

T-shirt turns tough after transformation

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Black drink saves from white death



The St Bernard, bringer of brandy – or coffee

Switzerland's St Bernard dogs, famous for finding and reviving avalanche victims with a tot of brandy, have been forced to adapt to the harsh economic climate. The barrels round the necks of the 135 official mountain rescue dogs will be replaced by miniature Nespresso-style coffee machines.

"It was a purely business decision," said Jörg Ettinghardt from the Swiss Alpine Club. "The glo-

bal financial crisis has meant we've got to either cut back the number of dogs or find some extra money. Using the Nespresso machines means we won't have to reduce the number of dogs."

The 3kg appliances work on the same "capsule" principle as the best-selling high-street models but with a few practical alterations.

"Every second counts when it comes to surviving an avalanche – the chances of survival have been estimated at 85 per cent within 15 minutes, 50 per cent within 30 minutes and 20 per cent within one hour. A warming drink – be it brandy or coffee – can make all the difference. However, the last thing you want to have to do with frostbitten fingers is fiddle around with aluminium capsules."

To solve that problem, all Despresso machines are fitted with three accessible buttons: espresso, black and decaf.

The Swiss army began training St Bernards to trace avalanche victims during the Second World War and in 1945 the Swiss Alpine Club took over specialised canine rescue training.

Ettinghardt says he has already been criticised by traditionalists angry at what they see as yet another aspect of Swiss culture being chipped away by globalisation. However, he hopes that once the dogs are in action and saving lives, people might change their mind.

He also points out that the old-fashioned barrels weren't without problems.

"You've got to bear in mind that not everyone drinks brandy," he said. "Doctors advise against giving 40 per cent alcohol to children and some people used to turn it down for religious or moral reasons."

The Swiss Alpine Rescue service depends on contributions from supporters and the cantons where it operates for its funding.

from swissinfo

T-shirt turns tough after transformation

The idea that a humble T-shirt will one day be turned into comfortable body armour for soldiers and policemen might be considered stretching a scientific story.

But researchers from Switzerland, the United States and China have discovered that cotton can be transformed into a material that is extremely tough as well as flexible.

What scientists in South Carolina have done is to combine the carbon in the shirt's cotton with boron – the third-hardest material on earth. The result is a lightweight shirt reinforced with boron carbide, which is used to protect tanks.

Researchers at the Federal Institute of Technology in Zurich (ETHZ), led by Brad Nelson, have been looking at how strong the new material is.

The scientists started with plain white T-shirts that were cut into thin strips and dipped into a boron solution. The strips were later removed from the solution and heated in an oven.

The heat changes the cotton fibres into carbon fibres, which react with the boron solution and produce boron carbide.

The result is a fabric that is lightweight, but tougher and stiffer than the original T-shirt. But it is still flexible, an improvement over the current boron carbide plates used in bullet proof vests and body armour.

This all sounds a little like "pie in the sky". Nelson in Zurich admits there's plenty of work to be continued on the material.

from swissinfo

Cheese industry defies economic crisis

More than 62,000 tonnes of Swiss cheese were exported in 2010, 1.6 per cent more than the previous year.

Top export – once again – was Emmental AOC, despite suffering an 8.6 per cent fall in orders, according to Switzerland Cheese Marketing on Wednesday. Roughly every third kilogram of exported cheese was Emmental.

Climbers included Vacherin Fribourgeois, which went up by 15.5 per cent, and the category "other semi-hard cheese", which rocketed by 45 per cent. The organisation said this was because of increased demand for specialty cheese.

These positive figures contrast with those from the chocolate industry, which showed sales of Swiss chocolate melting by 5.9 per cent, the first fall for six years.

from swissinfo