

## **AN OVERVIEW OF WINE WASTE VALORISATION IN THE REPUBLIC OF MOLDOVA**

\*Ruseva Olga, Covaliov Eugenia, Deseatnicova Olga, Reșitca  
Vladislav, Suhodol Natalia  
*Faculty of Food Technology,  
Technical University of Moldova, Republic of Moldova*  
\*olga.ruseva@doctorat.utm.md

### **Abstract:**

The Republic of Moldova is a country in which the main part of the economy related to agriculture, namely vinification. The land surface covered by vineyards is about 147,000 hectares, of which 102,500 hectares are used for commercial purposes. According to FAOSTAT, the Moldovan grape production in 2021 reached the value of 536829 tones. It is estimated that 75% of grape production is used in wine industry, thus generating 20-30% waste. The morphological parts of wine waste are used as sustainable products to obtain different compounds with biological active potential such as: enocolorants and polyphenols that exhibit antiradical activity from grape skin, polyunsaturated fatty acids from grape seeds, tartaric acids from grape mark and others.

Nowadays in Republic of Moldova, wide researches are done concerning the possibility of valorisation of wine waste. On one hand, the majority part of the studies are based on the extraction of biologically active compounds in order to obtain sustainable food products and enhance the potential use of wastes. Thus, products like ice-cream, marshmallow or bread have been used as food matrices in order to increase their functionality by incorporating grape skin extracts in their formulations. On the other hand, the wastewater from wine industry has been proven to be an energy source when applying anaerobic digestion. In the same context, wine waste is used in order to enrich soil fertility and consequently to increase the productivity of field crops.

**Key words:** *fertilizer, grape pomace, grape skin, polyphenols, sustainability.*

**Acknowledgments.** *The authors would like to thank the Moldova State project 20.80009.5107.09 Improvement of food quality and safety by biotechnology and food engineering.*