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VALORIZATION OF WINE YEAST SEDIMENTS AS A SOURCE OF LIPID PREPARATIONS

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Currently, various types of medicinal, food and animal feed preparations are developed on the basis of biologically active compounds of microbial origin. It has been demonstrated that yeasts could be used as biotechnological object, due to the high quality of biomass, are a excellent source for valuable biological compounds, such as vitamins, amino acids, unsaturated fatty acids, polysaccharides, antioxidant enzymes and other metabolites.

According to the specialized literature, bioadditives obtained from microbial biomass, due to the safety and effectiveness, significantly increase productivity and fertility of farm animals. Particular attention is paid to the problem of using yeast sediments, rich in valuable biocomponents, which accumulated in significant quantities on wineries and can be used in agricultural and industrial activities.

Determination of the biochemical composition of yeast sediments such as a secondary product derived from the wine production process, is of great practical importance for development of the new preparations based on the biologically active compounds, in particular lipids.

Thus, the purpose of this research was to evaluate the biochemical composition of the yeast biomass obtained from wine waste sediments for obtaining of lipid preparations with the perspective for use in animal husbandry.

The yeast biomass after production of the *Merlot*, *Cabernet and Rkatsiteli* wines, offered by the Cricova winery, was used as research object. Lipid content in the biomass was determined gravimetrically by extraction with the mixture of ethanol:chloroform:acetic acid. Determination of the fractional composition of lipids was carried out by the method of thin layer chromatography.

In the study of total lipid content, it was established that the yeast biomass contained from 2.5±0.03 by 11.1±1.0% d. w. of lipids, the maximal lipids accumulation has been identified in sediments from the *Rkatsiteli* white wine. As a results of the lipid fractionation procedure, it was demonstrated that the yeast sediments is characterized by the content of phospholipids - 17.43±1.05…20.61±0.77%, sterols – 13.77±0.54…20.01±0,19%, diglycerides – 13.61±0,13…14.85±1,06%, triglycerides – 15.96±1,0…22.32±0,84%, sterol ethers – 26.35±0,77…40.23±2.39% of the total amount of lipids.

Thus, according to the obtained data, we can conclude that the yeast biomass such as by-products of the wine industry can be used as an excellent source for the production of lipid preparations. The utilization of wastes from the wine industry contributes for the protection of environment.

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