RAPID IDENTIFICATION OF *Bifidobacterium* strains BY PCR

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Bifidobacterium spp. can provide human beings with several beneficial physiological effects. For a long time, substantial efforts have been made to develop selective media and methods to isolate and enumerate *Bifidobacterium* species. In line with this, there is an increasing need for an easy and rapid method to identify the *Bifidobacterium*. The aim of this study was to establish simple and rapid identification procedures for *Bifidobacterium* strains by using polymerase chain reaction(PCR). Successful PCR amplifications were obtained by using DNA from freeze-thaw lysed cells without further purification of the nucleic acids. In PCR using a set of universal 16S rDNA primers, *Bifidobacterium* strains tested reproducibly gave a single band of about 1,500~1,600 bp. PCR products were digested with various restriction endonucleases. Depending on the restriction enzymes, three to six different restriction patterns were identified. The resulting patterns could be used to distinguish the species of *Bifidobacterium* within the test group. This method can be completed in 7 hours for DNA preparation, PCR-amplification and restriction enzyme analysis. In addition, when the same DNA samples were used for PCR using random primers, reproducible RAPD(random amplified polymorphic DNA) patterns were also obtained.