

Characterization of Probiotics from Water Kefir Grains

ABSTRACT

The probiotic potential of lactic acid bacteria (*Lactobacillus mali*, *Lactobacillus casei*, and *Oenococcus oeni*), acetic acid bacteria (*Gluconobacter maltaceti*), and yeast (*Saccharomyces cerevisiae*) strains isolated from water kefir (WK) grains were identified and evaluated. All five isolates were acid- and bile-salts tolerant. These strains appeared to be non-hemolytic, susceptible to antibiotics, adhered to porcine gastric mucin, and exhibited high antimicrobial activities against enteric pathogens. All identified five strains have in vitro probiotic properties. The detected genera in the WK grains used in this study included *Lactobacillus*, *Lactococcus*, *Leuconostoc*, *Oenococcus*, *Acetobacter*, and *Gluconobacter*.