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Utilization of *Lactobacillus amylovorus* as an Alternative Microorganism for Saccharifying Boiled Rice

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The growth condition of *Lactobacillus amylovorus* strain JCM 10628, an amylolytic lactic acid bacterium, was tested as a source of enzymes for saccharifying boiled rice to produce a beverage similar to *Amazake*, a traditional non-alcoholic beverage. The composition of a medium that should leave no unpleasant taste in the *Amazake*-like product was confined to 1.0% raw cornstarch, 2.0% skim milk, and 0.1% yeast extract. α -Amylase activity and cell growth de-creased in the medium lacking any of the three ingredients. Production of α -amylase was stimulated by soluble starch as well as raw cornstarch, but neither by glucose nor sucrose. When 100 ml of the culture broth was mixed with 16 g of rice after boiling and incubated at 55°C for 24 h, the obtained fluid had an acceptable sweet and sour taste.

Keywords: Lactobacillus amylovorus, α-amylase, saccharification, boiled rice

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