


Abstract

Grape Pomace Seed and Skin Powder as a Source of Dietary Fibre [†]

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Abstract: Dietary fibre intake is associated with various health benefits, such as glucose absorption regulation, blood cholesterol level reduction, and the prevention of obesity and cardiovascular diseases. Grape pomace and its constituents (seed and skin) present a good source of dietary fibre. They can be used as gelling or binding water agents. However, they are mostly incorporated into various food products as an integral part of milled pomace flour and powder, contributing to their functional, nutritional, physicochemical, textural, and sensory properties. This study aims to determine the content of dietary fibres in the seven different unfermented pomace seed and skin flours of international (Italian Riesling, Muscat Hamburg, Merlot, Cabernet Sauvignon) and indigenous (Smederevka, Tamjanika, Prokupac) grape varieties. The content of total (TDF), soluble (SDF), and insoluble (ISDF) dietary fibres in seed and skin flours were determined by the enzyme-gravimetric method. The results showed that the content of TDF was almost three times higher in seed flour than in skin flour for all analyzed varieties. Seed flour had more ISDF (66.30–74.18%) and TDF (69.89–75.42%) and less SDF (0.89–4.27%) in comparison to the skin flour. The highest content of ISDF was confirmed in the seed and skin flour of the Cabernet Sauvignon variety. On the other hand, the highest content of SDF was determined in the skin of Italian Riesling and seeds of Smederevka varieties. Although there are differences in content, the seed and skin flour of all analyzed international and indigenous varieties represent a good source of dietary fibre and can be applied to formulate functional and nutritionally valuable food products. To the best of our knowledge, this is the first report on dietary fibre in the seed and skin flour of the autochthonous Prokupac and Tamjanika varieties.

Keywords: grape pomace; seed flour; skin flour; insoluble fibre; soluble fibre



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