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DYNAMICS OF PHENOLIC COMPONENTS DURING THE RIPENING OF GRAPES FROM SUB-MEDITERRANEAN CLIMATIC ZONE OF THE CRIMEA: INFLUENCE ON THE QUALITY OF RED WINES

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Seed tanning cause the excessive tannic and astringent taste of red wines, while anthocyaning and tanning of grape skin cause the formation of intense and stable colour, harmonious taste. Seed tannins are present in the free form in the beginning of ripening. It makes them easy to wine extraction processes. The tannins and anthocyanins of the grape skin is associated with the macromolecules of the cell walls, reducing their ability to extraction. The permeability of the cell walls of the berry skin and the extractability of anthocyanins are increased during the grape ripening and the extractability of galloylated seed tannins undergoing polymerization is reduced. The present publication is devoted to the extractibility of seed and skin polyphenols and its influence on the wine quality, depending on the sugar concentration (Brix) in the 'Ekim cara' and 'Cabernet-Sauvignon' grape cultivars from the South cost zone of the Crimea. The amount of seed tanning (Mp. %) and the percentage extraction of anthocyaning obtained under winemaking conditions (Ea, %) are determined by the Glories method; technological reserve of phenolic compounds (TRPh, mg L⁻¹) - with the Folin-Ciocalteu's reagent. Wines were produced and also studied. It is shown that the relationship of the sugar concentration in grapes and Ea and Mp is described by equations of the second degree ($p \le 0.05$). Cluster analysis allowed the grapes to differentiate into 2 groups. For 'Ekim cara' the first group is characterized by the following parameters: -21,5-25,5 Brix, Ea = 44-64 %, Mp = 8-11 %, TRPh = 1,9-3,4 mg L⁻¹; for 'Cabernet-Sauvignon': -21,5-23,7 Brix, Ea = 46-66%, Mp = 9-15 %, TRPh = 2,4-3,4 mg L⁻¹. Wines made from grapes of the first group have harmonious, velvety taste, intense ruby color, developed aroma; from grapes of the second group have tannin astringent taste and significantly (p < 0.05) differed in tasting evaluation.

<u>Keywords:</u> skin anthocyanins; seed tannins; wine; harmonious; velvety taste; sugar concentration; cluster analysis