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POSSIBILITIES FOR PRESERVING THE FUNCTIONAL POTENTIAL OF ROSEHIPS BY CONVECTIVE DRYING

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Abstract: *The choice to address the topic of exploiting rosehips in the food industry as a source of natural antioxidant compounds arose from desire to explore the ways in which we can benefit from the extraordinary potential that these fruits offer in maintaining our health. The aim of the research carried out is to stabilize the rosehips by convective drying under different conditions of temperature and time in order to retain as much as possible the bioactive compounds and their antioxidant properties. Based on the results obtained, in order to ensure microbiological stability and preserve bioactive properties, it was decided to condition the rosehips at 65°C, for 9 h, to a moisture content below 5%, at this value the microbial activity is practically non-existent. We can appreciate that the parameters of the conditioning process play an important role in the stability of the phenolic compounds, because both elevated temperatures and long-term exposure to heat treatment lead to their degradation and the reduction of the antioxidant capacity of rosehips. In summary, rosehips represent a valuable source of natural antioxidant compounds that can be used in the food industry to improve the quality and nutritional value of food products. Harnessing rosehips in this way can help promote a healthy lifestyle and provide more nutritious and antioxidant food options.*



Mouss4Rosa



The following conclusions emerge from the study:

- Both prolonging the drying time and increasing the temperature from 65°C to 75°C and 85°C respectively resulted in significant losses in the total antioxidant capacity of the conditioned rosehips.
- The data obtained on the conditioning of the rosehip show that drying at a temperature of 65°C results in the lowest loss of antioxidant capacity and polyphenol content at the end of the 9 h drying period.
- It can be appreciated that the parameters of the conditioning process play an important role in the stability of polyphenolic compounds, as both high temperatures and long term exposure to heat treatment lead to their degradation and reduction of the antioxidant capacity of the rosehips.
- Due to their proven antioxidant properties, it is recommended to use rosehips as a functional ingredient in various food applications, among which the mousse with paste and jelly of rosehips, obtained in this study, as a source of natural bioactive compounds, especially vitamin C and polyphenols.