Abstract

In the scope of this study, the grape pomace, which arises as a result of process of Öküzgözü (red) and Narince (white) grape types in wine industry and which is used generally as animal feed and fertilizer. After convectional drying, the pomace samples are divided into 3 groups as whole pomace, seedless pomace and only seeds. They were ground to obtain their flours. Besides chemical properties of those 6 different sample forms, their total phenolic material, antiradical activity, anthocyanins and total dietary fiber content were determined and compared with each other. According to obtained results, while there was no significant difference between final moisture values of pomaces, the ash content of grape seeds was higher than that of others. The first ranks among all samples belong to Öküzgözü seedless pomace flour in terms of protein (14.87%), Öküzgözü seed flour samples in terms of oil content (17.34%) and Narince seed samples follow it with value of 14.1% oil. The total sugar values of seedless pomace and whole pomace of Narince (21.5% and 19.33%, respectively) were evaluated as high when compared with all other pomace forms. It was determined that while seed samples of Narince and Öküzgözü species have rich composition in terms of total phenolic material (respectively 563.27 g/kg GAE and 552.10 g/kg GAE), they exhibit high antioxidant property in parallel with it (respectively 104.44 IC₅₀= µg/ml and 100.71 IC₅₀= µg/ml). The dietary fiber (72.45% and 72.78%, respectively), phosphorus and magnesium contents were higher than those of other samples. While whole pomace flour of Öküzgözü grape species had the highest anthocyanin (5754.0 mg malvidin–3-glucoside/kg) value, seedless pomace sample of Öküzgözü grape species follows it with value of 4853.29 mg malvidin–3-g glucoside/kg. As a result, Öküzgözü and Narince seed flours can be functional food additive due to their rich composition of phenolic material, total dietary fiber, total oil, magnesium and phosphorus. Öküzgözü grape pomace seedless flour and whole flour may be used in production of natural anthocyanins and/or natural coloring material.

Key words: antioxidant activity, Öküzgözü, Narince, grape pomace, grape seed