

PROPERTIES OF WINEMAKING BY-PRODUCTS OF *FETEASCA NEAGRA* GRAPE SEEDS

Angela Gurev¹*, Veronica Dragancea¹, Alexei Baerle¹, Natalia Netreba¹,
Olga Boestean¹, Svetlana Haritonov¹, Boris Gaina²

¹ Technical University of Moldova, 7, Studentilor str., Chisinau MD-2012, Republic of Moldova

² Academy of Sciences of Moldova, 1, Stefan cel Mare si Sfant Blvd., Chisinau MD-2001, Republic of Moldova

*e-mail: angela.gurev@chim.utm.md; phone: (+373 69) 60 70 90

Abstract. The aim of this study was to perform a quantitative and qualitative assessment of the biologically active compounds in winemaking by-products. The properties of the lipophilic and hydrophilic extracts from the seeds recovered from fermented pomace of the local grapes - *Feteasca Neagra*, grown in three vineyards, in the 2020 season, were studied. The physicochemical indicators of the seeds and the oil quality indicators were determined. The content of carotenoids and polyphenols in the lipophilic extracts was evaluated by spectrophotometric methods. The difference between the total content of polyphenols and flavonoids in the hydrophilic extracts from ground grape seeds (I) and degreased ground grape seeds (II) was registered. Some phenolic and flavanol constituents were identified and quantified using reversed-phase (C₁₈) gradient-elution HPLC/PDA. The Trolox equivalent antioxidant capacity assay proved the increased antioxidant activity of the hydrophilic extracts, with the highest DPPH• scavenging effect of almost 91.70 and 93.81%, an equivalent of 281.66 and 288.27 μM/L Trolox. It was concluded that the seeds recovered from *Feteasca Neagra* by-products are a rich source of functional compounds, with significant antioxidant properties.

Keywords: antioxidant, flavonoid, grape seed, polyphenol, waste.

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