

POSSIBILITIES OF USING SOY PROTEINE ISOLATE FOR THE PACKAGING OF *JUGLANS REGIA* L. NUTS

Boiștean Alina, Chirsanova Aurica

Technical University of Moldova

alina.boistean@toap.utm.md, aurica.chirsanova@toap.utm.md

The walnut has gained popularity because of its specific attractive organoleptic properties and high levels of essential fatty acids and bioactive components such as antioxidants. Walnut production is widely distributed all over the world and currently it ranks third in terms of global nut production after cashews and almonds (Pereira et al., 2008).

Analysis of tendencies in consumer packaging shows increased use of synthetic polymeric materials [Kenneth Marsh Ph.D. et al., 2007]. Nevertheless, the rapid development and implementation of them greatly exacerbates environmental problems in the developed countries of the world. The degradation of traditional polymeric materials takes a long time (tens and hundreds years). A promising solution for the problem of environmental pollution with polymeric waste is the development of a wide range of natural raw materials [Дубинина А. А. 2010]. The switch to new conservation methods will allow manufacturers to focus their efforts on improving productivity and quality, so as to expand the sales market and cover a wider area with regard to export directions. [Jung H. Han 2005].

For the research were used high quality Greek nuts (*Juglans regia* L.) of the “Cogalniceanu” variety, the 2016 harvest. Food granules were obtained on the basis of soy protein isolate (L. Atarés, C. De Jesús, 2010). The analysis of the obtained food packaging film solutions was accompanied by the determination of quality indicators by organoleptic evaluation of the samples immediately after the coating process and during the storage period. The viscosity of the solution with IPS concentrations was determined: 3.75, 3.5, 3.0 g. It has been observed that the higher solution viscosity provide the more uniform film and the better adhesion. The surface of the film was analyzed using the Dino-Lite Basic AM200 microscope with the application of different fonts. It has been observed that the properties of the samples evolve depending on the concentration of the isolate of soy protein. The results show that samples with 3.5 g of soy protein isolate have an excessive roughness with high inclusions.

In conclusion, the utilization of soy protein isolate in packaging film solutions for the subsequent preservation of crushed nuts and quarters is an effective way to keep the quality of the products under control.

References

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