



## This Smart And Eco-Friendly Packaging Could Prevent Food Poisoning

Scientists have reportedly developed a smart and eco-friendly form of packaging they claim can prevent food poisoning by eliminating harmful microbes.

BY KISHALAYA KUNDU

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Image Courtesy: NTU

Scientists have reportedly developed a new 'smart' and eco-friendly **packaging** they claim can prevent food poisoning. With the packaging industry continuing to use plastic despite its well-known ill-effects, any new material or idea that could steer people away from the synthetic polymer is always welcome. The new material developed by scientists promises to reduce plastic waste in the case of the new material developed by scientists. It could even prevent food poisoning.

Plastic trash has long been an environmental nightmare. Millions of tonnes of packaging materials, bottles, and other single-use plastic often end up in oceans, where they cluster together and form large masses of floating trash, killing marine life and adversely affecting the ecology. They also sometimes wash up ashore, polluting pristine beaches and affecting

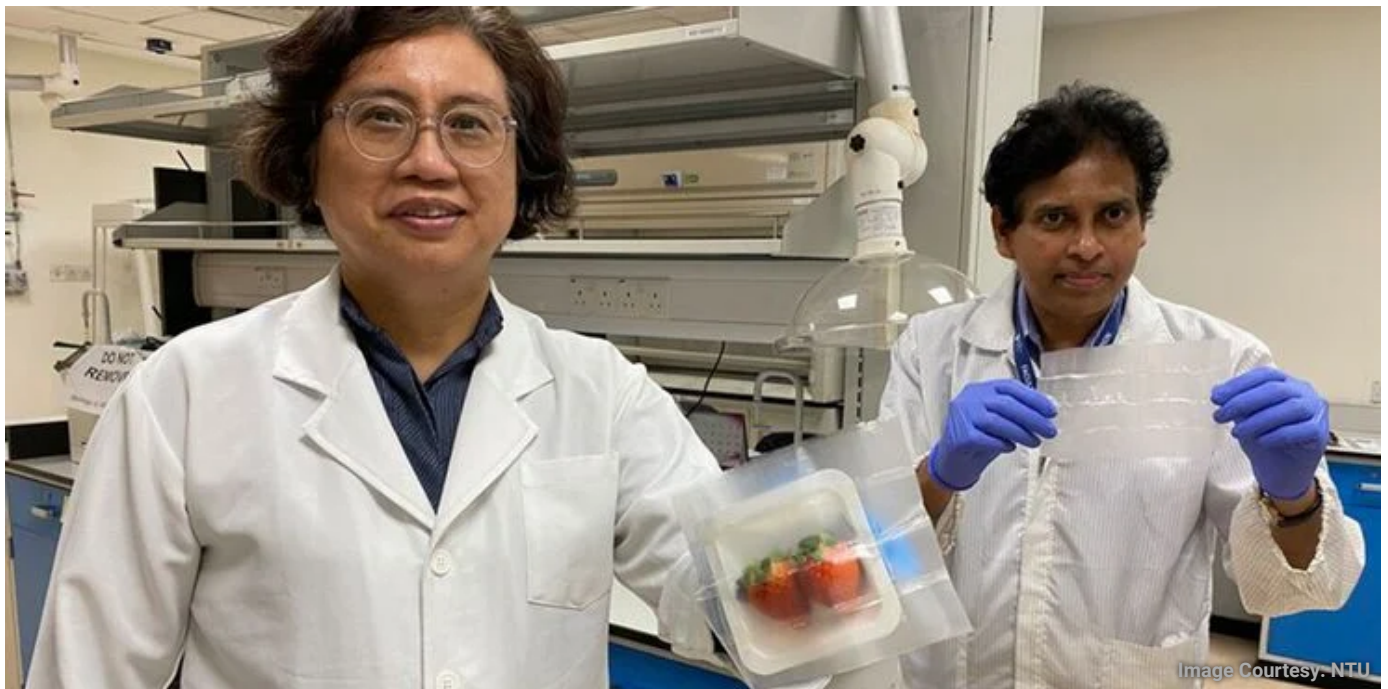
local economies. Cleaning up the trash has proven extremely difficult as conservationists often face criticism for their methods and green costs.

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Scientists from Nanyang Technological University, Singapore (NTU Singapore) and Harvard T.H. Chan School of Public Health, U.S., have developed a new 'smart' food packaging material they claim is eco-friendly and biodegradable. The water-proof packaging destroys hazardous bacteria like E.coli, Salmonella, and Listeria, preventing food poisoning and stomach ailments. It also prevents fungal growth, allowing meat, fish, fruit, and vegetables to last longer. The study has been peer-reviewed and published in the academic journal *ACS Applied Materials & Interfaces*.

## Natural, Biodegradable And Antimicrobial



The eco-friendly packaging material is entirely natural and built out of a type of corn protein called zein, starch and other natural substances. The scientists added natural antimicrobial compounds to the material to prevent harmful microbes and bacteria from growing within the packaging. The material is also described as 'smart' as it is designed only to release the antimicrobial compounds when exposed to increased humidity and in the presence of bacteria. This ensures that the packaging lasts a long time while adhering to safety standards mandated for the food packaging industry.

The researchers also claim that the packaging can keep food fresh longer than standard plastic containers. To prove their point, they conducted an experiment that showed strawberries packed with the new material stayed fresh for seven days before developing mold, while those stored in plastic boxes only stayed fresh for four days. With multiple benefits, the new material holds great promise for the food **packaging** industry, but it remains to be seen whether it can be mass-produced at the same level and at a similar cost to that of plastic, which can be churned out quickly and cheaply.

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Source: [ACS Applied Materials & Interfaces](#), [NTU](#)

