

# Food and Beverages

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## Innovative solution for food reformulating as source of bioactive compounds from by-products of wine industry

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**Statement of the Problem:** The growing concern of the world population for healthy food and the problems arising from increasingly significant amounts of food waste has led to a new trend in a more rigorous analysis of purchased products. Whether we are talking about traditional reinterpreted products or innovative products, we are trying to integrate and use food waste in order to reduce their quantity. The opportunity and the justification of the present paper is supported by two directions: the first direction concerns the solution of an actual problem of the local purple potato producers in Transylvania area regarding the absence of a real market for their product, and the second direction proposes a possibility recovery of a by-product of the wine industry. Grape pomace has the potential to become a significant source of biologically active compounds with various uses in the food industry containing more than 39 types of anthocyanins, various polyphenols, catechins and flavones.

**Methodology:** Grape Pomace (GP) with high antioxidant capacity, were added to process purple potatoes as cremogenate type for increase the nutritional properties. The addition of GP to Purple Potatoes Cremogenate (PPC) improve some parameters of consumer's acceptance, although the GP intensifying the matrix colour in intense purple are the best valued. The addition of GP to PPC increased the levels of vitamin C (Ascorbic Acid) very significant, at the same time increased also the content of phenolic compounds and antioxidant capacity in the matrices with 3% of GP. The quantification of total phenolic compounds was achieved by Folin-Ciocalteu method and the antioxidant activity was assessed by evaluating their radical scavenging activity on DPPH radical.

**Conclusion & Significance:** The obtained results revealed that purple potatoes cremogenate fortified with grape pomace with a high interest for consumers and with high antioxidant properties have been obtained.

### Recent Publications

1. Helkar P B, Sahoo A K and Patil N J (2016) Review: food industry by-products used as a functional food ingredients. *International Journal of Waste Resources*, 6:248.
2. Kruczek M, Drygas B and Habryka C (2016) Pomace in fruit industry and their contemporary potential application. *World Scientific News*, 48:259-265.
3. Socaci S A, Farcas A C, Vodnar D C and Tofana M (2017) Food wastes as valuable sources of bioactive molecules. In: NaofumiShiomi, eds. *Superfood and Functional Food - The development of superfoods and their roles as medicine*. InTech, Rijeka, Croatia, 75-93.
4. Xu Jianteng, Su X, Lim S, Griffin J, Carey E and Katz B (2015) Characterization and stability of anthocyanins in purple-fleshed sweet potato. *Food Chemistry*, 186:90-96.
5. Ziarati Parisa, Moshiri Mohsenin Iman, Sadeghi P and I Shabnam (2017) Grape pomace flour (*Vitis ssp.*) from Shiraz in South of Iran by high trace minerals as food supplements. *SciFed Drug Delivery Research Journal*, 1:1.

### Biography

Anamaria Pop is currently a Postdoctoral Researcher and Lecturer at the Faculty of Food Science and Technology in University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania. She is part of a research team focused on waste management techniques in the food industry and an active member of the Laboratory for Testing of Food Quality and Safety. She is having a background of six years in the field of food non-animal origin, extraction and analysis of bioactive compounds, processing and preservation of foods from plant origin. She is a Project Manager for an ongoing project in 2017 from the national competition in the field of by-product research, having as research theme "Innovative solution for reformulating some cake products using solid waste resulting from vegetable oil industry". The proposed research has an interdisciplinary dimension, however, technological risk that may arise is relates to the stability of the finished product during storage and this requires more extensive researches.

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