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Editorial

The Organizing Committee of the CMR | International Conference on Multidisciplinary Research

Manuela Ferreira¹, Ana Paula Cardoso², Raquel Guiné³, José Luís Abrantes⁴

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The special edition of the Millennium Journal publishes the abstracts of the plenary sessions and communications (oral and poster) presented at the "International Conference on Multidisciplinary Research - CMR", which took place in a hybrid format, and whose program was developed under four thematic lines: education, technologies, health and agrarian sciences, corresponding to the central areas of activity of the Polytechnic of Viseu's R&D Units.

Inclusive education and information and communication technologies were the themes of the invited plenary talks by José Fernández Batanero (University of Seville) and Bárbara Mariana Gutiérrez Pérez (University of Salamanca), in the area of Education. "Literacy and Mental Health in Higher Education Students" and "Promotion of Health, Literacy and Lifestyles in Higher Education" were the titles of the invited interventions by Carlos Sequeira (School of Nursing of Porto, Cintesis) and Ana Rita Pedro (National School of Public Health). Agricultural Sciences and Technologies were the thematic lines of the second day of the Conference. Invited talks in the areas of food science and technology, given by Elena Bartkiene (Lithuania University of Health Sciences), and sustainable agriculture, by António Dinis Ferreira (Cernas – Polytechnic Institute of Coimbra), were the starting point for the debate that took place during the morning. Barry Feeney (Dublin Institute of Technology) and Ana Lúcia Ferreira (Veolia Water Technologies Techno Center Netherlands B.V.) were the invited speakers who, in the afternoon, spoke about the connection between polytechnic institutes and companies and the treatment of industrial water, respectively.

Over the two days, the meeting promoted, simultaneously, the presentation of communications, oral and digital, in parallel sessions, resulting from a broad "open call" with the participation of researchers from 11 countries (Brazil, Cape Verde, Canada, Spain, United States of America, Ireland, Lebanon, Lithuania, Poland, Romania, Sri Lanka).

This Congress provided an opportunity for learning and scientific growth, through the dissemination and sharing of science, having an expected impact on the scientific community and society in general.

Askri, F., Pereira, E. L., Correia, P., Lema, F., Martins, F., Ouesleti, S., Droga, R., Ramalhosa, E. (2021). Effect of using microperforated bags on the storage of chestnut (*Castanea sativa* Mill.) for six months. *Millenium*, 2(ed espec nº8), 73-73.



EFFECT OF USING MICROPERFORATED BAGS ON THE STORAGE OF CHESTNUT (*CASTANEA SATIVA* MILL.) FOR SIX MONTHS

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Chestnuts are very consumed worldwide; however, it is a perishable product that loses weight and spoils quickly. So, it is crucial to find methods to reduce economic losses. Thus, the purpose of the present work was to study the effect of using microperforated bags (MP-bags) in long-storage of chestnuts in refrigerated industrial chambers for 1, 2, 3 and 6 months. The weight loss, colour, texture, water activity (aw), moisture content, titratable acidity (TA), total soluble solids (TSS), reducing sugars, starch, amylose, and microbiological analysis were determined.

No significant differences were noted in the colour of the chestnut kernel between the MP-bags and the control (unpacked chestnuts) in most situations. After six months, the weight loss was much lower in MP-bags (1.9%) than in control (23%), and a significant difference in moisture content was observed between both conditions (55.2 and 42.7%, respectively). After six months, TA and TSS varied between packages, while the starch did not. The packaging type and storage time significantly influenced the reducing sugars. The highest values were observed in control. Some variability, without a definite trend in the MP-bags, was observed along the storage period. In control, the contents of reducing sugars increased from 0.09 to 2.06 g glucose/100 g d.m.. No significant differences in aerobic mesophilic and moulds and yeasts were observed for the control and MP-bags at the end of storage. MP-bags demonstrated to be a promising solution for extending the shelf-life of chestnuts by preserving the nutritional quality of the fruits.

Keywords: Chestnuts; Shelf-life; Packaging; Physic-chemical parameters; Microbial counts