From milk to fabric

Milk gone sour? Don't waste it. Soured milk has been turned into various things, yogurt and cheese among them. Now add to the list: fabric. A German company, Qmilk, has found that soured milk can be spun into silky-soft cloth, particularly useful for those with allergies.

HOW IT WORKS

1 When milk goes sour, it separates — into whey at the bottom and a solid at the top. Remove the whey and what remains is cottage cheese.

2 This is dried into a protein powder, similar to that used by athletes.

3 The powder is mixed with water and other ingredients, resulting in a dough.

4 This substance is then put through what has been described as a big noodle machine. A nozzle with tiny holes forces out fine textile fibres instead of noodles.

5 It takes less than 5 minutes and 2 litres of water to create 1kg of Qmilk fibre. The company currently uses 1,000 tonnes of waste milk per year sourced from half a dozen local farms, and pays about four cents a litre for the waste milk.

Qmilk founder Anke Domaske was inspired to invent Qmilk after her stepfather was diagnosed with cancer. Here, she is pictured in her laboratory with waste milk, protein powder and cloth made of milk.

PROPERTIES

- Silky smooth
- Gentle on the skin, suitable for people with sensitive skin (created only from natural and renewable resources)
- Machine-washable (at up to 60 deg C)
- Has antibacterial properties (on E. coli and Staphylococcus aureus)
- 100 per cent biodegradable (home compostable in 6 weeks)

OTHER USES

- Qmilk technology has been adapted to produce non-woven materials as well, including toilet paper suitable for the most sensitive skins. In Italy, they have hit the shelves, thanks to a collaboration between Qmilk and Italian company Lucart, one of Europe's largest manufacturers of paper and tissue products. The name of the toilet paper: Carezza di Latte – which translates as "milk caress".

- The Qmilk biopolymer has also been used to make cosmetics. Containing natural peptides from the milk protein, they protect the skin and regulate its natural processes.

SOURCE & PHOTOS: QMILK & ISTOCK STRAITS TIMES GRAPHICS