

WHEY LIQUID WASTE OF DAIRY INDUSTRY AS RAW MATERIAL FOR FERMENTATION BY KEFIR GRANULES

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ABSTRACT

A novel system for alcoholic fermentation of whey and whey-molasses mixtures is described. This system consists of Kefir granules. 20 repeated batch fermentations of whey were carried out to prove the operational stability of the biocatalyst. The ethanol productivity reached the value of 2.57 g/L/h, while yield was 0.45 g/g. The fermentation time was just 8h. Mixtures of whey and molasses were fermented with initial °Be densities in the range of 4.2-10.2. and resulted in yields in the range of 0.36-0.48g/g. The percentage of ethyl acetate increases as the initial °Be density is diminished.