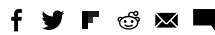


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Scientists find a way to add the smelly, thorny 'king of fruit' to sweets

Get that great durian taste without that terrible durian smell.

BY ZOEVY CHONG | JANUARY 17, 2019 2:27 AM PST



Don't bin your durian seeds! Scientists from Singapore have found ways to use them -- in your candy, for example.

NTU Singapore

Singaporeans have a deep affection for durians despite their notoriously foul stench. Now local researchers just gave the island state reason to love the "king of fruits" even more.

Scientists at Singapore's Nanyang Technological University have found a way to extract gum from durian seeds and turn it into a food stabiliser and -- with further processing -- probiotic powder.

The team demonstrated the process -- first washing the seeds, then slicing and boiling them before adding a solution to harvest the gum -- at a media briefing Thursday morning. Their findings

were published in the journal *Frontiers in Sustainable Food Systems* last September.

Food stabilisers are an ingredient used in many food items -- including gummies, sweet carbonated drinks and mayonnaise -- to bind and ensure that "various ingredients that do not mix well can gel harmoniously," according to Professor William Chen, director of the school's food science and technology programme.

These are typically harvested from Africa-imported acacia trees, but with climate change affecting seasonal harvests, alternative and more sustainable sources have to be explored, Chen added.



This isn't jam. It's an ingredient companies can use to bind other ingredients in your gummy bears and mayonnaise, amongst other food items.

NTU Singapore

Singaporeans devoured six million durians within the first six months of last year. Their seeds, which are about three to four centimeters wide and make up 20 to 25 percent of the entire fruit, are typically binned along with their thorny shells. Estimating that 3,600 tonnes of seeds are thrown away every year, Chen said he saw an opportunity to turn them into a "plant-based, all-natural" food stabiliser that is also vegetarian-friendly.

This isn't the first attempt at giving food by-products a new lease on life. Researchers from the National University of Singapore created an alcoholic beverage out of tofu whey, a liquid waste created when making beancurd. Earlier, Chen himself also found a way to turn what could otherwise have become a brewer's waste into "valuable liquid nutrient" that can be used to grow beer yeast.

What Singaporeans know and love as the "king of fruits" are shunned by many, though, for its unique smell and taste that can be a reminder of gym socks or even sewage. But the harvested gum bore neither smell nor taste after extraction (yes, I sniffed it and put some in my mouth).

Durian seed gum also contains elements that enable it to become a nutrient support for probiotics, a good bacteria that help people maintain a healthy digestive system. By fermenting the gum with added bacteria cultures then spray drying to eliminate moisture, Chen and his team was able to make a light pink-coloured probiotic powder.

During trials, the researchers discovered probiotic activity in commercial stabilisers were significantly reduced after five weeks, while that in durian seed stabilisers remained steady for two months. This suggests durian seed gum is 20 percent more effective at improving the lifespan of powder-based probiotics, hence extending shelf life to as long as 120 days.



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[How to get girl scout cookies:](#) Not available in durian flavour, sadly.

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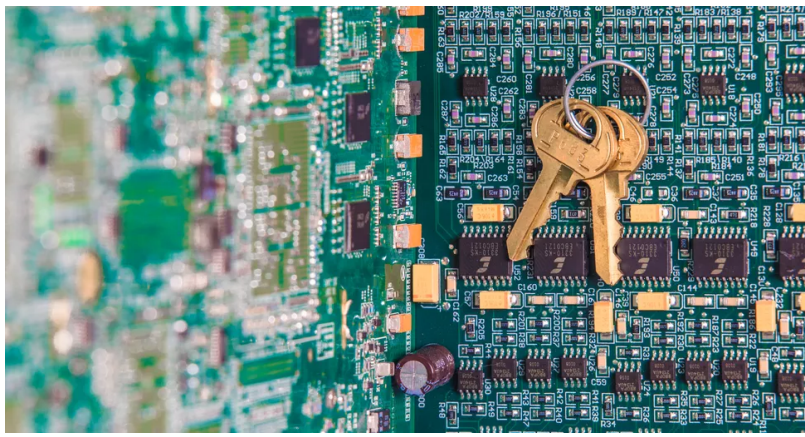
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Massive breach leaks 773 million email addresses, 21 million passwords

The best time to stop reusing old passwords was 10 years ago. The second best time is now.

BY ALFRED NG | JANUARY 17, 2019 8:40 AM PST





Millions of emails and passwords were dumped in an 87GB file.

James Martin/CNET

In one of the largest public data breaches, a collection containing more than 87 gigabytes of personal information was leaked online.

The data dump, titled "Collection #1," was hosted on the cloud service Mega, and had 772,904,991 email addresses, and 21,222,975 passwords. The treasure trove of private information was discovered by Troy Hunt, a security researcher and founder of the "Have I Been Pwned" service.

The login credentials appear to have been stockpiled over years, as some passwords and emails come from 2008, Hunt said on his blog. The information comes from more than 2,000 different sources, Hunt said. You can check if you were affected by the breach by entering your email address on Have I Been Pwned. And you can see if individual passwords were compromised by clicking here.

Breaches continue to happen on a massive scale as companies collect data on millions of people and fail to protect them properly. Marriott experienced one of the largest personal data breaches in history, losing personal information belonging to 383 million guests, while hackers hit Yahoo and stole data belonging to 3 billion accounts. The big numbers don't always equate to dire after-effects; the breach of Yahoo accounts, for instance, isn't likely to have the same potential for damage as the compromising of 147.7 million Social Security numbers taken in the Equifax breach.



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But just because your information is stolen doesn't mean that you're helpless. You can, and should, change your passwords.

When potential hackers have access to this massive amount of login data, they're not sitting at a computer trying to log into every account one by one. They're using bots to do it through a

technique called credential stuffing, which automatically blasts multiple services with the same set of login information.

"Massive data breaches like Collection #1 create huge spikes in bot traffic on the login screens of websites, as hackers cycle through enormous lists of stolen passwords," said Rami Essaid, a co-founder at bot security company Distil Networks.

The company found that websites experienced three times as many login attempts after public breaches happen.

The idea is that if you've reused those old passwords for different platforms, a potential hacker would use the leaked passwords to break into your newer accounts with these bots.

With this recent leak, it's a reminder for people to change their passwords, or [start using a password manager](#) that can automatically generate secure passwords for you.

[The best defense...](#): Data breaches can sucker-punch you. Prepare to fight back.

[That Marriott breach](#): Hackers stole more than 5 million passport numbers.

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