F.4. INVESTIGATION OF OBTAINING VINEGAR USING CONCENTRATED JUICE

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Abstract. Currently, a wide range of vinegars is produced in the world from various raw materials, including from fruits and their waste. Within the framework of this study, the technology of obtaining vinegar from grape and apple concentrates was analyzed in order to unify production. Optimal conditions have been created for alcoholic and acetic fermentation of concentrates. The concentrated juice for the first stage of alcoholic fermentation was diluted to a sugar concentration of 25%, the temperature during alcoholic fermentation was 25 ± 1 ℃, isolated from UV rays and without oxygen. For the second stage of acetic acid fermentation, wine / cider obtained from the first stage of fermentation, with an alcohol concentration below 12%, and organic vinegar with quality parameters: TTA (total titratable acidity) = 6%, residual alcohol - 0,93%, pH = 3.33, ρ = 1.070 kg / m^3. The temperature during fermentation was 28 ± 1 ℃ with oxygen, but isolated from UV rays. The influence of nutrients and salts on the fermentation process has also been studied. In this study, the parameters for obtaining vinegar from concentrates were established and the effect of nutrients and salts on the rate of obtaining high-quality vinegar was shown.

Keywords: fermentation, vinegar, grape concentrate, apple concentrate, acetic acid, ethyl alcohol