

Lab-coated pills

With users in the UK dying from ecstasy tablets containing PMA, are Dutch pill – testing strategies the way forward? Or are users lulled into a false sense of security? **Mike Power** investigates



Sander Rigter's in-tray at the Trimbos Institute in Utrecht would raise an eyebrow even in the most liberal office here in the Netherlands. It's filled with dozens of pinch-seal bags containing different drugs, from heroin to 2-CB and MDMA pills, cocaine and amphetamines.

But instead of being consumed, each of these samples is subject to rigorous testing and analysis with data entered into a national database.

Holland's Drugs Information Monitoring System is a nationwide strategy of harm reduction and drug-use prevention that gathers data from thousands of users every week and documents what drugs are on the street. It produces a comprehensive database of different pills and powders. Across the Netherlands, there are drop-in centres where users can come and have their drugs tested, free of charge and without fear of arrest.

The first check is to see if the pill is in this database. If it is, then simple pill-testing procedures are carried out using the Marquis reagent, which changes colour on exposure to various substances.

Information on contents is then offered to users, along with warnings about the dangers even of pure and uncontaminated drugs. Users are handed a card stating that the drugs they have, even if pure, are illegal and toxic and warn that consuming them can be harmful.

"Test centres always warn for health risks associated with drug use, regardless of the lab result," says Daan van der Gouwe of Trimbos. "We never say that it is safe to use a pill with a lab result of, for example, 95mg MDMA, containing only MDMA. It is the responsibility of the user to decide whether or not to take the pill."

If the pill does not appear on the database, it is sent to the Trimbos Institute, and straight to Rigter's in-tray. Pills he has never seen before are sent by courier to the south of the country and are examined by specialist gas chromatography-mass spectrometry (GCMS) machines. These reveal with molecular accuracy what is in the pill, and they are added to the database.

In the UK and Canada, there have been several deaths in the last 12 months where it was later found

that the user had consumed PMA – a hallucinogenic amphetamine passed off as MDMA, usually in the form of ecstasy pills.

PMA is more toxic than MDMA and is especially risky as it has a slow onset, meaning users can believe they have bought sub-par drugs and then proceed to take more than usual in a search of an elusive, sometimes fatal high.

PMA has been found in the blood of 10 people who died in the north-west of England this year alone – when normally, nationwide rates of deaths from MDMA over the last five years average less than 17 over a whole year.

"We do see PMA occasionally, but we can warn users that it is present and also do a nationwide warning, using mass media; radio, TV and the net," says Rigter.

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Utrecht is home to the Victas test centre. Inside, Laura Keizer sits in a small lab and waits in the early evening for her first visitors to arrive with ecstasy tablets for her to test. "97% of all pills in Holland contain only MDMA," she says.

A bizarre atmosphere of order and clinical precision is at odds with the illegal and hedonistic activities the centre enables, made more surreal by the fact that this drug-testing lab is paid for by the government.

One man arrives and hands over a small bag of white powder. It's amphetamine, he says and he'd like to have it tested so he can decide whether or not to take it this weekend. The drug is tested with a number of reagents, and it checks out: it's fairly pure amphetamine. "I would take it back to my dealer if it was not safe," he says.

Critics of the Dutch system, such as Dr John Ramsey, a toxicologist at St George's Hospital, London says liquid reagents – the most popular and cheapest methods – do not deliver

comprehensive results; if a pill contains a mixture of drugs and is tested with just one reagent, in most cases it will only deliver a partial identification.

Dr Ramsey is opposed to free public pill testing as a harm reduction strategy because he says "the most harmful drug in most pills is in fact MDMA". He says he has never seen a pill with PMA in it.

"I don't believe the Dutch system works. It doesn't give us any more or better data than the amnesty bin testing system does [whereby users drop their drugs in bins at festivals]."

His view is shared, to an extent, by Dr Adam Winstock, a consultant addictions psychiatrist and director of the Global Drugs Survey. Together with Ramsey, he wrote a 2001 paper decrying the practice: *Ecstasy pill testing: harm minimisation gone too far?*

However, Winstock says he has refined his viewpoint in the intervening 13 years, since the technology available has changed and is now more accurate, and because the contextual issues around pill-testing are now better understood.

"There is a form of pill testing such as that used by ChEcki! in Vienna, which has mobile HPLC (high-pressure liquid chromatography) and mobile thin-layer chromatography, which shows what is in each pill and how much of it there is. And the way that info is fed back is really smart. Users in the club can see what pills are circulating, and they are colour-coded, from green to amber to red, with the latter group carrying a warning."

"This means users can make informed decisions about whether they will buy and consume a drug inside a club", says Winstock.

"I still agree with the paper John and I wrote – that single colorimetric tests give an undeserved sheen of safety. But the people who run pill testing in night clubs and festivals tell me they believe its primary role is to encourage people to engage in a conversation on drug use, on harm reduction, and the making of informed decisions. I do stand by most of what we wrote, but I am gradually changing my view."

But Dr Winstock adds there is very little research that shows the impact on user behaviour once they know what is in their tablets. "How do we know people won't say: 'Well, I've spent a tenner on

it. I'm going to just neck it anyway?," he says.

Pill testing can be carried out in number of ways, with accuracy increasing in line with costliness and difficulty, as well as time taken. The simplest and least reliable test is a single colorimetric test, in the case of MDMA, using the Marquis reagent, as found in many pill-testing kits bought online.

A small scraping of the pill to be tested is exposed to the reagent and if it turns purple, it is likely that the pill contains some MDMA, or another drug in that family, such as MDEA or MDBB. Tests are sold with a colour-matching chart that shows the likely chemical reactions that will be caused by the presence of other drugs, such as methylone (yellow) and 2-CB (lime-green)

Critics of the system argue that this can lull users into a false sense of security, since the test results indicate only the presence or absence of a drug. Online gossip shows users placing their faith in other reactions, such as a fizz or a wisp of smoke, but these are caused simply by the presence of hydrochloric acid, a salt that is reacted with the freebase oil of chemicals such as MDMA to stabilise them into crystalline form.

There are several other colorimetric reagent test kits, which, when cross-referenced by expert users can whittle down the likely contents of any given sample of a chemical. These can be used with some success to analyse pills of the most dangerous sort: mixed pills containing PMA and MDMA.

PMA is mixed with MDMA to give dealers "more bang for their buck", says Johnboy Davidson of online user-generated quality-control analysis group pillreports.com. When PMA is mixed with MDMA, the two drugs potentiate each other, giving users the impression that the pills are strong and high-dosed – at the risk of triggering possibly fatal serotonin syndrome.

But the dose-response curve of PMA is much steeper and more toxic than that of MDMA, hence the string of deaths where tests revealed those who had died had MDMA and PMA in their system.

John, a user from Scotland, lost a friend to pills containing PMA and MDMA – green tablets stamped with E=MC², known locally as Einsteins. "They were sold for a tenner each – the same price as we normally pay for the best pills. We had about six over the night.



I DON'T BELIEVE THE DUTCH SYSTEM WORKS. IT DOESN'T GIVE US ANY MORE OR BETTER DATA THAN THE AMNESTY BIN TESTING SYSTEM DOES

"It took three [pills] before I had a decent hit off them. After the third I was so munted I was rolling round the couch, eyes in the back of my head. Then I came back to earth. Instead of leaving it at that we bought more. I did six in probably 15 hours, and nine hours after the last one I was still fucked.

"They were much more tweeky and uncomfortable than normal MDMA should be, and the comedown never really came on. My mate was far worse. He was walking into walls, very confused. He went grey in the face before being taken to hospital. Somehow I survived, but my mate didn't. There was another lad near here who also died."

These users were well accustomed to high doses of MDMA and other drugs, and six pills would not be considered a particularly excessive quantity of pills to consume.

Certainly, the paucity of data available to drug users presents a clear and present danger to them. Very few users would choose PMA-MDMA pills, given the choice, and it is far from certain that users, given the right information, would either binge or abstain. The research has yet to be carried out.

One in five users in the 2012 Global Drug Survey, which quizzed 12,000 users about their drug habits, said they had taken a "mystery white powder".

"The challenge in changing drug taking from a reckless, uninformed, hedonistic activity to one that becomes a semi-sanctioned, informed, recreational activity is a massive shift in landscape not just in policy, but in how people have taken drugs for decades," says Winstock. "But at the end of the day, I'm happy to err on the side of giving people information. Not via colorimetric tests, but via mobile HPLC. The challenge then is how to ensure the decisions made are both informed and responsible. But even then, knowing what is in your pill does not guarantee you safe or fun times."

While it is true that MDMA is often the most toxic ingredient found in MDMA pills, information around dosage, provided by the more costly HPLC technique, can reduce harms and allow people to dose more cautiously. The flipside to that, says Winstock, is that people who have never taken ecstasy because of fears over purity and dosage could be drawn towards taking the drug.

Perhaps the biggest effect of a system such as that used in Holland is that free public pill testing could be forcing dealers to be more honest. Moreover, its may have a knock on effect up the supply chain, since manufacturers and top-level dealers know that at every step of the transaction, customers can verify the quality of the product they are buying.

Since the sole motive for drug manufacture and distribution is profit, and since most users of ecstasy simply want MDMA, perhaps the simplest way to keep toxic adulterants off the streets is, short of legalisation, pill-testing.

"Yes, I think this system keeps our dealers honest, and people like me a bit safer," says one client at the test centre in Utrecht. "They know we can come here and check if what they tell us is true."

One dealer with close connections to British ecstasy distribution networks agrees: "Some of the filthy shit passed off here as in pills in the UK wouldn't even get on the streets in Holland," he told me.

■ **Mike Power** is a freelance journalist and author of *Drugs 2.0: the web revolution that's changing how the world gets high*. See review on page 26.