

EVALUATION OF THE LACTIC ACID BACTERIA ISOLATED FROM HUMAN MILK

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The human milk is relevant to the bacterial colonization of the infant gut and exerts an important influence on the health status of the new-born. This biological fluid is a source of commensal bacteria. Among these microorganisms are the lactic acid bacteria. In this study strains of these groups were isolated and the lactic acid bacteria were characterized. Eight samples were provided by the donors mothers and transported to the laboratory (ITAL, Campinas/SP, Brazil) under refrigeration. The isolation procedures involved serial dilution techniques and plating onto selective media. Five different media and incubation conditions were applied to enumerate some of the bacterial groups from human milk. The M17 agar supplemented with glucose (5%) incubated at $37\pm 1^{\circ}\text{C}/48\text{h}$ under aerobiosis and the agar MRS (Man Rogosa Sharp) pH 6.5 incubated at $37\pm 1^{\circ}\text{C}/72\text{h}$ under microaerophilia were used to isolate *Lactococcus* and *Enterococcus*. The agar MRS pH 5.4 incubated at $37\pm 1^{\circ}\text{C}/72\text{h}$ under microaerophilia was utilized to isolate *Lactobacillus*. The MRS agar supplemented with lithium chloride (0.1%), dicloxacilin (0.3%) and L-cysteine (0.05%) incubated at $37\pm 1^{\circ}\text{C}/72\text{h}$ under anaerobiosis was used to isolate bifidobacteria. Finally, sodium lactate agar incubated at $32\pm 1^{\circ}\text{C}/5$ days under microaerophilia was applied to isolate propionibacteria. The microbiological characteristics were different to each sample. Considering the data obtained using the five media, the average colony counts varied from 2,48 to 7,24 Log CFU mL^{-1} . The colony counts were lower in the samples when the lactation period was longer. The biochemical analysis verified the occurrence of different groups of lactic acid bacteria and these results changed among the samples.

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