

Isolation and characterization of lactic acid bacteria used as feed additives ⁽¹⁾

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Abstract

The objective of this study was to isolate the potential lactic acid bacteria strains with functional properties from animal and further used them as feed additives to promote the benefit in the livestock production. The lactic acid bacteria after isolation from intestinal canal of chicken, feces of chicken and pig were identified by API 50 CHL kits and 38 strains were screened in the experiment. Eighteen isolated LAB strains with higher enzyme activities were further identified as *Lactobacillus reuteri*, *Lactobacillus johnsonii*, *L.b. mucosae*, *L.b. casei*, *Lactobacillus salivarius*, *Pediococcus acidilactici* and *Pediococcus pentosaceus* by full sequence analysis of 16S rDNA and screened for their probiotic properties. Comparing the results obtained from 18 LAB isolates, strain 3-2 had high bile tolerance and antibacterial activity; strain 5-1, x-1d-2 and x-1d-3' had high low pH tolerance and antibiotic resistance; strain C1W2'-2 and C1W3'-2 had high bile tolerance and antibiotic resistance. The findings in this study provided a strong basis for exploring the potential of animal LAB isolates to be used in feeding as probiotic additives.

Key words: Lactic acid bacteria, Bio-feed, Functional properties.

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