

## Plant DNA leaves thieves tainted

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The police are using specially tailored plant DNA to catch thieves who steal money from cash delivery vans, in the latest crime-fighting development in genetic engineering.

When cash boxes in delivery vans are opened or moved illegally, dyes are released onto banknotes, but these can be removed using aggressive solvents, making stolen money hard to identify.

The adapted plant DNA, called SigNature, is added to the dye, so the cash, criminals and anything else the dye touches are coated in it. Long strands of plant DNA are very difficult to remove, so they persist after the dye has been removed, allowing suspects to be linked directly to the crime scene.

The first criminals to be successfully prosecuted on this type of evidence were convicted in late October. Two men who stole thousands of pounds by intercepting a cash delivery in London were found with SigNature DNA on their skin, clothing and mobile phones as well as on banknotes. They pleaded guilty and were sentenced to up to five years in prison.

Over 1,000 such robberies took place in the UK in 2009.

To make the tailored DNA, US-based biotech firm Applied DNA Sciences chops up plant DNA and rearranges it, creating unique and easily identifiable DNA “markers”.

The tailored DNA is then stabilised – it can survive unaltered for up to 350 years – and added to the dye. Police scan suspects’ clothing and any recovered money using handheld detectors. If DNA is seen, it is extracted and analysed to confirm it matches the marker in the dye.

Because the tailored plant DNA has been rearranged, each batch is unique. Different batches are used for each cash shipment, allowing police to trace stolen money to particular currency deliveries, and eliminating the chances of mistaken identity.

Loomis, a cash management company which handles about £150bn (\$239bn) annually in the UK, is the first company to adopt SigNature DNA marked cash boxes.