Probiotics used for new diabetes-friendly juices - Radiocápsula CPR/RCP. [1]

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Calificación:

SALT LAKE CITY, March 26, 2009 — Scientists in China are reporting development of a low-calorie, low-sugar vegetable juice custom-designed for millions of individuals with diabetes and pre-diabetic conditions that involve abnormally high blood sugar. They reported on the new drink here at the 237th National Meeting of the American Chemical Society. Heqin Xing, Ph.D., and Xiuqi Liu of Jilin University in Changchun, China, described a cost-effective method of preparing a special type of vegetable drink using lactic acid-producing bacteria (LAB) to remove carbohydrates while retaining good taste, vitamins and other nutrients. "This is an exciting development," Liu said. "The process significantly removes sugar but retains the nutritional content of the juice's raw materials." To develop the juice — made from pumpkin, balsam pear, onion and carrots — Xing and Liu turned to an age-old technique in the art of food production. For thousands of years, people have cultured food — including everyday eats such as yogurt, cheeses and sausage — by using the same LAB. LAB microbes produce a compound commonly found in sour milk products called lactic acid. Because of LAB's healthy link to food production, this class of bacteria is also referred to as probiotics. In the study, LAB reduced sugar content of the vegetable juice by transforming carbohydrates into lactic acid by a routine conversion process called fermentation. As this process increases the juice's acidity, it extends its shelf life as it inhibits growth of other bacteria. Compared to other microorganisms, LAB are known for their ability to withstand acidic environments. In addition to the lactic acid's protection against

contamination, the acidity from fermentation could enhance flavors in the beverage. Xing's and Liu's use of Lactobacillus acidophilus and L. plantarum in the vegetable juice increased its acidity by about 10-fold after 12 hours of fermentation. "The viable cell counts of L. plantarum in the fermented mixed vegetable juice still remained at up to 5 billion colony forming units per teaspoon after four weeks of cold storage," Xing said. Traditional purification methods are more expensive and highly complex compared to the LAB process, Liu said. "This improves the preparation method of the diabetic-friendly vegetable drinks, but it also simplifies the method over existing ones." And the taste of the low-sugar vegetable juice? Thanks to the addition of sugar, and a diabetic-friendly sugar substitute called xylitol, Xing said that the juice has a good mix of sweet and sour. "It has a good taste with reduced calories due to lower carbohydrates," said Xing. "I believe we can put it on the market possibly in one year after a few more tests." Contact: Michael Bernstein m_bernstein@acs.org [2] 202-872-6042 American Chemical Society

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