Researchers create agave drink with probiotics to regulate sugar levels

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Biotechnoenviromental lab at the UPAEP

With a drink designed from agave and probiotic microorganisms,

specialists from the Popular Autonomous University of Puebla (UPAEP) in Mexico succeeded in reducing sugar blood levels in students who were given a glucose solution.

"We tested a sample group of 10 students who were administered a glucose solution and then 250 milliliters of the beverage. Their blood glucose levels were measured afterward, and the results showed that they dropped significantly," said Beatriz Perez Armendariz, principal of the School of Biotechnoenviromental at UPAEP.

The technology with which the beverage was designed consists of a pasteurizing heat treatment in which the microflora present in mead is removed, thus preventing fermentation. "We try to prevent the fructans from changing, because they have the ability to be a fiber and a sugar trap."

Mead contains fructans, non-soluble fibers with a hypoglycemic effect that controls sugar levels. The problem is that the product is fermented rapidly and can become pulque (a type of typical artisan spirit); hence, the importance of creating a method that can keep the product fresh for a long period, said the Beatriz Peres, who leads the project.

The beverage is nondairy and doesn't contain alcohol. It is therefore ideal for people with diabetes and those who are lactose intolerant.

Also, an assessment of the microorganisms present in the mead was performed and some bacteria were selected, including Lactobacillus leichmannii, which was isolated and integrated into the pasteurized agave juice, which reaches a shelf life of 20 days, optimum time for marketing.

In addition, tests were made to see the effectiveness of the product for different conditions such as gastritis and irritable bowel syndrome, and

the team seeks to create an agreement with local hospitals to perform studies in patients with overweight and obesity.

Perez Armendariz said that dairy products should contain at least one million lactic acid bacteria per milliliter to obtain a health benefit. "In this drink, we got up to 900 million."

But they have to be careful with the number of microorganisms that are present in the drink, because the metabolites generated by fermentation can lend a mild unpleasant flavor; hence, the need for taste tests to provide the most palatable formulation.

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