

RFLP ANALYSIS OF *BIFIDOBACTERIUM* STRAINS BY 16S rRNA GENE

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Using rapid and simple isolation method total genomic DNA was prepared from 12 different lactic acid bacterial species including 10 bifidobacteria. The total DNAs were cleaved with several restriction enzymes(*EcoRI*, *HindIII*, *PstI*), electrophoresed and hybridized with 16s rDNA labeled with digoxigenin. Hybridizations with the ribosomal DNA probe revealed 11 different RFLP(restriction fragment length polymorphism) patterns. The results we obtained were different from traditional taxonomic relationships on the basis of fermentative characteristics. For example, *B. asteroides* and *B. bifidum* showed an identical pattern. Statistical analysis of all the patterns led to the construction of a dendrogram. It was divided into two main branches and 6 subgroups, 5 of which showed similarities more than 60 %. *B. adolescentis* and *B. globosum* showed high degree of similarity with *Lactococcus lactis* and *Lactobacillus plantarum*, the other lactic acid bacteria. Furthermore, RFLP analysis on *B. longum* 5 strains showed the possibility of identification at the strain level.