal

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PV 40 P. Viseu 40 anos

2nd JULY, 2021
MORNING

English session

7th SESSION | Room 1

AGRARIAN SCIENCES	ID	PRESENTER	TITLE		HOUR
Food Science & Technology	22	Paula Correia	Perception about food fraud and labelling	in person	10:45
	23	Sidnei Castro Junior	Production of hyper soft breads with castanea sativa flour for fast food chains	in person	10:58
	25	Ana Cristina Ferrão	Physical and chemical properties of some hazelnut varieties grown in Portugal	in person	11:11
	92	Luís Carreira	Estudo de algumas atividades biológicas de 9 variedades de amêndoa nativas da região do Algarve	online	11:24
	99	Elsa Ramalhosa	Effect of using microperforated bags on the storage of chestnut (Castanea sativa Mill.) for six months	online	11:37
	169	Maria Paula Simões	Effect of controlled atmospheres and environmental conditions in the physicochemical and sensory characteristics of sweet cherry cultivar Satin	online	11:50
	183	Malgorzata Korzeniowska	Optimization of the burgers quality by the addition of barley spent grains	in person	12:03
	211	Sara A. Cunha	In Vitro Gastrointestinal Digestion impact on the antioxidant activity of extracts produced from the microalgae Chlorella vulgaris and Nannochloropsis oceanica	online	12:16
	73	Neshankine Chandraruban	A comprehensive evaluation of oxygen dynamics and paddy hydration during conventional soaking of paddy parboiling process	online	12:29
	205	Aida Moreira da Silva	Sea purslane as emerging food crop: nutritional and biological studies	presencial	12:42

CHAIR Aida Silva & Maria João Barroca — In person (Total) 5

English session

8th SESSION | Room 4

AGRARIAN SCIENCES	ID	PRESENTER	TITLE		HOUR
Nutrition & Eating Behaviours	20	Maria João Barroca	Development of a new pasta product incorporating chestnut flour and bee pollen	in person	10:45
	54	Raquel Guiné	Knowledge about sustainability of edible insects: an investigation in a sample of Portuguese citizens	in person	10:58
	113	Nada Mallah Boustani	Food knowledge and Eating Habits in a developing Mediterranean country	online	11:11

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PHYSICAL AND CHEMICAL PROPERTIES OF SOME HAZELNUT VARIETIES GROWN IN PORTUGAL

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Worldwide there has been an increase in the demand for dried fruits. In Portugal, hazelnut is the dry fruit with the less cultivated area, however the country has conditions for a good production. This work intended to analyse the physical and chemical properties of seven hazelnut varieties grown in Portugal, named Negreta, Gunslebert, Tonda de Giffoni, Grada de Viseu, Butler, Segorbe and Longa de Espanha. For that purpose, hazelnut fruits were evaluated for biometric characteristics, apparent and true densities, colour, texture, nutritional parameters (moisture, ash, lipids content, protein, fibre and water activity), oxidative stability index and specific extinction coefficients (K232, K264, K268 and K272).

The results showed that, in general, there were statistically significant differences among the varieties under study. Hazelnuts of variety Longa de Espanha revealed to be more elongated and the variety Butler had heavier fruits, both in shell and kernel. The variety Grada de Viseu was harder in the shell being the kernels of variety Segorbe softer but more resistant to fracture. For all varieties, fat was the major chemical component. The lowest extinction coefficient, K232, was found for Negreta, indicating that this variety presented a lower degree of primary oxidation products. The other specific extinction coefficients were relatively low for all samples. Moreover, Tonda de Giffoni was the variety with the higher oxidation stability.

This work highlighted the differences in hazelnuts according to the variety, confirming the importance to perform more studies in this area since these results can be very useful in the hazelnut sector.

Keywords: Hazelnuts; Fruit; Biometric characteristics; Physicochemical characterisation; Specific extinction coefficients