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PHENOLIC CONTENT OF MACEDONIAN GRAPES FOLLOWED AT DIFFERENT PHYSIOLOGICAL STAGES

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The content of total phenolics, total anthocyanins, total flavonoids and total flavan-3-ols in pulp, skins and seeds of Vranec, Merlot, Smederevka and Chardonnay grapes has been determined at different stages of berry development: veraison, technological ripeness and late harvest. Anthocyanins accumulate in the berry at the beginning of the veraison and increase during the ripening as it was observed for Vranec grapes, but also, they can decline during berry development, as observed for Merlot grapes. The content of flavan-3-ols was highest in the veraison (noticed for Vranec, Merlot and Chardonnay seeds) because their synthesis begins when the berry starts to grow up and goes on till the beginning of the veraison, followed by decreasing in the next stage of ripeness. Individual identification of the components from different phenolic groups (anthocyanins, phenolic acids and derivatives, flavonols and flavan-3-ols) present in skin, seed and pulp extracts was performed by HPLC-MS using ESI-IT-MS spectrometric data, UV spectra and retention times of the available standards, applying gradient elution with 1 % (*v/v*) acetic acid in the mobile phase. Malvidin-3-glucoside is the dominant component from the group of anthocyanins and among the phenolic acids and derivatives, caftaric acid dominates in grapes.

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