

DETERMINATION OF PHENOLIC AND MINERAL SUBSTANCES IN WINE MATERIAL FROM CABERNET SAUVIGNON GRAPE GRAPES

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Medical impact of red wines on health of the person, thanks to features of polyphenolic compounds is widely known. Besides, for the consumer nutrition value of wine consists and available in it biologically active agents, vitamins and minerals which have useful physiological effect on a human body. The purpose of work was determination of structure of groups of phenolic and mineral substances of table wine materials of a red grade of grapes of “Cabernet Sauvignon” which is grown up in the conditions of various zones of wine growing of the Crimea Republic by means of modern methods of analysis: high-performance liquid chromatography (HPLC) and atomic absorption spectroscopy.

In samples of the table wine materials prepared "in a red way for a method" the main chemical and technological indicators corresponded to GOST P 52523-2006. As a result of a research of wine material phenolic substances of the following groups were identified: anthocyanins, procyanidins (oligomeric and polymeric). The identified procyanidins, are the strongest antioxidants exceeding vitamin E and C on activity. The greatest content of polymeric procyanidins and phenolic substances is noted in samples of wine material of Coastal zones of wine growing of the Crimea. The bank of phenolic substances is established. Mass concentrations of cations of metals are determined: potassium, calcium, sodium, magnesium, iron, copper and zinc.

Data of phenolic and mineral component composition of wine materials from red grapes of “Cabernet Sauvignon” allow recommending it for receipt of the high-quality red wines and foodstuff of conversion of grapes enriched with mineral, biologically active agents of the phenolic nature with antioxidant properties.

Keywords: wine material, anthocyanins, procyanidins, metal ions, high-performance liquid chromatography, atomic absorption spectroscopy.

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