## Durian: Smelly fruit leftovers used to make bandages

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Scientists have discovered a solution to a food waste problem by turning discarded <u>durian fruit</u> into antibacterial gel bandages.

Durian is a tropical fruit found in Southeast Asia and the husk - the outer shell - isn't eaten so it can generate a lot of waste.

Researchers at Nanyang Technological University (NTU) in Singapore have discovered that the fruits' husks can be used to make a soft gel which can be cut into bandages of various shapes and sizes.

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This hydrogel was made from durian husks and can be used as a bandage

"In Singapore, we consume about 12 million durians a year, so besides the flesh, we can't do much about the husk and the seeds and this cause environmental pollution," said Professor William Chen from the NTU.

The fruit's husks, which make up half of the durian, are usually thrown away or burnt which adds to the environmental waste.



**Durian fun facts** 

- Durian fruit is really smelly! It's known for it's strong scent, some people say it smells like stinky feet
- It's a tropical fruit that has a spiky hard outer shell, also called a husk
- They can be about the size of a football

The scientists use a low-cost process to take cellulose - the main substance in the walls of planet cells - to create a soft gel sheet which can be cut into bandages. They also add a substance, known as natural yeast phenolics, which make the bandage deadly to bacteria.

These bandages are better than regular bandages, at keeping the wound area cooler and moist, which helps speed up healing.

Another benefit is this process is cheaper too because usually bandages are made from more expensive materials like silver or copper ions which normally help fight bacteria.