Screening of lactic acid bacteria producing uricase and stability assessment in simulated gastrointestinal conditions

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Abstract	Thirteen probiotic lactic acid bacterial strains were screened for extracellular and intracellular uricase production. Results showed that all the strains could produce uricase with three strains, namely Lactobacillus sp.OL-5, Lactobacillus plantarum Mut-7, and Lactobacillus plantarum Dad-13, producing high intracellular uricase activities. Further analysis in simulated gastrointestinal conditions showed that Lactobacillus sp. OL-5, and Lactobacillus plantarum Dad-13 intracellular uricase, remained active after addition of gastric juice and duodenal juice. On the other hand, the intracellular of Lactobacillus plantarum Mut-7, and as well as both extracellular and membrane bond uricases of the three strains were not stable in gastric juice and duodenal juice. Thus based on uricase production and the stability in simulated gastrointestinal system, Lactobacillus plantarum Dad-13 is a potential strain for producing uricase. (C) All Rights Reserved
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