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MICROBIOLOGICAL CHARACTERIZATION OF A BRAZILIAN KEFIR GRAINS MILK

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Abstract

Kefir is a product resulting from the symbiosis between lactic acid bacteria-BAL and acetic acid bacteria. They have probiotic action, induce immune system stimulation, have antimicrobial activity to pathogens, aids intestinal microbiota balance, besides antitumor action. The present study aimed to the microbiological characterization of the grains of a Brazilian milk kefir. It was evaluated a kefir produced in the Videira/SC region. For this, ten grams of the sample were inoculated in 30mL of distilled water with 3 grams of skimmed milk powder and incubated for 24 hours at 28°C. The sample was prepared by serial decimal dilution in water, inoculated on agars : MRS, M17, Mycosel, YM and SD. They were incubated according to optimal temperature each one. The predominant microbiota was of BAL (70.5%), followed by yeasts (29.5%). The former ranged from 10E9 -10E11 CFU/g and yeasts from 10E4 to 105 CFU/g. Gram staining and analysis by optical microscopy were performed to identify the morphologic prevalence of the microbiota. The morphological analysis showed bacillary cells (short /curved long) and gram-positive cocci which grew in association to slightly oval yeast cells. There was a predominance of colonies positive catalase. The presence of distinct and numerous microbial populations in kefir reinforces the need to better explore the microbial composition of the same.

Keywords - Probiotic. Brazilian kefir grains. Microbial community.

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