

Characterization of Lactic Acid Bacteria Isolated from Kimchi and Application of Probiotic for Poultry

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This study aimed to characterize the lactic acid bacteria(LAB) isolated from Kimchi for applying a probiotic for poultry. *Lactobacillus plantarum* KCTC BP10224 and *Lactococcus raffinolactis* isolated from Kimchi were identified by the comprehensive biochemical and physiological characteristics. *Lc. raffinolactis* was shown the prominent antibacterial activity, which was affected by proteinase such as trypsin, pepsin and protease but not pH adjustment or heat treatment. To find out effective storage method, LAB was entrapped in Ca-alginate bead incorporating with various polymers. The best method to maintain viability for 5 months storage was attained when LAB was entrapped in Ca-alginate incorporating with gelatin. And entrapped LAB were demonstrated a significant increase in survival when subjected to simulated acidic and bile salts conditions. LAB were assessed as a probiotic in poultry, studying by their ability to provide profitable effects to the growth performance and intestinal microflora of weaning pigs. Growth performance, feed utilization efficiencies and intestinal microflora were superior to those not fed LAB when the LAB were administered through the feed mixture in pigs.