

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

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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 on three vineyards, in the 2020 season, were studied. The physicochemical indicators of the seeds and the oil quality indicators, were determined. By the spectrophotometric methods, the content of carotenoids and polyphenols in the lipophilic extracts was evaluated. 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.