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Singaporean researchers develop food stabiliser from durian fruit seeds

Published: 2019-01-21 Views:5



Core Tip: Researchers at Nanyang Technological University in Singapore (NTU Singapore) have developed a food stabiliser from the seeds of the durian fruit.

Researchers at Nanyang Technological University in Singapore (NTU Singapore) have developed a food stabiliser from the seeds of the durian fruit.

Durian is a thorny fruit with a unique taste and smell. Its seeds are about three to four cm in diameter, which are usually thrown away after the flesh is consumed.

Using a patented technique, scientists have harvested a thick gum from the seeds that could be used as a natural food stabiliser.

Stabilisers are used in food items for a uniform texture, they contain sugar-protein biopolymers that act as a force to bind various ingredients.

The durian gum harvested contains elements that act as a food stabiliser and supports probiotics, which are good bacteria to maintain a healthy digestive system. It was found to be 20% more effective in prolonging the lifespan of probiotics than regular food stabilisers.

At a temperature of four degrees Celsius, the probiotic count of existing commercial stabilisers had significantly reduced after five weeks, whereas the durian seed probiotic count remained the same for two months.

The findings come after a three-year research project led by NTU's Food Science and Technology programme director and professor William Chen.

Chen is holding talks with several interested companies to license and commercialise the research findings.

The durian stabilisers could be used in probiotic beverages and as natural food stabilisers.

They are also suitable for vegetarians and those who avoid animal-based food stabilisers such as gelatine.

Chen said: "The majority of consumer food contains food stabilisers, which are indispensable to ensure that various ingredients that do not mix well can gel harmoniously. What we have done is to use something we often ignore when eating durians, its seeds, to produce a 100% natural food stabiliser that can even keep our gut system healthy."

"The total cost for conventional industrial processes to produce probiotic compounds is estimated at about \$60 for every litre of the growth medium. In comparison, our discovery at NTU would only cost around \$13 per litre to produce, which is 4.5 times more cost-effective."

keywords: food stabiliser durian fruit probiotics food stabilisers gelatine

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