



5. Clandestine laboratories

Principal findings

- In 1997–98, 95 clandestine laboratories were detected in Australia, compared with 58 in 1996–97. In 1997–98, 58 per cent of the laboratories detected were in Queensland, 20 per cent were in New South Wales, and 11 per cent were in Victoria.
- Methylamphetamine is the principal illicit drug produced in Australian clandestine laboratories. This is because it is easier to obtain the precursor chemical pseudoephedrine than it is to obtain other amphetamine-type precursors.
- Sudafed tablets, which contain pseudoephedrine, have become an increasingly sought after substance for the manufacture of illicit drugs.
- In 1997–98 the most common type of laboratory detected in Australia, in particular Queensland, was the 'boxed lab'; it is small and portable, and all the necessary chemicals and tools can be stored inside it.



Plate 5.1: Clandestine laboratory
Source: Queensland Police Service.

Introduction

In previous editions of the *Australian Illicit Drug Report*, clandestine laboratories have been discussed briefly in the chapter dealing with amphetamine and related substances. Changes in the nature of illicit drugs and chemicals produced in clandestine laboratories, and the increasing number of clandestine laboratories detected in Australia in 1997–98, led the Bureau to decide that a separate chapter should be devoted to this subject.

Amphetamine, in particular methylamphetamine, remains the principal drug manufactured in illicit drug laboratories in Australia. Other drugs produced in Australia and reported on in connection with clandestine laboratories are ecstasy, methcathinone, cannabis oil, ‘crack’ cocaine, pethidine and gamma-hydroxybutyrate (GHB, or fantasy). Intelligence also suggests that dimethyltryptamine (DMT) is now produced in this country. There is potential for LSD, phencyclidine (PCP) and

methqualone (mandrax), currently all produced in clandestine laboratories internationally to be produced here.

What is a clandestine laboratory

In the context of the *Australian Illicit Drug Report*, a clandestine laboratory is any secret or hidden place where chemicals are used to make an illicit drug. Such laboratories range from crude, makeshift operations using simple processes to highly sophisticated operations using technically advanced facilities. They can be located virtually anywhere—in private residences, motel and hotel rooms, apartments, horse trailers, houseboats, boats, vehicles, buses, trucks, campgrounds and commercial establishments—and are usually very portable. Some clandestine laboratories use very simple processes such as extracting cannabis oil from plants using solvents; others use complex processes involving a number of chemicals and a range of equipment to manufacture drugs such as methylamphetamine and ecstasy.

Because of the increase in the number of clandestine laboratories detected in Australia, it was determined that there was a need for better exchange of information between the various jurisdictions. As a result, in August 1997 the first Chemical Diversion Conference was held at the Australian Bureau of Criminal Intelligence; among other things, a categorisation of the various types of clandestine laboratories was developed. Initially there were three categories but a fourth has since been added. The categories are as follows:

- Category A—active (chemicals and equipment in use);
- Category B—stored/used (equipment or chemicals);
- Category C—stored/unused (equipment or chemicals);
- Category D—used site/evidence or admissions of a prior laboratory (ABCI 1998).

History

Clandestine methylamphetamine laboratories have been in use since the 1960s, when they were mainly organised and operated by outlaw motor cycle gangs. The first recorded illicit amphetamine laboratory was discovered in the United States in 1963. Like many laboratories, it was discovered only after it exploded, resulting in the death of the ‘cook’. In the United States in the late 1980s and early 1990s the traditional manufacturers—outlaw motor cycle gangs—began to be forced out of the market by new and more violent manufacturers: the Mexican-national methylamphetamine organisations. Today, these Mexican nationals dominate the methylamphetamine-manufacturing market. Their industrial-size laboratories are producing methylamphetamine in mass quantities for distribution across the United States (Cashman 1998).

In the late 1980s the number of laboratories in operation in the United States began to decline as a result of restrictions on chemical supplies. This trend has since been reversed (Cashman 1998). One of the reasons for the reversal is the use of the Internet by illicit drug manufacturers: potential methylamphetamine manufacturers can turn on their computers, point and click to find a recipe, and then point and click again to find out where to get the required chemicals. Today, in California alone, law-enforcement agencies uncover on average one laboratory a day. Recent United States Drug Enforcement Administration statistics show that 98 per cent of clandestine laboratories seized are methylamphetamine laboratories (Cashman 1998).

Although in Australia home-baked heroin and cannabis oil have been found in all States at some time in previous decades, the first clandestine amphetamine laboratory was not detected until 1976 in Sydney. Since then illicit laboratories of varying types have been discovered and, as noted, in recent years there has been a significant increase in detections. During 1997–98 there were 95 category A, B and C laboratories detected, compared with 58¹ in 1996. Queensland recorded the highest number of clandestine laboratories detected—55 (58 per cent of all laboratories) were reported for 1997–98.

Plate 5.2: Clandestine laboratory equipment
Source: Queensland Police Service.



Manufacturing methods

Four manufacturing processes are used in clandestine laboratories, depending on what type of drug is to be produced.

- **Extraction.** The raw plant material is extracted using a chemical solvent to produce a finished drug. The chemical structure of the drug is not altered. Examples are hashish or hashish oil being extracted from cannabis and morphine being extracted from opium.
- **Conversion.** A raw or unrefined drug product is changed into a more saleable product by altering the chemical form. Examples are converting cocaine base into cocaine hydrochloride and converting methylamphetamine base into crystalline methylamphetamine hydrochloride (ice).
- **Synthesis.** Raw materials are combined, in specific portions, to create the finished product through chemical reactions. Examples are LSD and methylamphetamine.
- **Tableting.** The final product is converted into dosage form. An example is ecstasy.

The vast majority of amphetamine laboratories detected in Queensland had been using hypophosphorous acid to reduce pseudoephedrine as part of the process of making methylamphetamine. This has emerged as a trend since the early 1990s. The New South Wales Drug Enforcement Agency has also noted that the pseudoephedrine-reduction method used in methylamphetamine production has replaced more traditional methods.

In the remaining States, apart from the hypophosphorous method, the following manufacturing methods for amphetamine and methylamphetamine production were detected:

- pseudoephedrine with hydriodic acid and red phosphorous;
- phenyl-2-propanone (P2P) with methylamine—phenylacetic acid combined with acetic anhydride is used to make the P2P precursor;
- P2P with formamide to make amphetamine;
- the Friedel–Crafts alkylation method.

In Victoria attempts were also made to manufacture synthetic tetrahydrocannabinol (THC) and the pharmaceutical analgesic pethidine.

Occasionally, new and unusual production methods for amphetamine-type substances have been attempted in Australia, either to market new drugs or simply to find easier ways of manufacturing known drugs. A recent variation in the manufacture of methylamphetamine has seen liquid hypophosphorous substituted for crystalline phosphorus acid. The Queensland Illicit Laboratory Investigation Task Force considers that this variation in the manufacturing process occurred as a result of the work of the Queensland Chemical Diversion Desk, whereby suppliers of hypophosphorous acid are alerted when diversion of licit chemicals is detected.

The South Australian Forensic Science Centre recently reported that methylamphetamine production using the hypophosphorous method has been detected in that State. Victoria Police received information that an American scientist from Bombay was to be employed by a local syndicate to come to Australia to use a new manufacturing process (which eliminated heat) for amphetamines. This was the first time such a process had come to the attention of law-enforcement in Australia.

Production trends

As noted, methylamphetamine is the most common amphetamine substance produced in Australia because it is easier to obtain the precursor chemical pseudoephedrine than it is to obtain other amphetamine-type precursors. Pseudoephedrine is commonly derived from Sudafed. Use of Sudafed as a precursor is most noticeable in Queensland, but illicit laboratories in most other jurisdictions are now using it.

The Australian Government Analytical Laboratory in New South Wales reports that attempts to manufacture MDMA are generally not successful. Only one MDMA clandestine laboratory was detected during 1997–98, while in previous years there have been several MDMA clandestine laboratories detected.

Figure 5.1 shows detections for 1997–98 by State and laboratory category. Figure 5.2 shows clandestine laboratory detections for 1997–98 by drug type.



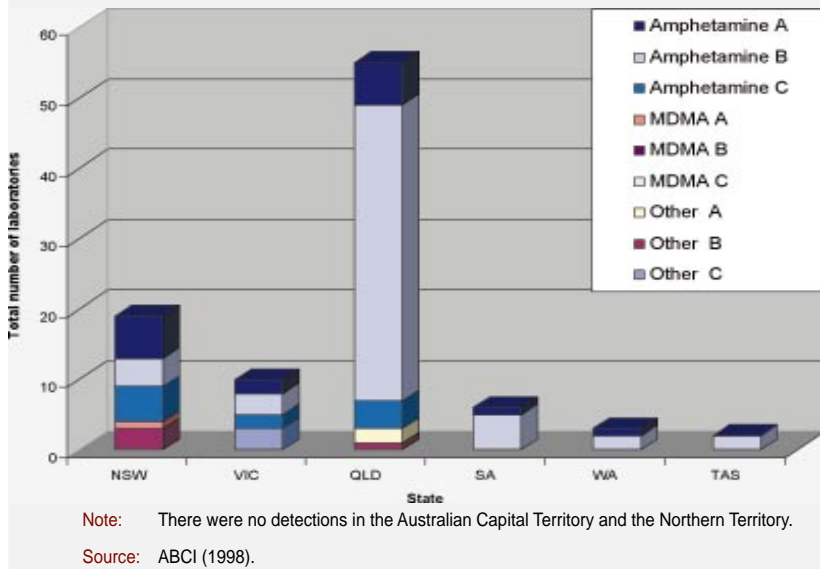
Plate 5.3: 'Boxed lab' concealed in drill box
Source: Queensland Police Service.



Plate 5.4: 'Boxed lab' concealed in camera case.(above)
Plate 5.5: 'Hash keg' hash oil laboratory (below)
Source: Queensland Police Service.



Figure 5.1: Clandestine laboratory detections, by State and laboratory category, 1997-98



The majority of laboratories detected in Queensland were ‘boxed labs’, which are often only the size of a small suitcase or briefcase and contain all the equipment, precursor chemicals and instructions. These laboratories are believed to sell for between \$10 000 and \$20 000 each and they allow for a reduced ‘cooking time’—from several days to several hours.

It was reported by some jurisdictions that outlaw motor cycle gangs have a direct involvement in the manufacture of amphetamines, particularly in New South Wales. Other agencies such as the Queensland Police Service report, however, that the majority of laboratory offenders have only loose affiliations with such gangs. In Queensland there appears to be a network of 15 to 20 people involved in manufacturing methylamphetamine. In most cases the actual ‘cooks’ have no chemical expertise: they are usually self-taught or have learnt from others. There have been instances of the same people being arrested for repeated manufacturing offences.

Reports from New South Wales law-enforcement agencies indicate a higher rate of detection of laboratories in rural areas. The New South Wales Crime Commission has reported that on a number of occasions rural properties have been bought for the sole purpose of manufacturing illicit drugs. Tasmania Police reported that two clandestine laboratories were detected during 1997-98; none were detected in 1996-97. Intelligence suggests that production is occurring in the Northern Territory, although no clandestine laboratories were detected during 1997-98.

In South Australia reports indicate that generally younger males with no formal chemistry training are acting as ‘cooks’. New South Wales law-enforcement agencies reported that several laboratories were using ‘cooks’ that had chemistry training. In one instance, an offender travelled to Queensland from New South Wales to receive training from a chemical supplier. In South Australia specialists have been used to obtain precursor chemicals using a variety of methods; for example, owners of legitimate businesses purchase chemicals that are later diverted for use in clandestine laboratories.

The Queensland Illicit Laboratory Investigation Task Force has detected increased use of microwaves during the pseudoephedrine-extraction process. On occasion, however, this method has generated too much heat too quickly, resulting in loss or burning of the powder.

Chemical diversion

Sudafed is much sought after and has become a trading commodity in the trafficking of illicit drugs. Packets of Sudafed (90 tablets) generally retail for about \$18. Police reports reveal that ‘cooks’ are paying third parties twice the retail price for Sudafed in order to avoid detection. In some instances it was reported that a ‘cook’ paid for the rental of a vehicle so that a third party could travel to as many chemists as possible to obtain Sudafed. In one case the ‘Sudafed run’ was reported to go from Cairns to Brisbane and back.

Cases have also been reported where a ‘cook’ will supply a gram of ‘speed’ for four packets of Sudafed. This appears to be a regular form of trade, eliminating the need for cash. Other precursors are reportedly traded in the same manner. In one instance 151 boxes of Sudafed were seized from the home of a person who had previously been implicated in a cocaine-importing conspiracy.

Victoria Police reported that gold-mining companies in the Ballarat region have been approached by criminals wanting to buy sodium cyanide, which is used in the gold-mining process but is also known to be used in conjunction with precursor chemicals for amphetamines and is a reagent for other unrelated synthetic drugs such as PCP (phencyclidine).

Victoria Police further reported that people have tried to obtain amphetamine precursors from chemists in the Ballarat region who specialise in providing bulk orders to veterinary practices and farmers.

Illicit drug manufacturers are finding more ways to circumvent precursor legislation and controls: instances have been reported of fake companies being registered in an apparent effort to buy precursor chemicals legally to facilitate the illegal manufacture of amphetamines.

Chemicals and hazardous waste products are often disposed of by simply pouring them down the drain or directly onto the ground. If laboratories are located on boats the chemicals may be discharged directly into the waterways. ‘For every kilo of pure methylamphetamine produced 10 kilos of hazardous and toxic waste is created’ (White 1998, p. 34). The implications of this for the environment and the community are obvious.

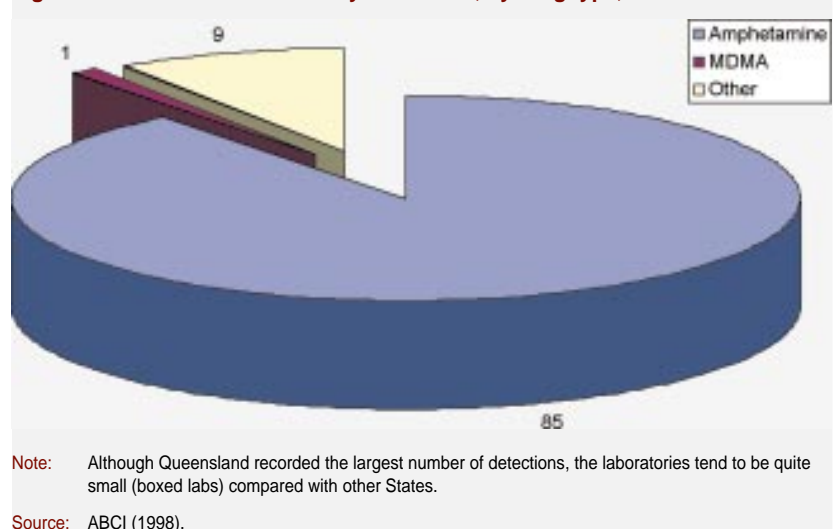
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The dangers associated with clandestine laboratories were highlighted during 1997–98 by two particular incidents.

- In March 1998 in Queensland two people were found in a vehicle in a paddock near Gladstone. One offender was suffering from severe injuries that were consistent with being involved in a chemical explosion.
- In June 1998 in Kingswood, New South Wales, an explosion and fire occurred at a townhouse. A clandestine laboratory was found to have been the cause of the explosion and 70 litres of diethyl ether were found at the premises. The fire did not ignite the diethyl ether: if it had there could have been an explosion, resulting in destruction of property and possibly loss of life.

Outside the reporting period (October 1998) in Western Australia a 'relatively safe' amphetamine laboratory exploded during the final clean-up and removal of chemicals. A chemical contractor employed to remove the chemicals was seriously injured and a forensic chemist and a female police officer were also injured.

Figure 5.2: Clandestine laboratory detections, by drug type, 1997–98



Conclusions

Methylamphetamine is the principal illicit amphetamine produced in Australian clandestine laboratories. This is because it is easier to obtain the precursor chemical pseudoephedrine than it is to obtain other amphetamine-type precursors. Other drugs such as ecstasy, methcathinone, cannabis oil, 'crack' cocaine, pethidine and GHB (gamma-hydroxybutyrate) have all been manufactured in Australia, but on a much smaller scale.

In 1997–98, 95 clandestine laboratories were detected in Australia; 58 per cent of them were in Queensland, 20 per cent in New South Wales, and 11 per cent in Victoria. Clandestine laboratories were detected in all other States. None were detected in the Territories.

Clandestine laboratories found in Australia range from simple, makeshift operations to large industrial-size laboratories equipped with the latest in technology. The most common type, however, is small and portable. These 'boxed laboratories' are often carried in a toolbox or similar container and do not attract undue attention.

Sudafed tablets, which contain pseudoephedrine, can be purchased over the counter at any pharmacy and have become a highly sought after substance in the manufacture of illicit drugs. In Queensland this method for producing methylamphetamine appears to be preferred. Other States have also seen an increase in the demand for Sudafed.

As a result of law-enforcement initiatives and in conjunction with State and Territory and federal governments, the first Chemical Diversion Conference was held at the Australian Bureau of Criminal Intelligence in August 1997. This brought together law-enforcement investigators, chemical diversion officers, forensic chemists and other delegates from external agencies to develop strategies to facilitate a better exchange of information and intelligence between agencies. A guide for categorising the various types of clandestine laboratories was developed at the Conference.

The level of detection of methylamphetamine laboratories in Australia has increased but the level of detection of MDMA laboratories continues to remain low: only one was detected in 1997–98.

Notes

¹ This figure is not based on the current classification system; it refers to the total number of laboratories seized in that year.

References

- ABCI 1998, *Clandestine Laboratory Intelligence Bulletin April-June 1998*, Australian Bureau of Criminal Intelligence, Canberra.
- Cashman, M. 1998, 'Meth Labs: toxic time bombs', *The Police Chief*, February, pp. 42–7.
- White, John 1994, 'Safety Training for Clandestine Laboratory Investigators', *Australian Criminal Intelligence Digest*, July, pp. 44–50.
- White, John 1997a, *Clandestine Laboratory Safety Awareness Training Program for Drug Law Enforcement and Forensic Personnel*, Victorian Forensic Science, Melbourne.
- White, John 1997b, *Clandestine Laboratory Safety Manual of Recorded Standard Operating Procedures*, Victorian Forensic Science, Melbourne.
- White, John 1998, 'Clandestine Labs: the lethal workplace', *The Police Association Journal*, vol. 64, no. 10, October.

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