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# USE OF ROSEHIP AND CAROB POWDER AS UNCONVENTIONAL PLANT MATERIALS TO DESIGN NOVEL FUNCTIONAL AND NUTRITIONAL CHOCOLATE FORMULATIONS

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**Abstract**: *The purpose of this paper is to design functional and nutritional value-added chocolate formulations by rosehip and carob powder incorporation as unconventional plant materials in the manufacturing recipe. Chocolate formulations were prepared in laboratory conditions by replacing cocoa powder in different percentages in the range 10-50% (w/w) with carob powder, respectively the mixture of carob and rosehip powder. All chocolate formulas obtained by incorporating carob powder as well as a mixture of rosehip powder and carob powder into the recipe showed higher values of bioactive compound content and antioxidant properties compared to the control sample. The radical scavenging activity and FRAP value of the rosehip powder recommends it as a value-added plant ingredient for obtaining a wide range of high functionality chocolate formulas.*

## • Introduction

Rosehip (*Rosa canina* L.) and carob (*Ceratonia siliqua* L.) powder are becoming popular due to their content and profile of bioactive components.

## • Material and method

The products designed were analyzed in terms of proximate composition, bioactive compounds, antioxidant properties and sensory attributes, in accordance with standard methods.

## • Results and discussions

The data obtained revealed that the rosehip powder included in the chocolate recipe has a high content of vitamin C, total phenolic compounds and flavonoids.

## • Conclusions

Our results are useful for food processors to develop new value-added, low-cocoa content chocolate formulations by exploiting the bioactive potential of unconventional plant materials, underused in the food purposes.