



Production and Characterization of Yellow Onion Syrup in Different Formulations

Sofia POPESCU^{1,2*}, Mihaela-Maria STANCIUGELU³, Florina RADU^{1,2*}, Patricia-Cristina TARKANYI¹, Alina Andreea DAMIAN¹, Antoanela COZMA¹, Mariana POIANA^{1,2}, Lia Sanda ROTARIU¹, Mihaela LACATUS¹, Despina BORDEAN^{1,2}

¹ University of Life Science "King Mihai I" from Timisoara, Faculty of Food Engineering,

² "Food Science" Research Center, University of Life Sciences "King Mihai I" from Timisoara, Aradului Street No. 119, 300645 Timisoara, Romania

³ Brukenthal National Museum, Natural History Museum, Sibiu, Romania

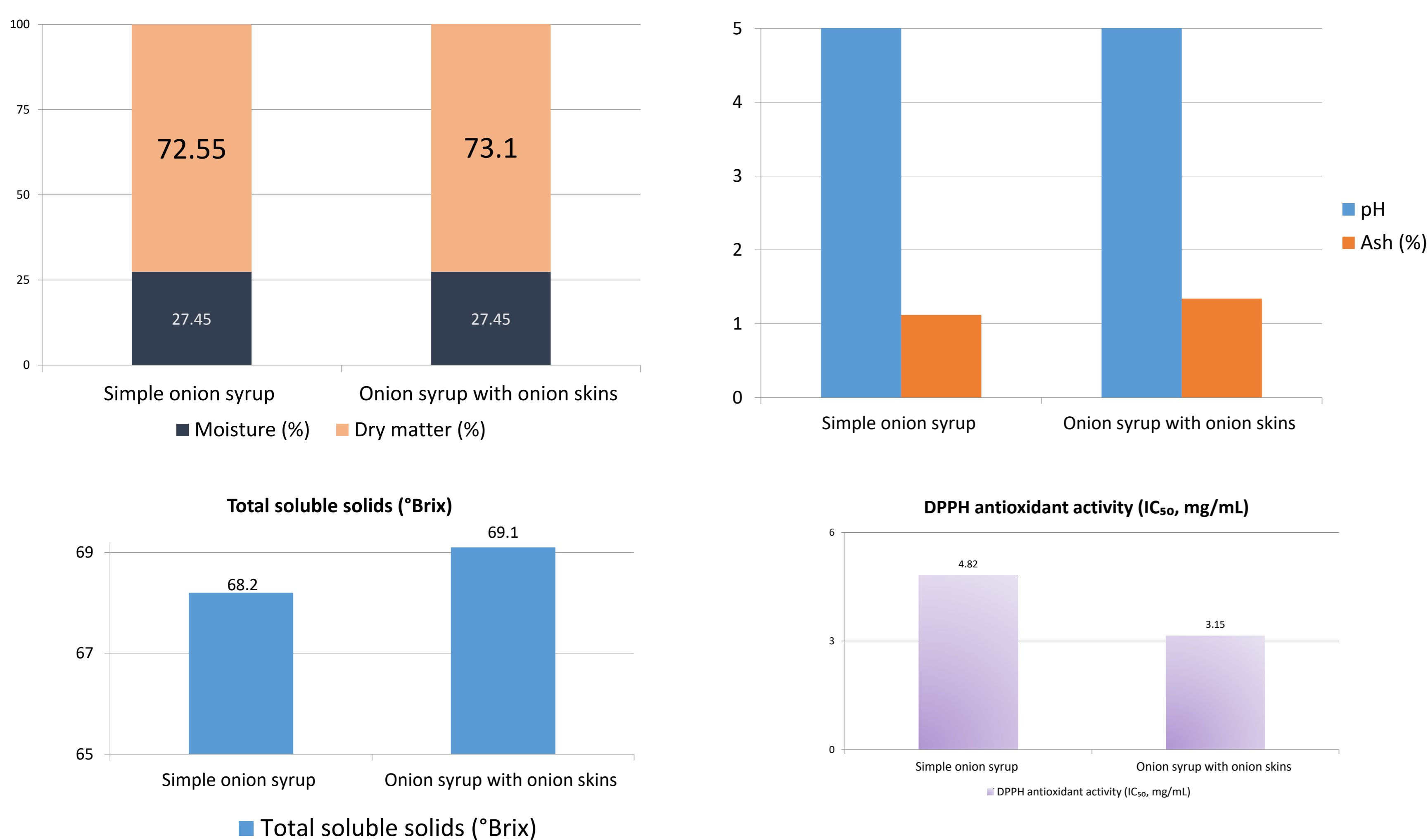
e-mail: florinaradu@usvt.ro, sofiapopescu@usvt.ro

Abstract The aim of this study is the development and characterization of yellow onion syrup in two formulations, namely a simple formulation and one supplemented with onion skins, a by-product of onion processing. The study evaluates the influence of the technological process on the physicochemical, nutritional, and antioxidant properties of the final product. The main raw material is yellow onion, processed through hot aqueous extraction, followed by filtration and sugar concentration. In the modified variant, onion skins are added during the boiling stage in order to assess potential differences in composition and antioxidant activity.

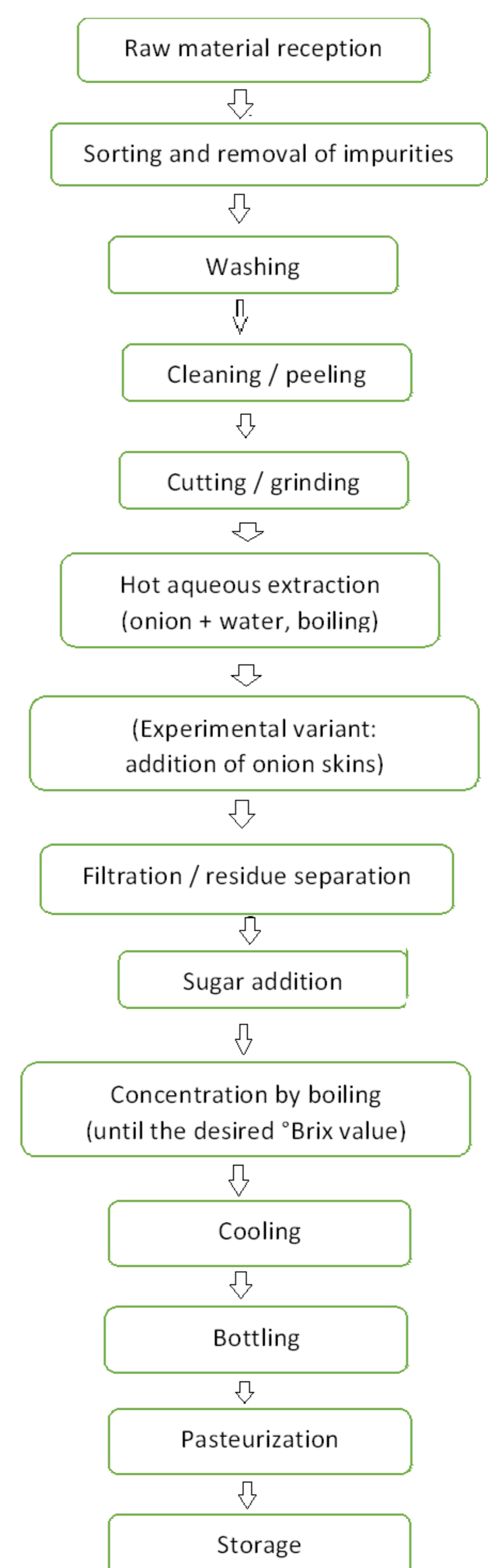
Several parameters were determined, including moisture content, dry matter, ash content, °Brix value, and antioxidant capacity, allowing a comparative evaluation of the two formulations.

The results indicate that the addition of onion skins slightly affects the product's characteristics without significantly modifying the technological process, confirming the functional potential of onion syrup as a natural food product.

Physicochemical characteristics of onion syrup formulations



Technological Scheme for Onion Syrup Production



Conclusions: The study demonstrated that onion syrup can be successfully produced through a simple technological process based on hot aqueous extraction and concentration. The addition of onion skins slightly influenced the physicochemical characteristics of the syrup and improved its antioxidant activity, as indicated by lower IC₅₀ values. These results highlight the potential use of onion syrup as a natural functional product and support the valorization of onion by-products.