

Health Series

Number 21

**Illicit Drug Samples Seized in the ACT
1980 to 1997**

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Produced under the auspices of Health Status Monitoring, Epidemiology Unit

Population Health Group

ACT Department of Health and Community Care

November 1998

Acknowledgments

This publication has drawn on the expertise and knowledge of several individuals who have worked in the field of illicit drug analysis in the ACT. The ACT data contained in this publication has been collected by these people over a seventeen year period. The contribution of the following people is gratefully acknowledged:

Brad John Duck

Peter Gary Smith

Paul Leslie Reedy

Max Anthony Offer

Wayne John Riley

Dr Mala Weerasuria

Jennifer Burnett

Margaret Clare Woolcock

Ine Hendrix Van Dyke

The author is particularly grateful to Dr Doris Zonta, Peter Gary Smith, Paul Leslie Reedy and Carol Kee for their assistance in preparing this publication. This publication is auspiced by the Health Status Monitoring Unit in the Epidemiology Unit.



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ISSN 1325-1090

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Published by Publications and Public Communication for the ACT Department of Health and Community Care's Epidemiology and Population Health Section and printed by the Authority of the ACT Government Printer

200 - 8 98 A4 (98/2612)

Suggested citation: Pianca D.J., (1998), *Illicit Drug Samples Seized in the ACT 1980 to 1997*, ACT Government Analytical Laboratory, ACT Department of Health and Community Care: Health Series No 21, ACT Government Printer, ACT

The ACT Government Homepage address is: <http://www.act.gov.au/>

This publication is on the internet at: <http://www.health.act.gov.au>

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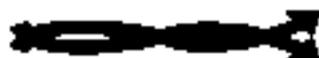
Illicit Drug Samples Seized in the ACT 1980 to 1997

1. Introduction

This publication contains data about illicit drug samples analysed in the ACT. The data was collected by the ACT Government Analytical Laboratory (ACTGAL) and covers the period from January 1980 to December 1997.

It is not the aim of this publication to draw conclusions from the data but rather to highlight obvious trends and make comparisons with nationally observed trends. The data is presented in order to be available for health and criminal research and for related policy planning.

All references are to the ACT unless otherwise stated. Raw data may be obtained from ACTGAL for use in appropriate research studies.



2. Executive Summary

In the ACT as nationally, cannabis is by far the most commonly used illicit drug. The quantities of cannabis seized by the police in the ACT have increased dramatically since 1992.

During this period the use of hydroponic techniques for growing cannabis has become popular and there has been a trend towards the growing of cannabis for personal use. Very little cannabis has been seen that has not been grown in Australia.

Although the number of samples is low it appears that amphetamines are the next most used illicit drug in the ACT. This also follows the national trend. The number of amphetamine samples seized indicates that availability and use are increasing. Methamphetamine has been the most commonly seized amphetamine, probably because it is the simplest amphetamine to synthesise in clandestine laboratories.

Nationally there has been a resurgence in the popularity of designer amphetamines and LSD in the 1990s. These drugs are reported to be popular recreational drugs at events such as 'rave' and 'dance' parties. Such parties have increased in popularity among the late teenager to mid-twenties age group. The popularity of these drugs is reported to be spreading to general drug using groups. National household surveys indicate that the level of use of these drugs is substantial, possibly higher than that for heroin. The increase in the seizures of these drugs in the ACT in the 1990s indicates that this trend is also true for the ACT.

Cocaine availability and use does not appear to be increasing, however there is evidence that the problem is greater than the number of cocaine seizures suggests. Cocaine base or 'crack' which is a major problem in the USA has not been seen to any significant extent in the ACT which is consistent with observations nationally. National household surveys indicate that cocaine is a popular drug of use, possibly to a greater degree than heroin.

The production of heroin in the South East Asia region has been increasing in the 1990s. This area is the major source of the majority of heroin in Australia. During this period there has been a decrease in heroin originating from the Middle East and Golden Crescent regions.

Police intelligence reports that in the 1990s Vietnamese gangs from Cabramatta have come to dominate the importation and distribution of heroin in the ACT and surrounding region, and appear to have contributed considerably to the increased quantities of heroin available in this region.

Sydney is the main entry point and distribution centre for heroin and cocaine in Australia. In the 1990s there has been an increase in the amount of heroin and cocaine imported through Sydney. The close proximity of the ACT to Sydney has resulted in a rise in availability of heroin to the ACT. Cocaine availability may be following the same trend.

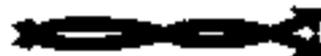
Along with the increase in availability there has also been a dramatic rise in the purity of heroin sold to addicts. This is the result of a major change in the organisations which import and distribute heroin in Australia. This increase in the purity of street heroin has been widely reported as being the cause behind an increase in overdoses and deaths attributed to heroin both in the ACT and nationally. Available evidence indicates that the rise in purity of heroin is not the only cause for the increase in opiate related mortality.

The use of anabolic steroids is increasing in the ACT and police are finding that the contents of pharmaceutical preparations are substituted with veterinary preparations and re-sold under the pharmaceutical product label.

Clandestine laboratories have become a major problem in Australia with a large number detected in the 1990s. The majority of these laboratories produce amphetamines. Motor cycle gangs have become heavily involved in these laboratories and the distribution of the amphetamines produced. Clandestine laboratories have only been an occasional problem in the ACT to date, but this could easily change.

The control of precursors by the states and territories through legislation appears to have reduced the quantities of amphetamines produced. Recently there has been an increase in the production of amphetamines in some Asian countries. These factors may result in an increase in the importation of amphetamines from these countries to Australia.

The internet has influenced the popularity of illicit drugs in the 1990s with information now readily available to the general public. Much of this information regarding the effects and dangers of illicit drug use is misleading or incorrect. Many of the clandestine laboratories that have been uncovered have obtained recipes for the synthesis of drugs from the internet.



3. Factors that Affect the Number of Samples Seized

The number of samples seized containing any particular illicit drug can fluctuate for a number of reasons:

- Changes in drug use trends in the community.
- Changes in the quantities of drugs produced and available. For example heroin production in Asia and amphetamine production in Australia have risen in the 1990s (ABCI 1994, 1995, 1996, 1997).
- Involvement of new organised groups in the production and distribution of drugs. In the 1990s Vietnamese groups have become prominent in heroin importation and distribution, and motor cycle gangs have become prominent in the manufacture and distribution of amphetamines (ABCI 1994, 1995, 1996, 1997).

- **Changes in law enforcement policies and techniques.** These changes are influenced by factors such as political climate, level of criminal activity, community concerns at any particular time and advancements in law enforcement techniques.

The adoption of the harm minimisation philosophy by the community and police in the early 1990s has resulted in a greater focus on the distributors of illicit drugs and more tolerance towards users of illicit drugs by the police. This may be a contributing factor in the drop in the number of samples in the late 1980s and early 1990s.

Public concern over the increase in heroin overdose deaths has put pressure on police to target the heroin scene in recent years.

Better detection techniques have seen a reduction in large outdoor cannabis plantations in the 1990s (ABC1 1994, 1995, 1996, 1997).

- **Legislative changes relating to illicit drugs can have different effects on different drugs particularly if they are targeted towards a particular type of drug.**

In the 1990s Australian states and territories placed legislative controls on precursors and chemicals used in clandestine laboratories. Police intelligence indicates that the legislation has reduced the quantities of amphetamines produced. Law enforcement agencies fear that this may also result in an increase in the illegal importation of precursors and amphetamines (ABC1 1994, 1995, 1996, 1997).

- **Changes to customs efforts in detecting illicit drugs at the customs barrier will primarily affect imported drugs such as heroin and designer amphetamines.**



4. Correlation Between Drug Use Levels and Data

The number of illicit drug samples does not always reflect the relative levels of use between different types of illicit drugs. There are various reasons for this:

- The quantities of drugs produced or imported into the ACT fluctuate producing fluctuations in the seizure numbers.
- Different organisations are involved with different types of drugs. Police would have different degrees of success in stopping the illegal activities of different groups particularly when there are ethnic, social or economic differences. For example Chinese and Vietnamese groups are involved in heroin importation and distribution whereas motor cycle gangs are involved in the manufacture and distribution of amphetamines (ABC1 1994, 1995, 1996, 1997).

Any targeting by the police of a particular drug type or associated criminal group will also increase the number of samples for that drug type. Public concern over the increase in heroin overdose deaths has put pressure on police to target the heroin scene in recent years.

- Different people use different illicit drugs. Cocaine is an expensive drug, so its use is largely restricted to more affluent people. These people can self fund their habit and therefore do not attract as much attention from the police as the users of other illicit drugs (ABC1 1994, 1995, 1996, 1997).
- **Potential for Addiction.** Heroin use is far more likely to lead to an addiction than is the use of other illicit drugs. Addiction leads to social and economic problems which in turn leads to behaviour which attracts police attention.

Care must be taken when interpreting trends in illicit drug use in the ACT region from the number of samples seized. The number of samples is not directly proportional to the level of use and fluctuations in the number of samples can be due to many factors other than levels of use. Relative levels of use for different drugs is also not directly related to the relative number of samples. The data needs to be interpreted in conjunction with data from other sources. Data from publications such as the annual Australian Bureau of Criminal Intelligence (ABCI) Australian Illicit Drug Reports, community drug use surveys and various publications of Australian health departments are used to help interpret trends in the ACT data.

Drug use levels indicated by the household surveys and school surveys also contain bias. As the number of people surveyed is small there would be a large statistical error in any use level where few users are surveyed. Due to the stigma attached to the use of drugs such as heroin, respondents may also not answer questions truthfully. In addition drug dependants are alleged to live unconventional lifestyles (eg homeless), reducing the chance of inclusion in such surveys.



5. Overview of the Number and Type of Samples

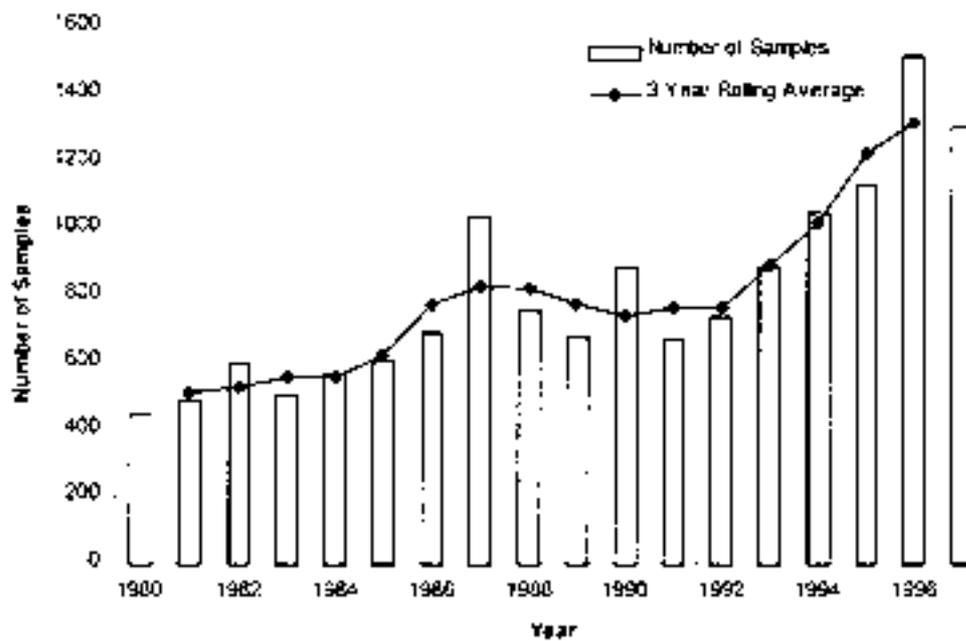
The number of samples received at ACTGAL from the Australian Federal Police (AFP) has increased over the period 1980-97 by an average of 7.1% per year. In the case of non-cannabis samples there was a sharp decrease in the number of samples from July 1989 to June 1992. Samples containing heroin and amphetamines made up the majority of the non-cannabis samples. It is unclear why this occurred however there appears to have been a drop in the quantities of heroin imported and changes in police operations (more emphasis on harm minimisation and social justice) during this period.

Table 1: Profile of samples received by ACTGAL, 1980-97

Year	Total		Cannabis			Non-Cannabis		
	No.	% Increase	No.	% Increase	% of Total Samples	No.	% Increase	% of Total Samples
1980	449		362		80.6	87		19.4
1981	489	8.9	393	8.6	80.4	96	10.3	19.6
1982	598	22.3	447	13.7	74.7	151	57.3	25.3
1983	505	-18.4	392	-14.0	77.6	113	-33.6	22.4
1984	571	13.1	392	0.0	68.7	179	58.4	31.3
1985	606	6.1	412	5.1	68.0	194	8.4	32.0
1986	692	14.2	513	24.5	74.1	179	-8.4	25.9
1987	1035	49.6	683	33.1	66.0	352	96.6	34.0
1988	761	-36.0	442	-54.5	58.1	319	-10.3	41.9
1989	678	-12.2	445	0.7	65.6	233	-36.9	34.4
1990	884	30.4	683	53.5	77.3	201	-13.9	22.7
1991	668	-32.3	555	-23.1	83.1	113	-77.9	16.9
1992	738	10.5	601	8.3	81.4	137	21.2	18.6
1993	886	20.1	644	7.2	72.7	242	76.6	27.3
1994	1047	18.2	830	28.9	79.3	217	-11.5	20.7
1995	1126	7.5	700	-18.6	62.2	426	96.3	37.8
1996	1512	34.3	1146	63.7	75.8	366	-16.4	24.2
1997	1309	-15.5	848	-35.1	64.8	461	26.0	35.2
Average					72.8			27.2
Average Increase		7.1%		5.7%			15.7%	

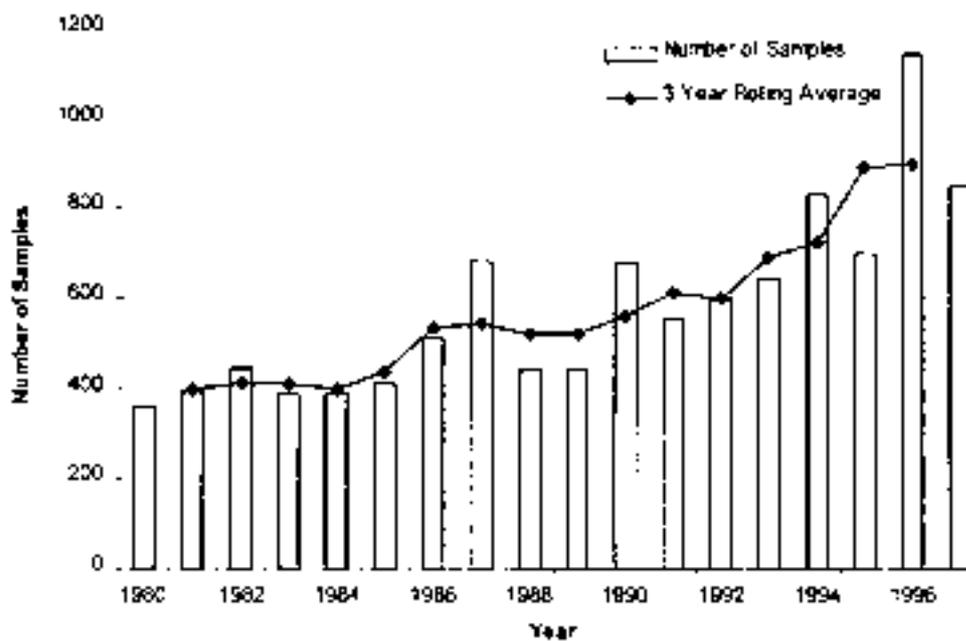
Source: ACTGAL Data Collection

Figure 1: Total illicit drug samples received by ACTGAL, 1980-97



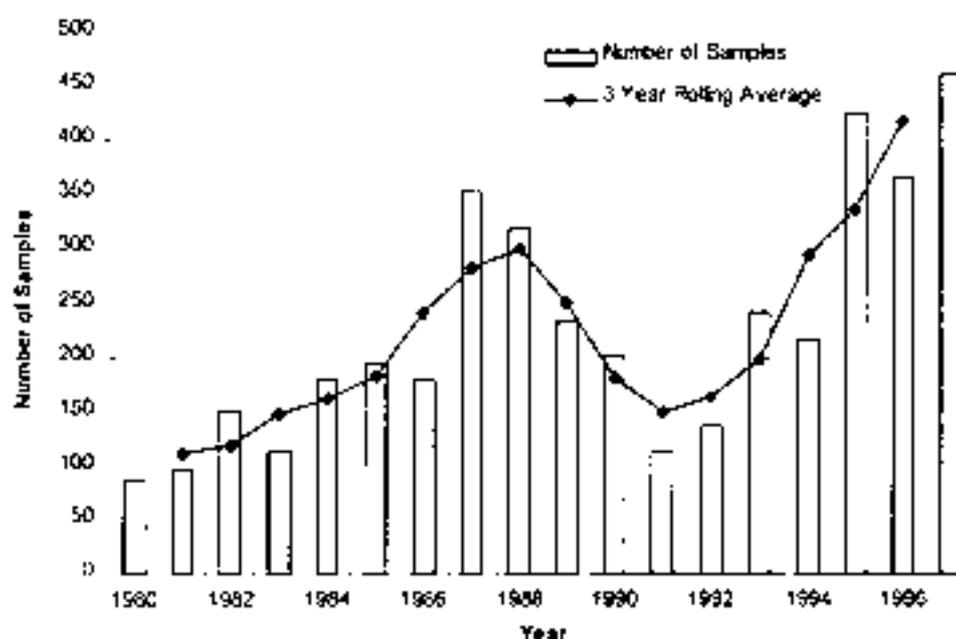
Source: ACTGAL Data Collection

Figure 2: Cannabis samples received by ACTGAL, 1980-97



Source: ACTGAL Data Collection

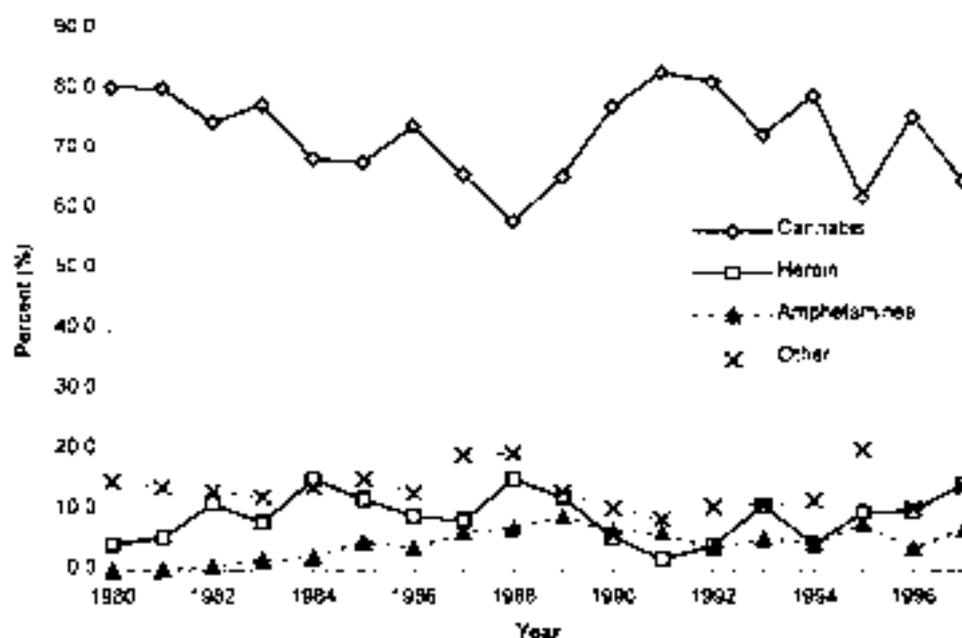
Figure 3: Non-cannabis samples received by ACTGAL, 1980-97



Source: ACTGAL Data Collection

Cannabis was the predominant illicit drug seized in the ACT (72.8% of samples) in 1980-97. Over this time the second most common illicit drug seized was heroin which was found in 9.1% of the total samples or 32.1% of the non-cannabis samples. Amphetamines were found in 4.5% of the total samples or 16.3% of the non-cannabis samples. The number of samples containing heroin and those containing amphetamines were approximately equal in 1980-97, which appears to be due to a sharp decrease in the number of heroin samples.

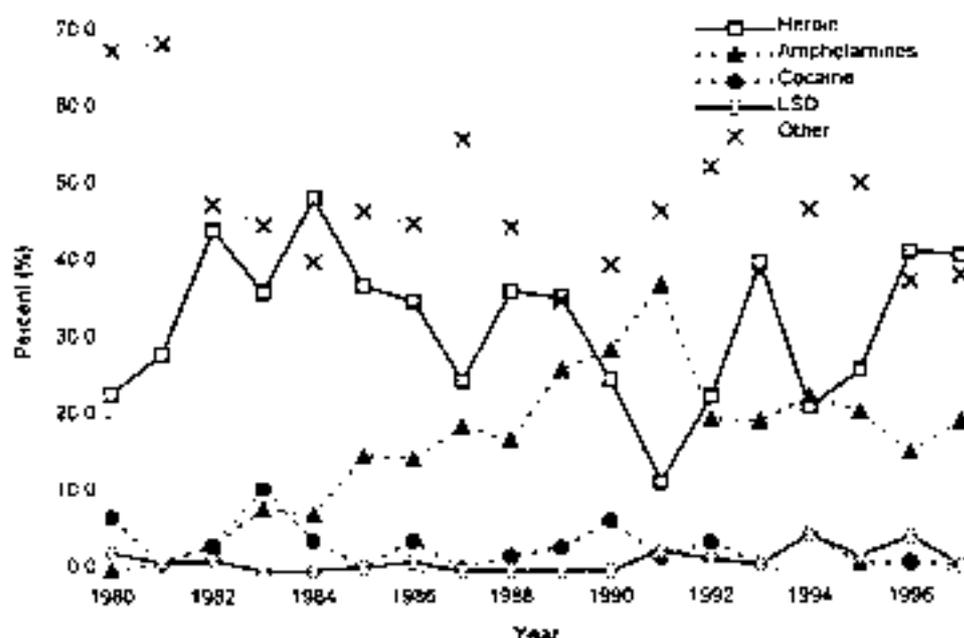
Figure 4: Profile of samples by type received by ACTGAL, 1980-97



Other includes cocaine, LSD, prescription drugs and samples where no drugs were detected.

Source: ACTGAL Data Collection

Figure 5: Profile of non-cannabis samples by type received by ACTGAL, 1980-97



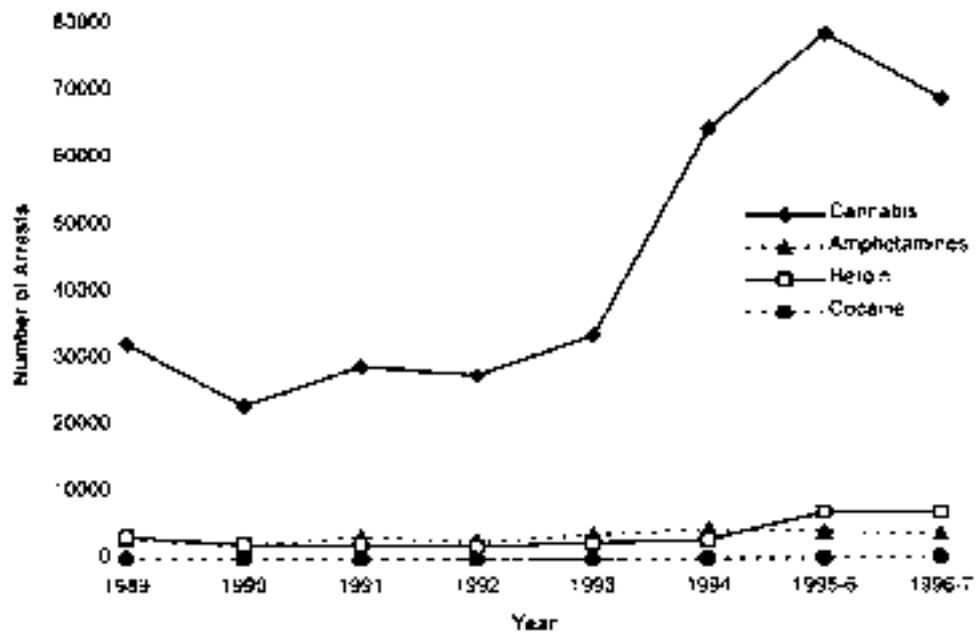
Other includes prescription drugs and samples where no drugs were detected
 Source: ACTGAL Data Collection

Nationally the number of illicit drug samples seized is not available, but arrest figures for illicit drug offences are available (Table 2). As relative number of arrests will be similar to the relative number of samples for any particular drug this data can be used to make comparisons to the ACT data. National arrest figures for drug related offences from 1989 to 1993 were relatively stable between 28000 and 40000. From 1994 arrests jumped to between 78000 and 98000. Cannabis related arrests doubled from 1993 to 1994 and heroin related arrests doubled from 1994 to 1995-6 (ABCJ 1994, 1995, 1996, 1997, DSHS 1994).

From 1989 to 1997 between 80% to 85% of illicit drug arrests nationally were related to cannabis. Heroin and amphetamine related arrests comprise the majority of the remainder. Heroin arrests have represented approximately 8% of illicit drug related arrests. From 1991 to 1994 there was a drop to a low of 4% before increasing back to previous levels. From 1989 to 1993 amphetamine related arrests represented approximately 8% of illicit drug arrests. After 1994 they dropped to approximately 5% of total illicit drug arrests. Cocaine related arrests have remained low at less than 1% and dropping to below 0.5% after 1992 (ABCJ 1994, 1995, 1996, 1997, DSHS 1994).

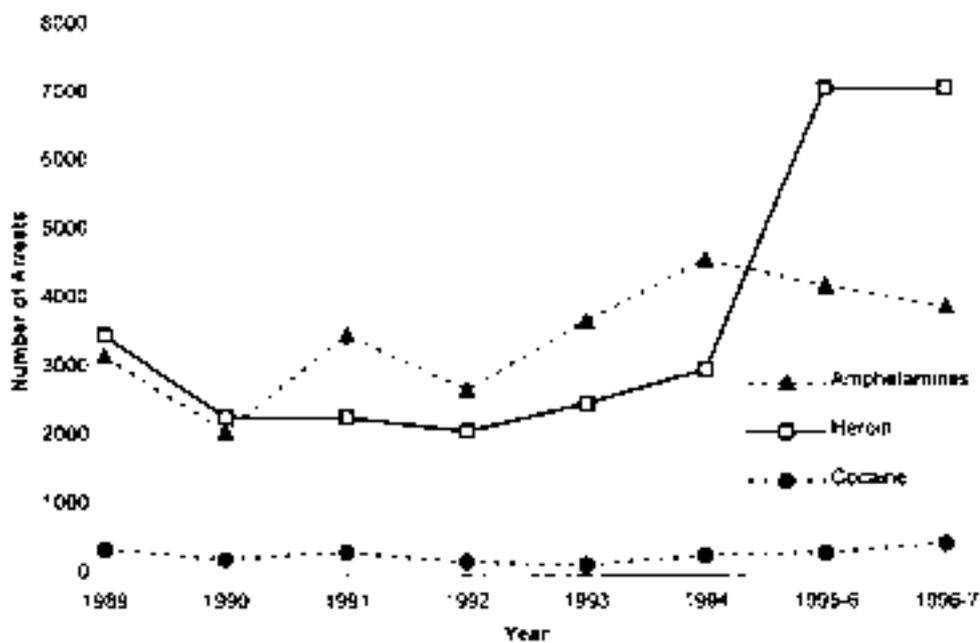
The dip in the number of samples containing heroin seized in the ACT is also seen in the national arrest figures relating to heroin (Figure 7).

Figure 6: Number of illicit drug arrests, Australia, 1989-97



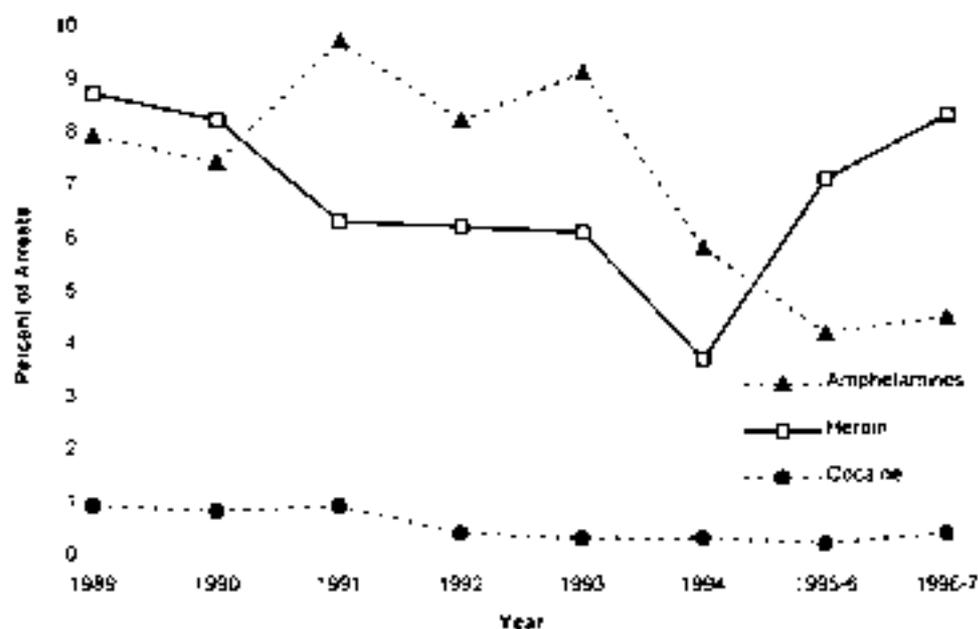
Source: ABCI 1994, 1995, 1996, 1997; DHSI 1994

Figure 7: Number of non-cannabis illicit drug arrests, Australia, 1989-97



Source: ABCI 1994, 1995, 1996, 1997; DHSI 1994

Figure 8: % of non-cannabis illicit drug arrests, Australia, 1989-97



Source: ABCI 1994, 1995, 1996, 1997; DHSI 1994

Table 2: Illicit drug-related arrests, Australia, 1989-97

Year	Cannabis		Amphetamines		Heroin		Cocaine		Total No.
	No.	%	No.	%	No.	%	No.	%	
1989	32600	82	3200	8.0	3500	8.8	383	1.0	40000
1990	23200	83	2100	7.5	2300	8.3	244	0.9	28000
1991	29200	83	3500	9.8	2300	6.4	345	1.0	35000
1992	27800	85	2700	8.3	2100	6.3	200	0.5	33000
1993	33800	84	3700	9.2	2500	6.2	154	0.4	40000
1994	64700	83	4600	5.9	3000	3.8	299	0.4	78000
1995-6	78900	80	4200	4.3	7100	7.2	330	0.3	98000
1996-7	69100	81	3900	4.6	7100	8.4	460	0.5	85000

Source: ABCI 1994, 1995, 1996, 1997; DHSI 1994

6. Cannabis

The majority of samples received and the bulk of material is for cannabis. From 1980 to 1997 samples containing cannabis represented 60 to 80% of the total number of samples.

Nationally, in the 1990s, cannabis related arrests represent 80% of illicit drug arrests (ABC1 1994, 1995, 1996, 1997). During this period there was an increase in the number of cannabis samples seized in the ACT by an average of 5.7% per year and an increase in the weight of cannabis material of 27.4% per year.

Cannabis has been the preferred illicit drug since the 1960s, with a significant increase in use during the 1980s (DHHLGGS 1993).

Figure 3 shows the three year rolling averages of the number of samples which contain cannabis. The increase in the number of samples is relatively constant over the period of the data.

The weight of cannabis material received shows a high rate of increase from 1992 to 1997 of 32.5%.

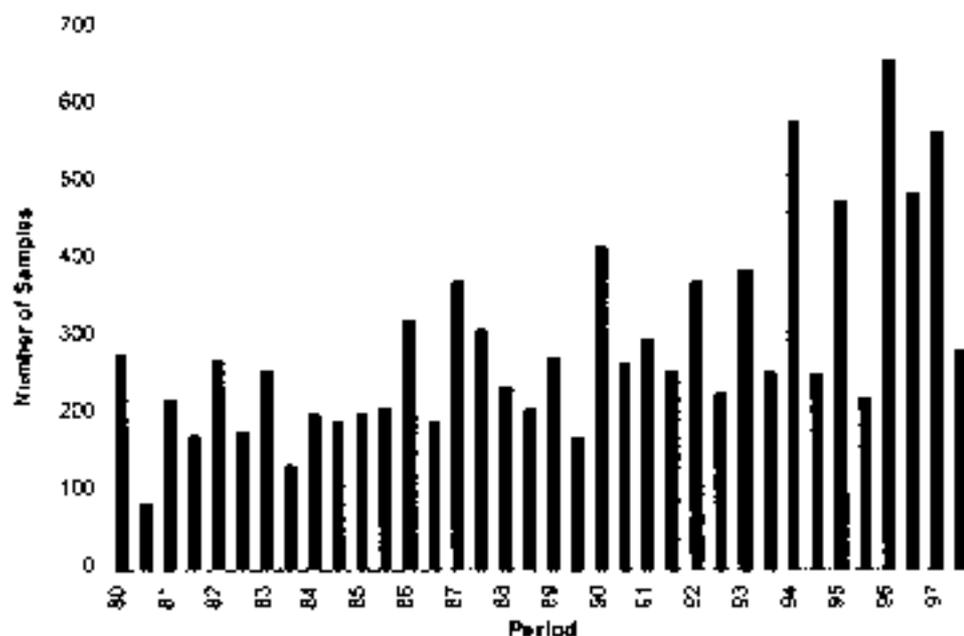
Observations at ACTGAL indicate that the increase in weight of cannabis material seized in the 1990s is mainly due to fresh plant material. This is highlighted in Figure 10 and Figure 11 which show the number and weight of cannabis samples seized in six monthly periods. In the second half of each year the number and weight of seizures was relatively constant. However, since 1992 there is a dramatic rise in the first half of each year due to fresh cannabis plants seized at the end of the cannabis growing season. Cannabis plant seizures generally contain a small number of plants indicating a trend towards users growing cannabis for personal use.

Table 3: Samples containing cannabis received by ACTGAL, 1980-97

Year	Total No.	% Increase	Total Weight (Kg)	% Increase
1980	362		66.0	
1981	393	8.6	35.6	-85.4
1982	447	13.7	200.2	462.4
1983	392	-14.0	67.0	-198.8
1984	392	0.0	53.3	-25.7
1985	412	5.1	57.1	7.1
1986	513	24.5	428.4	650.3
1987	683	33.1	58.0	-658.6
1988	442	-54.5	128.0	120.7
1989	445	0.7	118.0	-8.5
1990	683	53.5	118.0	0.0
1991	535	-23.1	135.0	14.4
1992	601	8.3	287.8	113.2
1993	644	7.2	296.0	2.8
1994	830	28.9	512.1	73.0
1995	700	-18.6	415.5	-23.2
1996	1146	63.7	422.0	1.6
1997	848	-35.1	538.0	27.5
Average Annual Increase		5.7%		27.4%

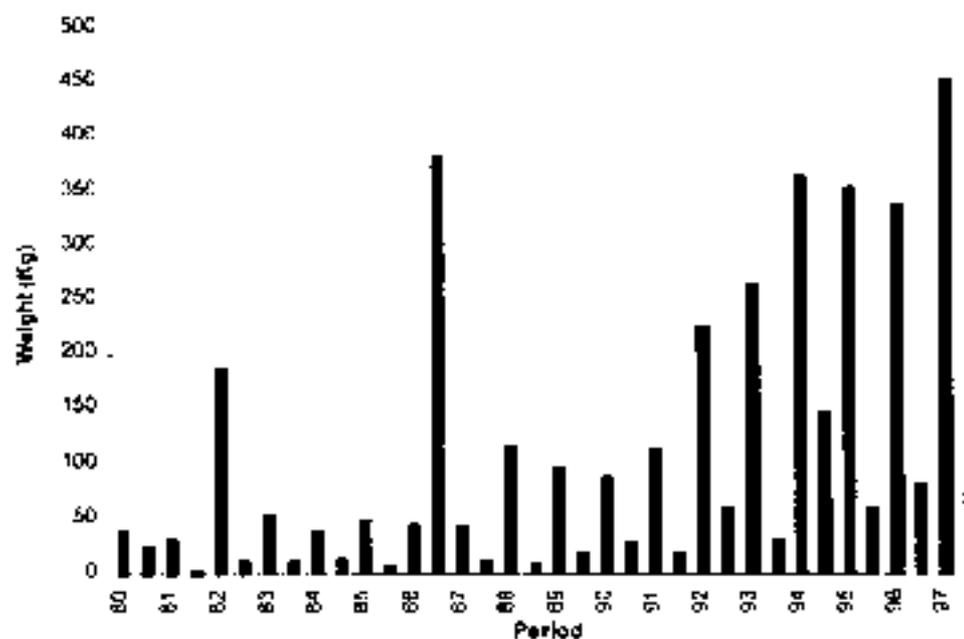
Source: ACTGAL Data Collection

Figure 10: Samples Containing Cannabis Received by ACTGAL in 6 mthly blocks, 1980-97



Source: ACTGAL Data Collection

Figure 11: Wgt of cannabis material received by ACTGAL in 6 mthly blocks, 1980-97



See Table 4, for details of the peaks in 1982 and 1986

Source: ACTGAL Data Collection

Table 4: Cannabis seizures over 20 Kgs received by ACTGAL, 1980-97

Year	Month	Weight (Kg)	Material
1982	February	163	Plantation
1986	October	377	380 Blocks of Hash
1992	February	26	24 Plants & Vegetable Matter
1992	March	12	45 Plants & Vegetable Matter
1992	March	23	Vegetable Matter
1992	May	20	20 Blocks of Hash
1992	November	66	320 Plants & Vegetable Matter
1993	March	23	9 Plants
1993	March	24	12 Plants
1993	April	38	Plants & Vegetable Matter
1993	May	26	25 Plants & Vegetable Matter
1994	February	25	17 Plants
1994	February	35	11 Plants & Vegetable Matter
1994	March	21	16 Plants
1994	December	68	79 Plants & Vegetable Matter
1994	December	37	90 Plants & Vegetable Matter
1995	February	38	26 Plants
1995	February	40	9 Plants
1995	March	36	Plants & Vegetable Matter
1996	February	29	22 Plants
1997	January	61	49 Plants
1997	February	39	Plants & Vegetable Matter

Source: ACTGAL Data Collection

Police intelligence indicates that improved police detection methods have influenced cannabis production methods in the 1990s. Large scale plantations have become less common, replaced by smaller plantations with scattered plants in isolated rural areas. In the cities, small and large scale indoor and hydroponic plantations have become popular (ABCI 1994, 1995, 1996, 1997).

ACT police report that cannabis is grown in backyard plots, indoor hydroponic systems and small plantations on outlying national park or farm land. The AFP in Canberra also reported the use of elaborate hydroponic constructions in lighted shipping containers and buildings in industrial areas for growing cannabis (ABCI 1996).

The use of hydroponic systems and indoor plantations extends the growing season, decreases the chance of detection, increases the size and Δ^9 -tetrahydrocannabinol (THC) content of the plants and increases their growth rate.

Hydroponically cultivated cannabis has become more common among ACT seizures in the late 1990s with many plants derived from cuttings. This has also been reported by police elsewhere in Australia. Cuttings are taken from known high THC content female plants ensuring a good quality crop for the grower. Police have also reported on the illicit sale of cannabis cuttings for use in hydroponic cultivations (ABCI 1994, 1995, 1996, 1997).

In the early 1990s there was a drop in the availability of cannabis material, apparently attributable to drought conditions affecting outdoor plantations. In the late 1990s the use of indoor and hydroponic plantations has resulted in a constant availability of cannabis (ie no more seasonal fluctuations). In 1997 Victorian police reported that 90% of cannabis material seized was hydroponically grown (ABCI 1994, 1995, 1996, 1997). In the ACT seasonal fluctuations in the quantities of cannabis seized are still occurring which may be due to the colder weather. This does not mean that there is a drop in the availability of dried cannabis material in the ACT in the winter months.

In 1992 the *ACT Drugs of Dependence Act 1989* was amended to allow for 'simple cannabis offence notices' to be issued by police for the possession of under 25 grams of cannabis and/or 5 plants for personal use. In 1996-7, 65.5% of cannabis offences in the ACT were simple cannabis offence notices (ABCI 1997).

The introduction of 'simple cannabis offence notices' does not seem to have had a noticeable effect on the number of cannabis samples submitted in that or the subsequent year. This correlates with the 1995 National Drug Strategy Household Survey which found that the decriminalisation of cannabis in the ACT and SA has not resulted in a greater level of cannabis use in the ACT or SA (DHFS 1995). This is supported by the number of cannabis offences per head of population which in the ACT in 1997 was the lowest in Australia (ABCI 1997).

However the weight of cannabis seized in the ACT did rapidly increase in 1992, which may have been partly due to a misunderstanding in the community of the changes to the Act.

The 1995 National Drug Strategy Household Survey found that many people in the ACT were unaware or unsure of the changes to the *ACT Drugs of Dependence Act 1989* in relation to the possession of small quantities of cannabis for personal use (DHFS 1995). Police in the ACT also reported this misunderstanding among offenders who had grown plants for their personal use believing they were not contravening the Act. In SA where decriminalisation of cannabis has also occurred, the survey also found a high level of misunderstanding in relation to the legal status of cannabis.



7. Heroin

From the beginning of the study in 1980 to the end of 1988 the number of heroin samples received at ACTGAL increased at a steady rate. In 1980, 20 heroin samples were received, by 1988 this had risen to 116. The average purity of the samples remained constant over this period at an average of 22.6%.

From 1989 to the end of 1991 the number of samples received decreased dramatically. In the second half of 1991 only 5 samples containing heroin were received. From January 1991 to July 1992 the purity of samples also showed a sharp decrease to an average purity of 12.3%.

The material seized before 1992 had the appearance of a fine white to light brown coloured powder which consisted of heroin cut with an agent such as glucose. From 1993 to the end of the study period both the number of samples and purity have increased dramatically to levels far above those seen in the 1980s. In the second half of 1997, 86 samples containing heroin were received, slightly down on the first half of 1997 (103 samples). The average purity of the samples received in the second half of 1997 was 67.3%. Much of the material seized after 1993 has had the appearance of soft white solid material known as 'rock' heroin.

The proportion of arrests directly related to heroin at the national level also showed a drop in the early 1990s (*Figure 8*). In 1989 and 1990 and after 1994, more than 8% of illicit drug arrests were related to heroin. Between 1991 and 1994 this proportion dropped to just over 6%. In the ACT the proportion of arrests directly related to heroin was 0.5% in 1992 rising to 11.7% in 1996-7. National arrest numbers show a similar trend until 1994 when they dramatically rose to over three times those of the early 1990s (*Figures 6 & 7*) (ABCI 1994, 1995, 1996, 1997, DSH 1994). It appears that the dip in the number of samples which contained heroin seized in the ACT in the early 1990s was not unique to the ACT and suggests that a drop in the availability of heroin in Australia was part of the reason for the dip.

Care must also be taken when using numbers of heroin seizure and heroin related arrest figures to estimate the level of heroin use. Due to the police attention that heroin dependence attracts, using these figures would result in an inflated estimate of the level of use in the community.

Eighty percent of the heroin seized at the customs barrier comes from South East Asia with the remainder from the Middle East and Golden Crescent (Afghanistan and Pakistan). The quantities of heroin seized at the customs barrier have consistently increased since at least 1987 (ABCI 1994, 1995, 1996, 1997).

Prior to 1993 the imported heroin was usually in the form of a powder but since then there has been an increase in the appearance of granular heroin with higher purity ('rock' heroin). By 1996 many jurisdictions reported that the majority of heroin seized was in the form of 'rock' heroin (ABCI 1994, 1995, 1996, 1997).

In 1993 police intelligence indicated that criminals of Chinese extraction continued to dominate the heroin importation and distribution trade with some Vietnamese groups operating from Cabramatta establishing a heroin network partly independent of the Chinese. The Vietnamese gangs were selling 'rock' heroin directly to the street, cutting out traditional distribution levels and resulting in the dramatic increase in the purity of heroin in the 1990s. These gangs operating from Cabramatta have come to dominate the heroin trade in the ACT region (ABCI 1994, 1995, 1996, 1997). The apparent drop in availability of heroin in the early 1990s may have allowed the Vietnamese gangs to enter the heroin importation and distribution scene.

Sydney is the main importation and distribution centre for heroin in Australia and the close proximity to Sydney has resulted in high availability of heroin in the ACT. Heroin is usually imported from Sydney into the ACT region by motor vehicle. Some of the large seizures during the study have been from police intercepts of local heroin buyers returning from Sydney with a purchase (ABCI 1994, 1995, 1996, 1997).

Heroin packages seized in the ACT have often contained up to 0.4 grams of 'rock' heroin neatly wrapped in a foil which is then wrapped inside balloons. Police report that these small packages are often concealed in the mouth and swallowed if necessary. There have been reports of couriers transporting the packages internally through customs.

Police report that in the 1990s heroin has been readily available in the major centres with no prolonged shortages. Most jurisdictions including the ACT reported that prices came down over the period of the study accompanied by an increase in seizure numbers. Police conclude that their activities seemed to have had little effect on the availability of heroin (ABCI 1994, 1995, 1996, 1997).

The sharp decrease in the purity of heroin samples in 1991 corresponded to a decrease in the number of heroin samples collected, indicating a lack of heroin supply. Profits made from the sale of heroin are affected more by the quantity sold rather than the purity of the product. During a drop in the availability of heroin, sellers may try to maintain their profits by cutting the heroin more.

The drop and subsequent dramatic increase in the percent of heroin related arrests and quantities of heroin in the ACT in the 1990s appears to be due to major changes in the heroin scene. It appears that in the early 1990s the availability of heroin from overseas decreased, resulting in a drop in both the quantity and purity of heroin available in the ACT. The subsequent dramatic increase after 1994 appears to be due to changes in the overseas sources supplying the Australian market, and changes in the organisations importing and distributing heroin in Australia. Changes in the overseas sources are demonstrated by the change in the appearance of the heroin material over the 1990s. At the same time Vietnamese groups from Cabramatta became prominent in the heroin importation and distribution scene in Australia.

The decrease in the number of heroin samples in the ACT in the early 1990s is also seen with amphetamines. It is therefore unlikely to be only due to a drop in the availability of drugs in

the community. The drop in the number of samples may also be a reflection of the move towards the harm minimisation philosophy by policy makers and the police, resulting in a more tolerant attitude towards illicit drug users.

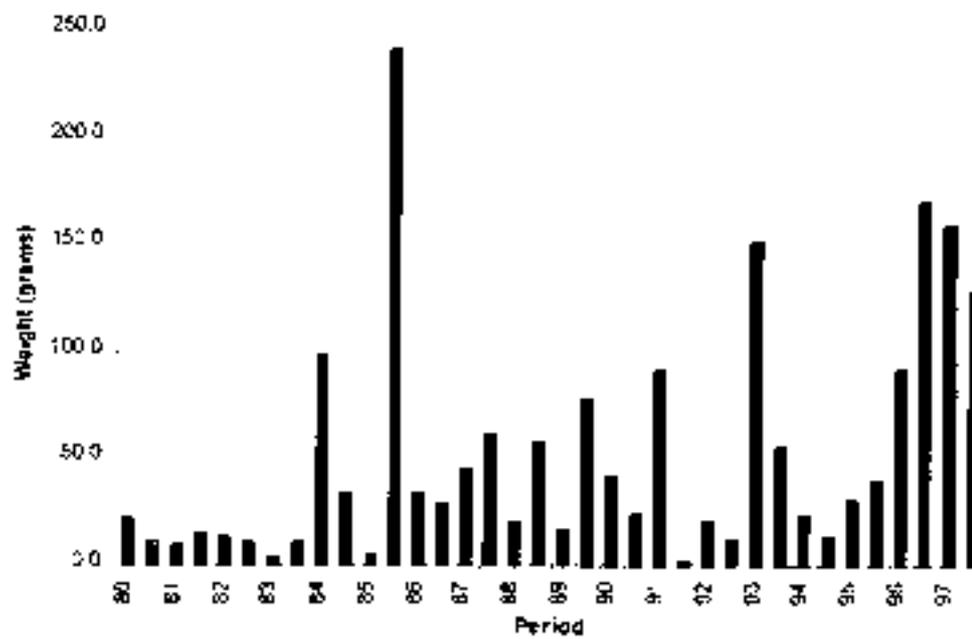
Table 5: No. & purity of samples containing heroin received by ACTGAL, 1980-97

Period	Total Number	% of Samples		Total Weigh (grams)	Average % Heroin	Standard Deviation
		Total	Non-Cannabis			
January to June 1980	31	3.3	30.8	22.8	21.9 (8)	14.0
July to December 1980	9	7.6	26.5	71.6	15.2 (7)	14.7
January to June 1981	16	5.9	31.4	9.9	20.7 (8)	8.8
July to December 1981	11	5.0	24.4	14.9	33.7 (6)	13.3
January to June 1982	44	12.5	32.4	33.9	26.0 (16)	11.5
July to December 1982	23	9.4	34.3	11.1	25.9 (9)	7.4
January to June 1983	19	6.3	41.3	4.6	28.7 (11)	17.9
July to December 1983	22	10.9	32.8	11.2	13.0 (4)	7.6
January to June 1984	49	16.3	49.5	98.8	20.8 (24)	12.1
July to December 1984	38	14.0	47.5	34.0	19.5 (19)	13.0
January to June 1985	34	11.2	33.3	5.8	31.7 (14)	16.8
July to December 1985	38	12.5	41.3	241.2	28.1 (22)	17.7
January to June 1986	42	9.7	38.3	34.5	25.8 (8)	6.9
July to December 1986	21	8.1	30.0	30.0	18.8 (10)	11.2
January to June 1987	46	8.1	23.3	45.4	15.3 (6)	3.5
July to December 1987	41	8.8	26.3	61.5	17.9 (5)	3.4
January to June 1988	46	12.6	35.1	21.1	21.1 (8)	7.8
July to December 1988	70	17.7	37.2	57.6	21.9 (3)	12.6
January to June 1989	51	12.7	39.3	17.3	15.9 (2)	4.5
July to December 1989	52	11.6	30.8	78.3	15.6 (9)	4.9
January to June 1990	17	3.2	15.2	41.4	19.2 (4)	5.5
July to December 1990	33	9.3	37.1	24.2	35.3 (9)	13.1
January to June 1991	10	2.8	17.3	91.4	10.3 (3)	10.6
July to December 1991	3	1.0	3.4	2.1	14.0 (1)	
January to June 1992	18	4.2	32.7	21.0	12.5 (2)	9.2
July to December 1992	13	4.2	15.9	12.7	19.0 (3)	11.8
January to June 1993	57	11.3	32.3	150.9	39.2 (11)	19.4
July to December 1993	40	10.3	30.1	55.7	33.2 (11)	8.7
January to June 1994	23	3.4	24.0	22.9	38.5 (13)	15.8
July to December 1994	23	6.2	19.0	13.9	32.3 (13)	19.5
January to June 1995	41	6.2	22.3	30.4	56.7 (23)	17.9
July to December 1995	70	15.0	28.7	39.3	56.7 (30)	14.5
January to June 1996	83	9.9	45.4	1159.6	54.7 (27)	9.2
July to December 1996	69	10.3	37.7	169.6	61.0 (26)	14.3
January to June 1997	103	12.7	42.4	158.8	51.1 (25)	20.8
July to December 1997	86	17.2	39.4	2128.8	67.3 (26)	12.7
Average		9.2%	32.3%			
Average Jan. 1980 - Dec. 1994					22.7%	
Average Jan. 1995 - June 1997					57.9%	

*Note: Purity was not determined for all samples, figures in brackets indicate the number assayed.
Source: ACTGAL Data Collection*

From 1985 to 1995 the proportion of the Australian population 14 years of age and over who tried heroin remained low at under 2%. Less than 1% of these used heroin in the previous year indicating that the number of current users is low. For amphetamines these figures are 6% and 2% respectively and for cocaine 3% and 1%. These data suggest that the level of heroin use in the Australian community is lower than that for amphetamines and cocaine (COHFS 1995, DHSI 1994).

Figure 13: Total wgt of heroin samples received by ACTGAL, 1980-97

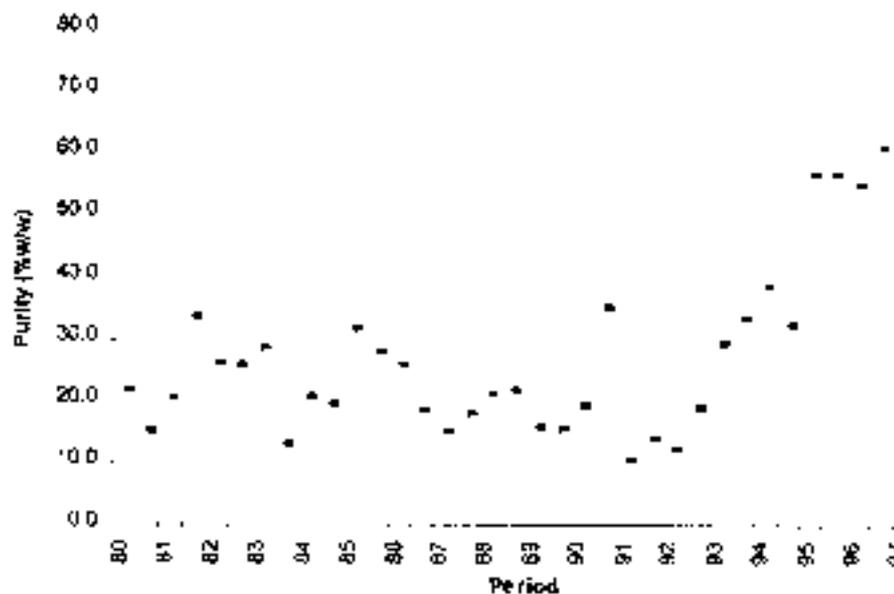


The large seizures made in Sydney in the first half of 1996 and second half of 1997 are not included

See Table 6 for details of the peaks in 1984, 1985, 1993, 1996 and 1997

Source: ACTGAL Data Collection

Figure 14: Purity of heroin samples received by ACTGAL, 1980-97



Bars indicate one standard deviation of multiple results.

Source: ACTGAL Data Collection

Table 6: Heroin seizures received by ACTGAL, 1980-97

Year	Month	Weight of Powder (grams)	Purity
1980	January	18	21%
		5	43%
1984	June	28	20%
		7	56%
1984	June	46	49%
1985	July	198	65%
		8	27%
1987	April	44	10%
1987	December	50	14%
1988	November	29	37%
1989	August	27	24%
1990	March	21	21%
1991	February	80	3%
1993	March	74	14%
1993	June	21	33%
		41	67%
1993	October	27	47%
1995	January	10	67%
		13	37%
1996	February	27	49%
1996	April	1068200*	76%
1996	June	36	53%
1996	September	28	62%
		26	56%
		95	66%
1997	April	48	57%
1997	May	50	20%
1997	September	53	84%
1997	September	24	65%
1997	December	15	81%
1997	December	2000000 ^b	75.5%

Samples not separated by lines are from the same seizure

** Attempted importation of heroin in a state from overseas*

^b Attempted importation of heroin from overseas to an address in Canberra

Source: ACTGAL Data Collection

There was a dramatic increase in deaths due to heroin in the 1990s. The increase in heroin purity on the street has been reported in the press as causing this increase. A study by Hall W. and Darke S. (1997) reported that the number of opioid overdose deaths in Australia rose from 70 in 1979 to 550 in 1995. However the study concluded that 'The factors that have probably contributed to the increase are increased purity and changes in patterns of polydrug use and injecting behaviour. At present the specific contributions of these causes to the large increase in overdose mortality are uncertain.'

Although heroin is generally injected, police report a growing level of use by professional, affluent socio-economic and ethnic Asian groups who smoke it. Little police attention is drawn to these groups as they self fund their habit and consume in private (ABCI 1996).



8. Amphetamines

The term amphetamines refers to drugs which have the basic structure of the drug amphetamine. These include methamphetamine, as well as the designer drugs 3,4-methylenedioxyethylamphetamine or MDMA and 3,4-methylenedioxyamphetamine or MDA.

Amphetamines seized in the ACT have typically been white to brown coloured powders usually containing methamphetamine and cut with an agent such as glucose. Few seizures of tablets containing amphetamines have been made over the period of this study.

The bulk of illicit methamphetamine sold in Australia is domestically produced whereas the bulk of the illicit designer amphetamines is imported. Police fear that tighter precursor legislation and the increase in the production of amphetamines in Asia may result in a dramatic increase in the quantities of amphetamine and methamphetamine material imported from that region (ABC1 1994, 1995, 1996, 1997).

Methamphetamine HCl crystals or 'ice' is a major problem in the USA. It is taken by inhaling the vapours after heating, producing an intense effect. It is highly addictive. From 1980 to 1997 none of this material was seen in the ACT although 'ice' was seized in some Australian jurisdictions in 1996-7 (ABC1 1997).

No samples containing amphetamines were seized in the ACT between 1980 and mid 1981. Since then the number of samples has increased up until July 1990 when just under 40 samples were submitted in a half year. From the end of 1990 to the middle of 1992 the number of samples containing amphetamines decreased dramatically to less than 10 in the first half of 1992. This decrease starts one year after the similar trend occurred with heroin samples and reached a minimum at the same time. The number of samples containing amphetamines increased after the middle of 1992 to reach levels above those previously seen. In 1994 and the first half of 1997 the number of samples containing amphetamines show peaks of close to 50 samples in half a year.

From 1980 to 1997 amphetamines represented on average 4.7% of illicit drug samples and 16.3% of non-cannabis samples. From 1987 to 1997 the average was 6.3% of illicit drug samples and 22.3% of non-cannabis samples.

The general trend is an increase in the number of samples which contain amphetamines over the period of the study, however there are repeated fluctuations. Peaks can be seen in the first halves of 1985 and 1987, the second halves of 1989, 1992 and 1993, and the first halves of 1995 and 1997. These peaks may represent the entry of a new source of amphetamines into the ACT region.

The weight of amphetamine material seized in the ACT fluctuated over time (Figure 15). It was dominated by seven large seizures which occurred in six half year periods. Generally the amount seized is in the order of 23 grams per half year with the exception of the six half year periods where an average of 470 grams of material was seized. The peaks in the number of samples containing amphetamines in the second half of 1989, 1992 and 1993 and the first half of 1995 correlate with these peaks in the weight of amphetamine material seized.

These observations may be due to a sporadic supply and small number of importers of amphetamines into the ACT at any one time. The large seizures are not followed by a sudden reduction in the number of samples which suggests that the police, although successful in detecting suppliers, are having little effect on the supply. This indicates that the amount of amphetamines available in the community is greater than the number of samples and weight seized suggests.

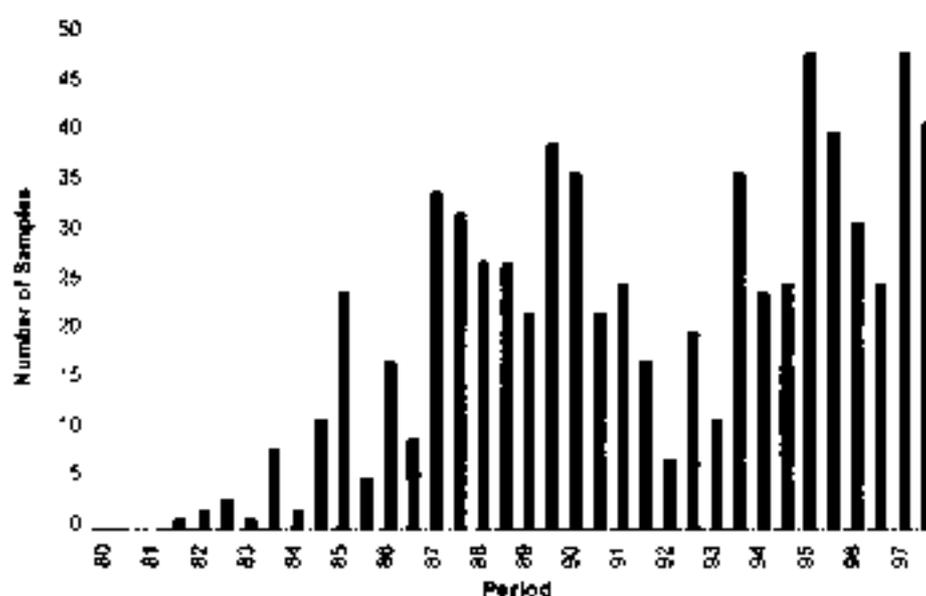
Between the middle of 1989 and the middle of 1995 the number of amphetamine samples was comparable with those for heroin, making them equal second in number. This was not due to an increase in the number of samples containing amphetamines, rather a reflection of the decrease in heroin samples.

The ACT amphetamine seizure numbers and weight, indicate that the use and availability of amphetamines, although sporadic, is increasing in the ACT.

From 1985 to 1995 the proportion of the Australian population aged 14 years or more which had tried amphetamines remained constant at approximately 6% making amphetamines the second most used illicit drugs after cannabis. The proportion of the population who had used amphetamines in the previous year also remained constant at approximately 2% indicating that the number of current users was also constant (CDHFS 1995, DSH 1994).

There is evidence that suggests that amphetamine use is becoming more of a health problem in Australia with the number of users entering programs for the treatment of amphetamine use increasing tenfold in Western Australia between 1988 and 1994 (ABC 1996).

Figure 15: Samples containing amphetamines received by ACTGAL, 1980-97



Source: ACTGAL Data Collection

Table 7: Samples containing amphetamines received by ACTGAL, 1980-97

Period	Total Number	% of Samples		Total Weight (grams)
		Total	Non-Cannabis	
January to June 1980	0	0	0	0
July to December 1980	0	0	0	0
January to June 1981	0	0	0	0
July to December 1981	1	0.5	2.2	0.03
January to June 1982	2	0.6	2.4	0.3
July to December 1982	3	1.2	4.5	0
January to June 1983	1	0.3	2.2	0.6
July to December 1983	8	4.0	11.9	22.4
January to June 1984	2	0.7	2.0	4.6
July to December 1984	11	4.1	13.8	1.1
January to June 1985*	24	7.9	23.5	454.3
July to December 1985	5	1.7	5.4	6.8
January to June 1986	17	3.9	15.6	5.5
July to December 1986	9	3.5	12.9	21.0
January to June 1987	34	6.0	17.3	8.4
July to December 1987	32	6.9	20.5	7.0
January to June 1988	27	7.4	20.6	33.3
July to December 1988	27	6.8	14.4	39.3
January to June 1989	22	5.5	17.1	26.4
July to December 1989*	39	14.2	37.3	234.8
January to June 1990	36	6.8	32.1	55.5
July to December 1990	22	6.2	24.7	58.6
January to June 1991	25	7.1	43.9	50.0
July to December 1991	17	5.4	30.4	35.9
January to June 1992	7	1.6	12.7	3.4
July to December 1992*	20	6.3	24.4	1007.3
January to June 1993	11	2.1	10.1	12.3
July to December 1993*	36	9.3	27.1	522.0
January to June 1994	24	3.6	25.0	59.3
July to December 1994	25	6.7	20.7	80.6
January to June 1995*	48	7.3	26.4	243.3
July to December 1995*	40	8.6	16.4	358.5
January to June 1996*	31	3.7	16.9	380.8
July to December 1996	25	3.7	13.7	19.4
January to June 1997	48	5.9	19.8	48.8
July to December 1997	41	8.2	18.8	53.1
Average	30.0	4.7%	16.3%	109.6 grams
Average 1987 to 1997	29.0	6.3%	22.5%	155.8 grams
Average Weight Excluding Seven Half Year Periods with Large Seizure Weights*				22.5 grams
Average Weight for the Seven Half Year Periods with Large Seizure Weights*				470.1 grams

Source: ACTGAL Data Collection

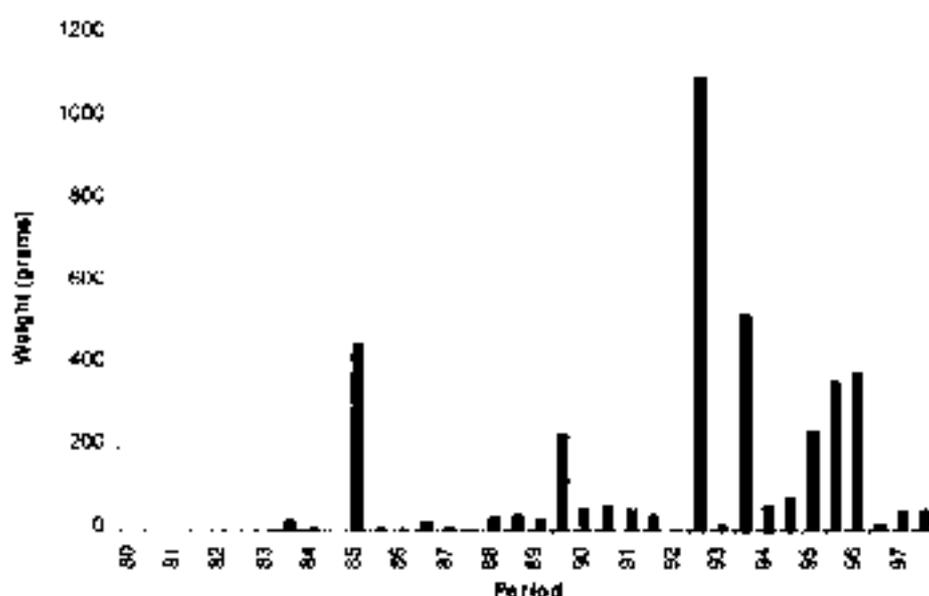
Amphetamines are the second most used type of illicit drug in Australia after cannabis. This is not reflected in the national amphetamine arrest figures which are only higher than those for heroin from 1991 to 1994 when the number of heroin related arrests show a dip (Figure 7). Amphetamine related arrests remained relatively constant with a slight rise from 1993 to 1996-6. In 1995-6 and 1996-7 heroin arrests dramatically increased to well above those for

amphetamines. As a percent of total arrests there was a decrease after 1993 from approximately 8% to 5% (Figure 8) (ABCI 1994, 1995, 1996, 1997, DSHS 1994).

In the ACT the relative number of samples seized which contained amphetamine and heroin indicate that amphetamines are used less. At the national level the relative number of arrests does not seem to reflect the relative level of use for heroin and amphetamines. As samples and seizures are closely related, then in the ACT amphetamines may well be used to a greater degree than heroin.

In the ACT in 1996, 6.9% of male and 9.1% of female year 12 students reported that they had tried amphetamines, with 6% of males and 7.8% of females using in the last year. Approximately 5% of male and 2.3% of female year 12 students reported that they had tried narcotics. This level of use is far lower than that for amphetamines and provides strong evidence that amphetamine use is greater than heroin use in the ACT community (Phung H et al. 1998). This apparent contradiction between relative arrest or sample numbers and relative use levels is not unexpected. The use of amphetamines is not as likely to lead to addiction as the use of heroin. Addiction leads to situations which attract police attention such as resorting to crime to fund the habit or involvement in the easily visible "junkie" scene. Amphetamine use tends to be occasional and recreational which is more difficult for police to target.

Figure 16: Wgt of samples containing amphetamines received by ACTGAL, 1980-97



See Table 8 for details of the peaks in 1985, 1989, 1992, 1993, 1995 and 1996
Source: ACTGAL Data Collection

Police intelligence indicates that there have been some changes in the preferred mode of administration of amphetamines in recent years. Traditionally amphetamines have been taken by nasal insufflation (snorting) however injection has been gaining popularity. Some jurisdictions in 1997 reported that injection was the sole method of administration (ABCI 1996, 1997). Since 1984 in the ACT there have been numerous seizures of syringes which

have been found to contain amphetamines. Some of these syringes have also contained heroin.

In 1995 a bogus company was purchasing diphenhydramine from legitimate chemical companies and then mixing the drug with amphetamines. Diphenhydramine, an antihistamine, is reported to enhance the effects of amphetamines up to ten times. Numerous amphetamine seizures throughout Australia were found to contain this chemical in 1995 (ABCI 1996). In the ACT seven samples containing amphetamine (a total of 22 grams of powder) were found to also contain diphenhydramine in 1995. A further two samples containing a total of 115 grams of powder were found to contain diphenhydramine and chlorpheniramine, another antihistamine.

Amphetamines seized in the ACT are generally of low purity which reflects the national trend. The average amphetamine purity of seizures throughout Australia in 1995-6 was 7.4% (ABCI 1996).

Police intelligence from all jurisdictions indicates that close knit organisations such as motor cycle gangs are heavily involved in the manufacture and distribution of amphetamines. There have also been reports of the use of amphetamines in the transport industry to combat the effects of sleep deprivation (ABCI 1994, 1995, 1996, 1997).

Table 8: Large seizures of amphetamines received by ACTGAL, 1980-97

Year	Month	Weight of Powder (grams)	Amphetamine	Purity
1985	March	453	Methamphetamine	86%
1989	August	140	Methamphetamine	7.0%
		67	Methamphetamine	5.9%
1992	December	1011	Methamphetamine	5.7%
1993	July	448	Methamphetamine	5.1%
1995	June	132	Amphetamine	3.7%
1995	December	280	Methamphetamine	4%
1996	May	117	Amphetamine	12.7%
1996	June	226	Methamphetamine	2.3%

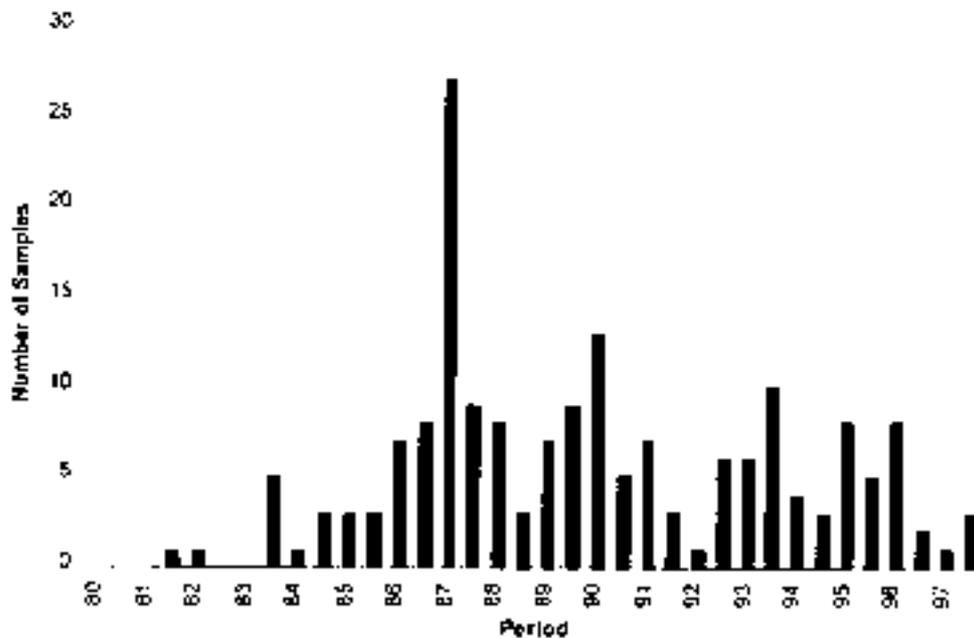
Samples not separated by lines are from the same seizure

Source: ACTGAL Data Collection

8.1. Amphetamine

Samples containing the drug amphetamine represent a small proportion of samples seized in the ACT. Over the period of the study an average of 5 samples containing amphetamine were analysed per six month period. This represents 1.2% of the total samples or 4.4% of the non-cannabis samples. Six peaks can be seen in the number of samples, the largest in 1987 when 27 samples were received.

Figure 17: Samples containing amphetamine received by ACTGAL, 1980-97



Source: ACTUAL Data Collection

The weight of samples containing the drug amphetamine show an increase from the middle of 1994 to the middle of 1996. The bulk of the material is confined to two large seizures. This would indicate that the police have been successful in targeting importers and distributors of amphetamine into the ACT. There is also a sudden drop in both the number of samples and the weight of amphetamine containing material after the last large seizure in May 1996, which would suggest either the amphetamine supply stopped or police operations were successful in disrupting the importation of material into the ACT. Before and after this period the quantity of amphetamine containing material seized was small.

Police intelligence and amphetamine seizure numbers in Australia show that amphetamine is not generally seen in great quantities in Australia (ABC 1994, 1995, 1996, 1997). This is probably due to the greater availability of methamphetamine precursors and the simpler synthetic pathways which can be employed to make methamphetamine as opposed to amphetamine.

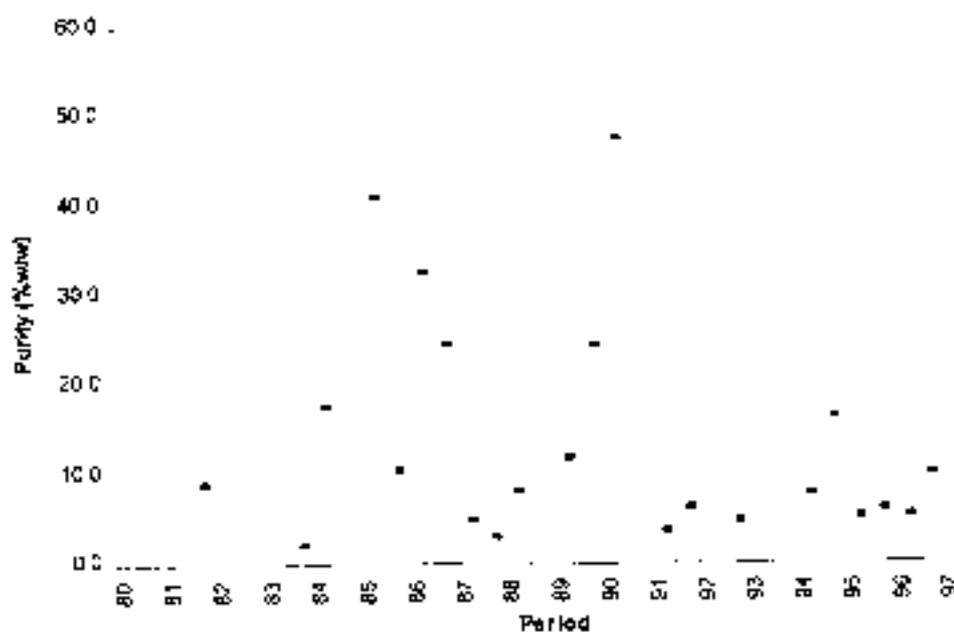
Table 9: No. & purity of samples containing amphetamine received by ACTGAL, 1980-97

Period	Total Number	% of Samples		Total Weight (grams)	Average % Amphetamine	Standard Deviation
		Total	Non-Cantabis			
January to June 1980	0	0	0	0		
July to December 1980	0	0	0	0		
January to June 1981	0	0	0	0		
July to December 1981	1	0.5	2.2	0.03	9.0 (1)	
January to June 1982	1	0.3	1.2	0.3		
July to December 1982	0	0	0	0		
January to June 1983	0	0	0	0		
July to December 1983	5	2.5	7.5	11.2	2.1 (3)	0.1
January to June 1984	1	0.3	1.0	0.3	17.6 (1)	
July to December 1984	3	1.1	3.8	0		
January to June 1985	3	1.0	2.9	0.09	41.0 (2)	4.2
July to December 1985	3	1.0	3.3	6.6	10.5 (1)	
January to June 1986	7	1.6	6.4	2.6	32.6 (3)	1.4
July to December 1986	8	3.1	13.4	19.7	24.6 (7)	18.1
January to June 1987	27	4.7	13.8	6.5	5.0 (5)	1.1
July to December 1987	9	1.9	5.8	2.4	3.1 (2)	
January to June 1988	8	2.2	6.1	18.2	8.2 (3)	4.1
July to December 1988	3	0.8	1.6	2.3		
January to June 1989	7	1.7	5.4	14.4	11.9 (2)	4.6
July to December 1989	9	3.3	8.7	13.2	24.3 (2)	0.2
January to June 1990	13	2.5	11.6	15.5	47.5 (2)	10.6
July to December 1990	3	1.4	5.6	2.9		
January to June 1991	7	2.0	12.3	6.6	3.7 (1)	
July to December 1991	3	1.0	5.4	13.2	6.3 (5)	8.4
January to June 1992	1	0.2	1.8	0.4		
July to December 1992	6	1.9	7.3	3.9	4.8 (2)	3.3
January to June 1993	6	1.2	5.5	1.3		
July to December 1993	10	1.6	7.5	1.7		
January to June 1994	4	0.6	4.2	27.7	7.8 (2)	3.3
July to December 1994	3	0.8	2.5	28.6	16.3 (1)	
January to June 1995	8	1.2	4.4	158.5	5.1 (7)	3.2
July to December 1995	5	1.1	2.0	21.4	6.1 (4)	0.8
January to June 1996	8	1.0	4.4	132.6	5.5 (4)	5.1
July to December 1996	2	0.3	1.1	0.8	9.9 (1)	
January to June 1997	1	0.1	0.4	0		
July to December 1997	3	0.6	1.4	0.8		
Average	5.0	1.2%	4.4%	14.3 g	13.8%	

Note: Purity was not determined for all samples, figures in brackets indicate the number assayed

Source: ACTGAL Data Collection

Figure 19: Purity of amphetamine samples received by ACTGAL, 1980-97



*Bars indicate one standard deviation of multiple results
Source: ACTGAL Data Collection*

From 1980 to 1997 the purity of amphetamine material seized in the ACT has remained relatively constant and low at an average of 13.8%. In 1985, 1986 and the first half of 1990 a number of samples were seized with a much higher than average purity. This usually indicates the material was seized further up the distribution chain prior to dilution to street level purity.

Table 11: High purity amphetamine seizures received by ACTGAL, 1980-97

Year	Month	Weight of Powder (grams)	Purity
1985	April	0.063	44%
1985	May	0.028	38%
1986	April	0.542	34%
1986	April	0.500	32%
1986	July	0.520	65%
1990	March	0.247	40%
1990	June	14.5	55%

Source: ACTGAL Data Collection

8.2. Methamphetamine

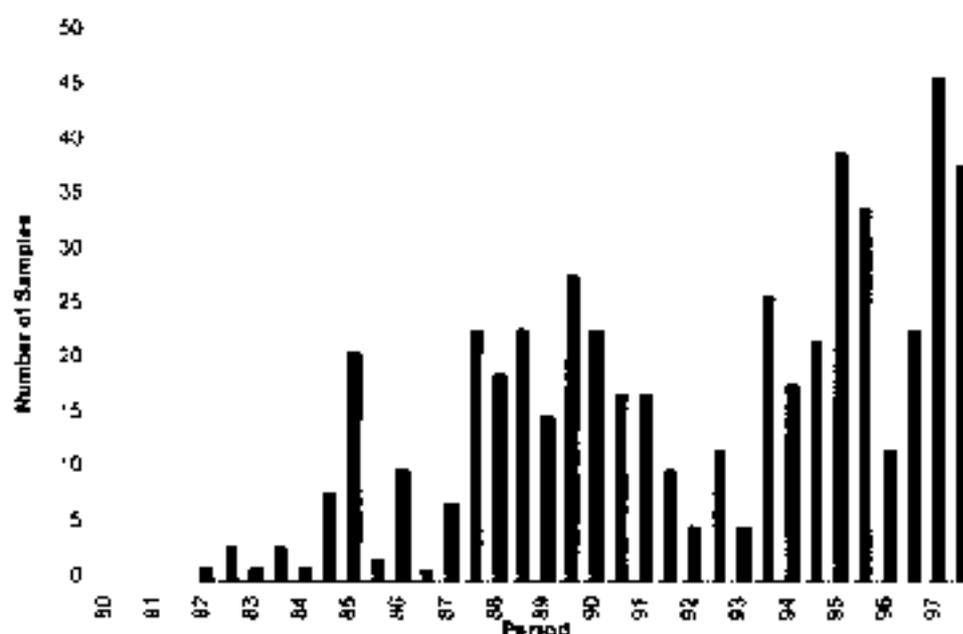
Methamphetamine is the most common amphetamine found in illicit drug seizures in the ACT and Australia (ABCJ 1994, 1995, 1996, 1997).

Figure 20 depicts the number of methamphetamine samples seized in the ACT. It shows two envelopes, one from 1987 to the end of 1991, and one from the second half of 1993 to the end of the study period. Methamphetamine has been found in 3.3% of total samples or 11.2% of non-cannabis samples.

The drop in the number of methamphetamine samples after 1990 was also observed with heroin samples. In 1992 there was a seizure containing a large quantity of methamphetamine material suggesting that the drop in the number of methamphetamine samples was not due to a disruption in the supply of methamphetamine. Police report that methamphetamine has generally been readily available in the 1990s in Australia (ABCJ 1994, 1995, 1996, 1997).

In 1985 a clandestine laboratory was detected by the police in the ACT. The laboratory, operated by a qualified chemist, was synthesising methamphetamine. The police seized 452 grams of powder containing 86% methamphetamine.

Figure 20: Samples containing methamphetamine received by ACTGAL, 1980-97



Source: ACTGAL Data Collection

Table 12: No. & purity of samples containing methamphetamine received by ACTGAL, 1980-97

Period	Total Number	% of Samples		Total Weight (grams)	Average % Methamphetamine	Standard Deviation
		Total	Non-Cannabis			
January to June 1980	0	0	0	0		
July to December 1980	0	0	0	0		
January to June 1981	0	0	0	0		
July to December 1981	0	0	0	0		
January to June 1982	1	0.3	1.2	0		
July to December 1982	5	1.2	4.5	6		
January to June 1983	1	0.3	2.2	0.6	7.6 (1)	
July to December 1983	3	1.5	4.5	11.2	9.6 (3)	0.4
January to June 1984	1	0.3	1.0	4.5		
July to December 1984	8	3.0	10.0	11		
January to June 1985	21	6.9	20.6	54.5	50.0 (2)	10.9
July to December 1985	2	0.7	2.2	0.2	17.2 (2)	5.0
January to June 1986	10	2.3	9.2	2.9		
July to December 1986	1	0.4	1.4	1.5	4.5 (1)	
January to June 1987	7	1.2	3.6	2.0	12.0 (1)	
July to December 1987	23	4.9	14.7	4.6	3.9 (1)	
January to June 1988	19	5.2	14.5	15.2	12.4 (4)	10.0
July to December 1988	23	5.8	12.2	37.1	3.5 (3)	0.7
January to June 1989	15	3.7	11.6	12.0	8.7 (3)	0.4
July to December 1989	28	10.2	26.9	221.6	5.7 (9)	1.9
January to June 1990	23	4.3	20.5	40.0	18.0 (2)	
July to December 1990	17	4.8	19.1	55.7	9.1 (3)	1.2
January to June 1991	17	4.8	29.8	43.4	9.0 (5)	10.1
July to December 1991	10	3.2	17.9	22.6	7.3 (4)	5.7
January to June 1992	5	1.2	9.1	3.0		
July to December 1992	12	3.9	14.6	1093.5	5.4 (6)	1.0
January to June 1993	5	1.0	4.6	11.0	4.7 (1)	
July to December 1993	26	6.7	19.5	20.3	6.2 (9)	2.8
January to June 1994	18	2.7	18.8	31.6	4.9 (7)	2.2
July to December 1994	22	5.9	18.2	52.1	4.9 (13)	2.2
January to June 1995	39	5.9	21.4	84.8	3.7 (25)	1.7
July to December 1995	34	7.3	13.9	337.1	3.6 (20)	1.3
January to June 1996	12	1.4	6.6	348.2	2.1 (7)	1.0
July to December 1996	23	3.4	12.6	18.7	4.9 (5)	3.0
January to June 1997	46	5.7	18.9	48.8	5.7 (13)	5.8
July to December 1997	38	7.6	17.4	52.5	2.2 (8)	
Average		3.3%	11.2%	80.6 g*	7.3%**	

* J63 to D97 excluding J92-D92

** Figure J63-J85 not included

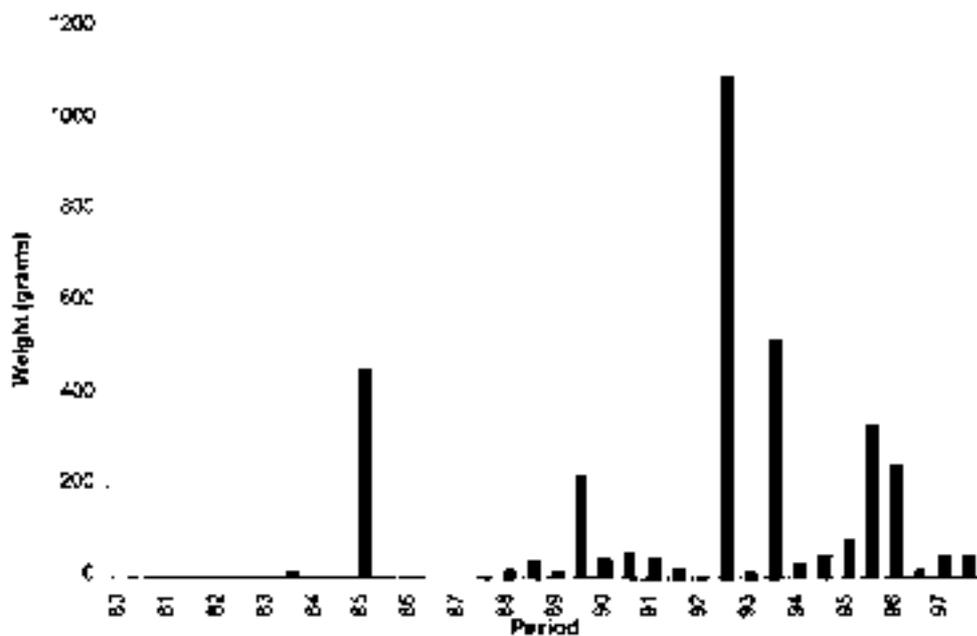
Note: Purity was not determined for all samples, figures in brackets indicate the number assayed.

Source: ACTGAL Data Collection

Apart from the clandestine laboratory in 1985 the bulk of material containing methamphetamine was seized after 1988, mostly from only five seizures. Both the number of samples and weight of material seized suggest that methamphetamine use and availability, although sporadic, is increasing.

A few seizures of a red liquid which contained methamphetamine occurred in the ACT in 1990. The liquid was in small vials and in syringes indicating that it was injected. No further seizures have been made since 1990. Numerous seizures of a reddish brown liquid containing methamphetamine have been reported by other Australian forensic laboratories since 1988. The liquids are acidic and contain ephedrine or pseudoephedrine, iodine and many other impurities. These are believed to be the reaction mixtures from the conversion of ephedrine or pseudoephedrine to methamphetamine using hydriodic acid and red phosphorus. In 1993 Queensland police reported that 'ox blood', a red liquid which contains amphetamines was growing in popularity (ABC 1994).

Figure 21: Wgt of methamphetamine samples received by ACTGAL, 1980-97



See Table 13 for details of the peaks in 1985, 1989, 1992, 1993, 1995 and 1996
 Source: ACTGAL Data Collection

Table 13: Large methamphetamine seizures received by ACTGAL, 1980-97

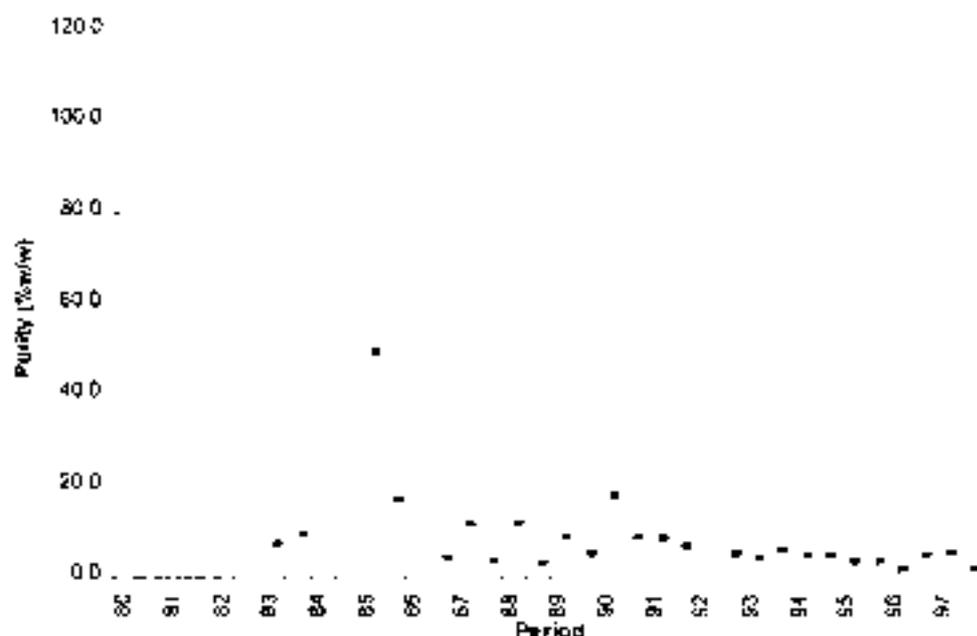
Year	Month	Weight of Powder (grams)	Purity
1985	March	453	86%
1988	November	57.4	4.3%
		2.9	3.4%
1989	August	140	7.0%
		67	5.9%
1990	May	16.9	18%
1990	June	19.6	18%
1990	August	26.7	7.7%
1990	October	12.3	10.1%
1990	December	11.4	9.4%
1991	March	13.0	22%
1991	June	21.3	1.6%
1992	September	55.5	5.9%
		19.7	19.7%
1992	December	1011	5.7%
1993	January	11.0	4.7%
1993	July	448	5.1%
1993	November	53.7	4.2%
1994	February	26.8	4.5%
1994	November	12.2	5.3%
		4.0	8.3%
1995	March	11.9	3.5%
1995	April	18.2	4.2%
1995	May	14.0	7.3%
		6.0	2.1%
1995	December	27.4	4.4%
		7.0	3.5%
1995	December	280	4%
1996	June	226	7.3%
1997	April	23.6	6.2%
1997	October	26.7	1.0%

Samples not separated by lines are from the same seizure.

Source: ACTGAL Data Collection

From 1980 to 1997 the purity of the methamphetamine samples seized in the ACT has been low at an average of 7.1%. After 1992 there has been a slight decrease in purity levels to an average of 4.4%. This slight decrease also occurred in other jurisdictions. It is believed to be due to a reduction in the domestic production of methamphetamine resulting from the states restricting the availability of precursors through legislation. Police believe that distributors are diluting the available methamphetamine further in order to maintain the quantities of material on the street. In doing this, the effect on their profit from a reduction in the availability of methamphetamine is minimised (ABCI 1994, 1995, 1996, 1997).

Figure 22: Purity of methamphetamine samples received by ACTGAL, 1980-97



Bars indicate one standard deviation of multiple results

In the first half of 1985 a clandestine laboratory was found where methamphetamine was being synthesizing. A quantity of powder found at the laboratory contained 86% methamphetamine

Source: ACTGAL Data Collection

8.3. Ephedrine/Pseudoephedrine

Pseudoephedrine is a common pharmaceutical available to the community without prescription and is of the same class of drugs as the amphetamines. Differentiation is not always made between the naturally occurring drug ephedrine and its synthetically produced stereoisomer pseudoephedrine during routine analysis of samples at ACTGAL. Pseudoephedrine is significant as clandestine laboratory investigations throughout Australia indicate that it is the most common precursor used in the illicit production of methamphetamine. Ephedrine and pseudoephedrine are also common additives to illicit preparations containing amphetamine and methamphetamine.

Clandestine laboratory investigations carried out by Australian forensic laboratories have found that thefts of ephedrine and pseudoephedrine from pharmaceutical supply companies are occurring to supply clandestine laboratories.

Table 14: Large ephedrine/pseudoephadrine seizures received by ACTGAL, 1980-97

Year	Month	Weight of Powder (grams)
1989	August	98
1990	February	18.8*
1993	February	358
1994	August	500

* Seizure also contained lignocaine.

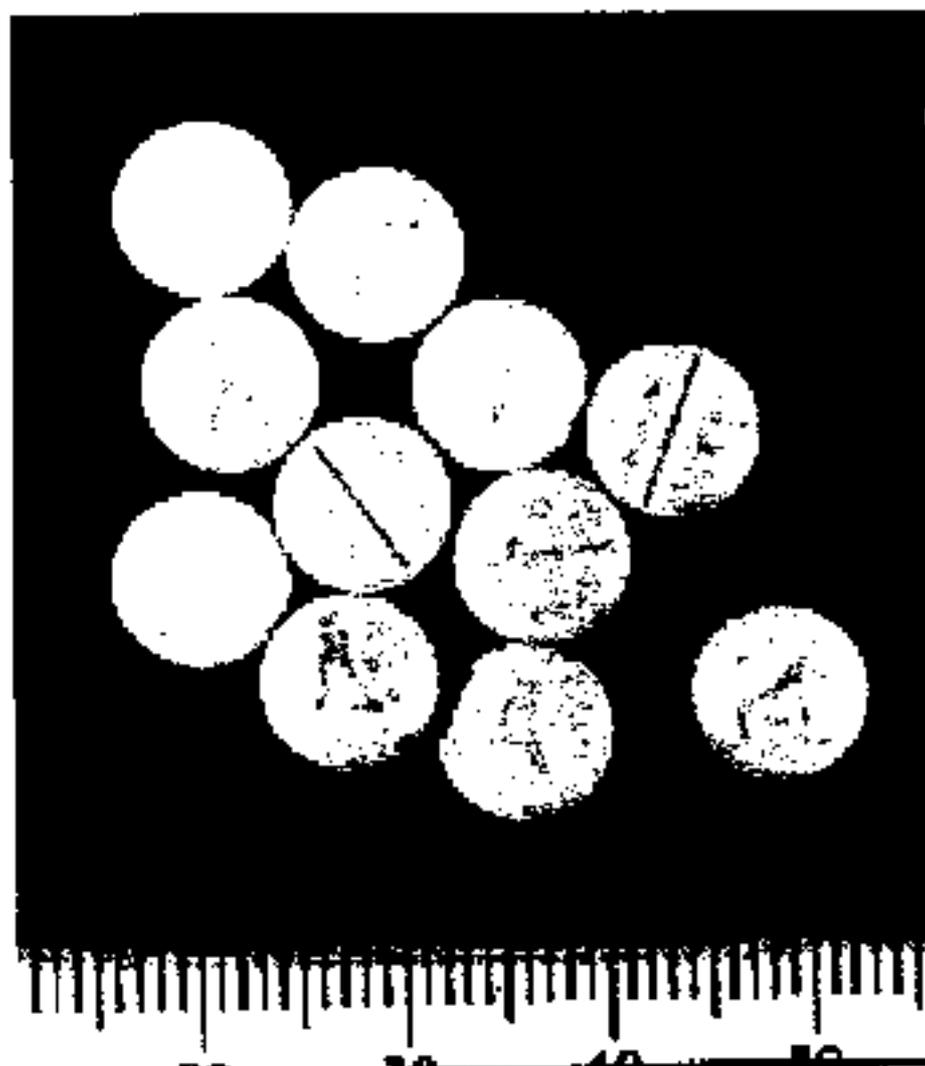
† This seizure contained filtration apparatus, mortar and pestle, two quantities of white powder and two quantities of brown powder. The powders contained pseudoephedrine. It appears that the two quantities of white powder were filtered extracts from tablets which were ground up using the mortar and pestle. The two quantities of brown powder were not fine and had an organic chemical smell, these are most likely the result of failed attempts to produce methamphetamine from pseudoephedrine.

Source: ACTGAL Data Collection

8.4. Designer Amphetamines

Designer amphetamines have the same basic structure as amphetamine with ring substitutions and have greater hallucinogenic effects than methamphetamine. Many are well known by their street names such as 'Ecstasy' (MDMA or 3,4-methylenedioxyethylamphetamine) and 'Eve' (MDE or 3,4-methylenedioxyethylamphetamine).

Figure 23: MDMA (Ecstasy) tablets with bird imprint received by ACTGAL



These drugs are generally presented as tablets or capsules for ingestion which often have imprinted designs (Figure 23). An exception is 4-bromo-2,5-dimethoxyamphetamine (DOB) which is generally impregnated into small paper squares called 'tiles', 'tabs' or 'tickets'. These 'tiles' usually have designs printed on one side and are usually thicker than LSD 'tiles' (Figure 24). Some powder preparations have also been seized. It is unknown whether these were to be pressed into tablets or packaged into capsules prior to sale, or were to be taken by nasal insufflation (snorting), injection or by mixing with drinks.

Figure 24: Thick 'tiles' impregnated with DOB, Snow Flake design, received by ACTGAL



No designer amphetamines were seized between 1980 and 1988. Since 1988 an average of three samples have been seized per year. This low number of samples may indicate a poor supply or low demand for these drugs in the ACT or it may reflect the difficulty police have in targeting the distributors and users of designer amphetamines.

The purity of the designer amphetamine preparations varies considerably within each type of drug. The vast majority of designer amphetamines are imported into Australia. MDMA is the most popular with the countries of origin predominantly the Netherlands followed by the UK. Importation has increased dramatically in the 1990s from little evidence of importation in 1993 to 169 seizures of amphetamines, predominantly designer amphetamines at the customs barrier in 1996-7. The seizures in 1996-7 contained 88.7 kg of material. In recent years there has been some clandestine laboratories detected in Australia producing designer drugs (ABCJ 1994, 1995, 1996, 1997).

There has been a change in the profile of users in the 1990s. In 1991 MDMA users were described as confined to a sub-set of experienced drug users with a median age of 27 (ABCJ 1994). In 1996-7 users were described as more mainstream and designer amphetamines as widely used drugs with many young inexperienced users (ABCJ 1997).

Police intelligence indicates an increase in the popularity of these drugs in the 1990s. Police from all jurisdictions report that designer amphetamines are generally used by occasional users at intermittent events such as 'rave' dance parties and more recently night clubs, however their use is not confined to these events. As these users do not attract police attention they are difficult for police to target (ABCJ 1994, 1995, 1996, 1997).

No information specifically on the ACT situation is available from the ABCJ Illicit Drug Reports, however these national trends are likely to be followed here

Table 15: No. & purity of samples containing MDA received by ACTGAL, 1980-97

Year	Month	Preparation	Purity	MDA Per Dose
1991	May	50 Tablets (11340 mg)	0.6%	1.36 mg
1996	January	21 Capsules (12286 mg) 998 mg	13.8% 9.2%	80.7 mg N/a
1996	January	33 Capsules (20374 mg) 2 Capsules (1450 mg)	10.7% 9.7%	66.1 mg 70.3 mg

Source: ACTGAL Data Collection

Table 16: No. & purity of samples containing MDMA received by ACTGAL, 1980-97

Year	Month	Preparation	Purity	MDMA per Dose
1989	December	1 Tablet		
1991	August	581 mg 54 Capsules (6895 mg)	90% 91%	116.2 mg
1992	April	Trace		
1992	December	51.5 Tablets (15142 mg)	36.1%	166.1 mg
1995	February	Capsules (654 mg)	2.9%	
1996	May	1 Tab (Also DOB)		
1996	May	1 Tablet (246 mg) (Also MDE)		
1996	May	1/2 Tablet (91 mg)		
1997	July	1 Tablet (229 mg)		
1997	December	2 Tablets (263 mg)	41.3%	54.3 mg

Source: ACTGAL Data Collection

Table 17: No. & purity of samples containing MDE received by ACTGAL, 1980-97

Year	Month	Preparation	Purity	MDE per Dose
1994	February	2 Tablets Trace	N/a N/a	N/a N/a
1996	May	1 Tablet (246 mg) (Also MDMA)	N/a	N/a
1997	January	247 mg	N/a	N/a

Source: ACTGAL Data Collection

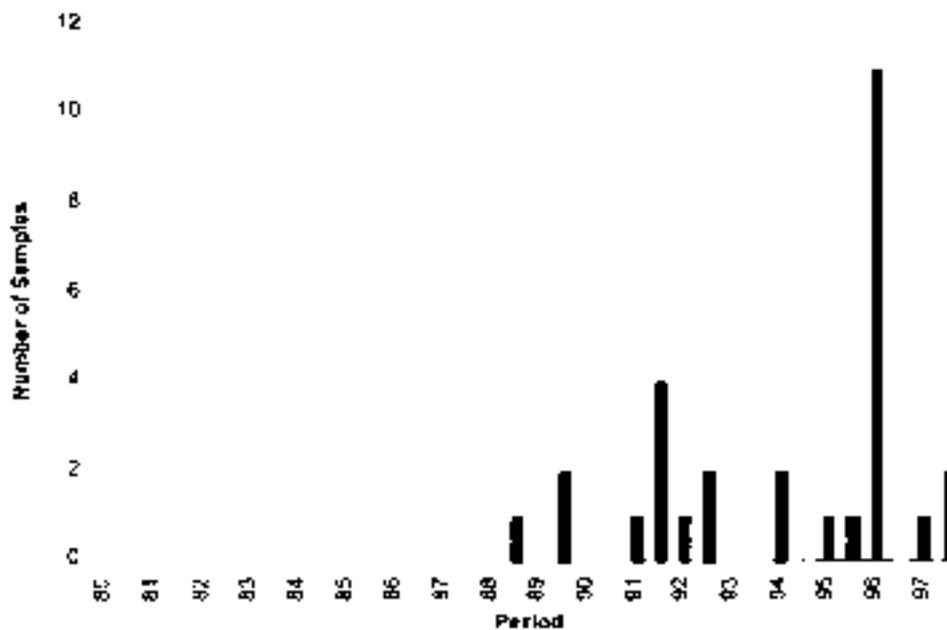
Table 18: No. & purity of samples containing DOB received by ACTGAL, 1980-97

Year	Month	Preparation	DOB per Dose
1988	December	18 "Tiles"	
1989	November	1 "Tiles"	
1991	August	1 "Tiles" 12 "Tiles"	1.4mg "Tile"
1992	September	2 "Tiles"	
1995	December	2 "Tiles"	
1996	January	50 "Tiles"	1.68mg "Tile"
1996	January	12 "Tiles"	2.39mg "Tile"
1996	May	1 "Tiles" (Also MDMA)	

Samples not separated by lines are from the same seizure

Source: ACTGAL Data Collection

Figure 25: Samples containing designer amphetamines received by ACTGAL, 1980-97



Source: ACTGAL Data Collection

In the 1990s between 2 and 3% of the Australian population aged 14 years and over had tried ecstasy. The proportion of the population who used ecstasy in the previous year remained constant at approximately 1% indicating the number of current users is low (DHSI 1994).

In the ACT in 1996, 5% of male and 6.9% of female year 12 students reported that they had tried designer amphetamines with use in the last year reported by 5% of males and 3.4% of females (Phung H et al. 1998).

These surveys indicate a level of use of the designer amphetamines above that for heroin.

This is not reflected in the number or quantities of designer amphetamines seized in the ACT.

This apparent contradiction between relative arrest or sample numbers and relative use levels is not unexpected for the same reasons outlined under amphetamines.



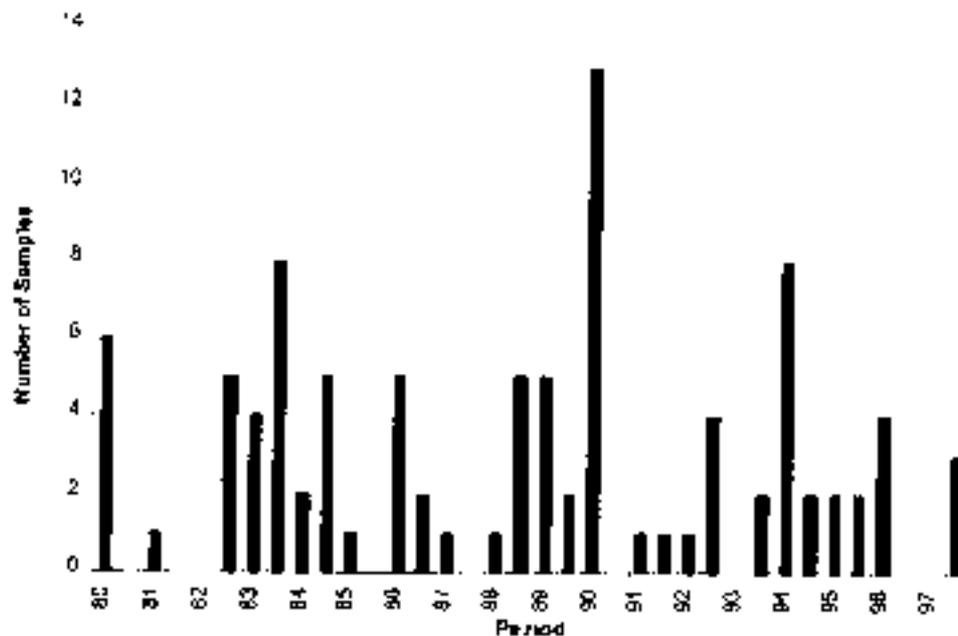
9. Cocaine

Cocaine is a stimulant predominantly available as the hydrochloride salt in Australia. It is usually administered by nasal insufflation (snorting) or injection. The base form known as 'crack' is smoked and is highly addictive (ABCI 1994, 1995, 1996, 1997).

In the USA 'crack' has reduced the cost of a dose of cocaine allowing the drug to become popular among lower income earners. It is the illicit drug of choice in some areas of the USA. The lack of seizures of 'crack' in Australia indicate that it is not a problem in Australia (ABCI 1995). This is also true for the ACT with only one seizure of cocaine base in 1994 recorded. Police believe that all illicit cocaine available is imported from South America (ABCI 1997). The number of samples

containing cocaine seized in the ACT has been small at an average of 0.7% of total samples or 3.0% of non-cannabis samples. The data does not indicate that the number of samples is on the increase.

Figure 26: Samples containing cocaine received by ACTGAL, 1980-97



use is confined to the more affluent market. As a result it is more difficult for the police to target the distributors and users of cocaine and the number of samples may not accurately reflect the level of use in the community.

From 1985 to 1995 the proportion of the Australian population 14 years old and over who had tried cocaine was approximately 3%. The proportion who had used cocaine in the previous year remained below 1% indicating that the number of current users is also constant (CDHFS 1995, DSHS 1994). In both categories the level of use is below that for amphetamines and above that for heroin. This contradicts the national and ACT seizure figures for cocaine.

The ACT AFP has reported the use of cocaine in young professional groups but due to the low number of detections they find it difficult to gain information on the distribution and use of cocaine in the ACT. The ACT police believe that cocaine is not freely available for those without contacts in the cocaine scene and is not often sold at street level. Intelligence from other jurisdictions indicates that cocaine is used by the middle and upper class, by young professionals, and in the night club scene. Due to the expensive nature of the drug its use is confined to the more affluent who can fund their own habit. Police feel that due to the difficulties in detecting cocaine use and distribution it is difficult to evaluate the level of cocaine use in the community and it may be greater than detection levels indicate (ABCI 1996).

In the ACT in 1996, 5% of male and 3.4% of female year 12 students reported that they had tried cocaine, with 3% of males and 1.1% of females using in the last year. This is comparable to those who had tried heroin (Phung H et al, 1998).

The apparent contradiction between relative arrest or number of samples and relative use levels is not unexpected. Cocaine use is not as prone to lead to addiction as the use of heroin and due to the higher price for cocaine its use is restricted to the more affluent market. These factors and the closed nature of the cocaine market means that police attention is not drawn to this scene.

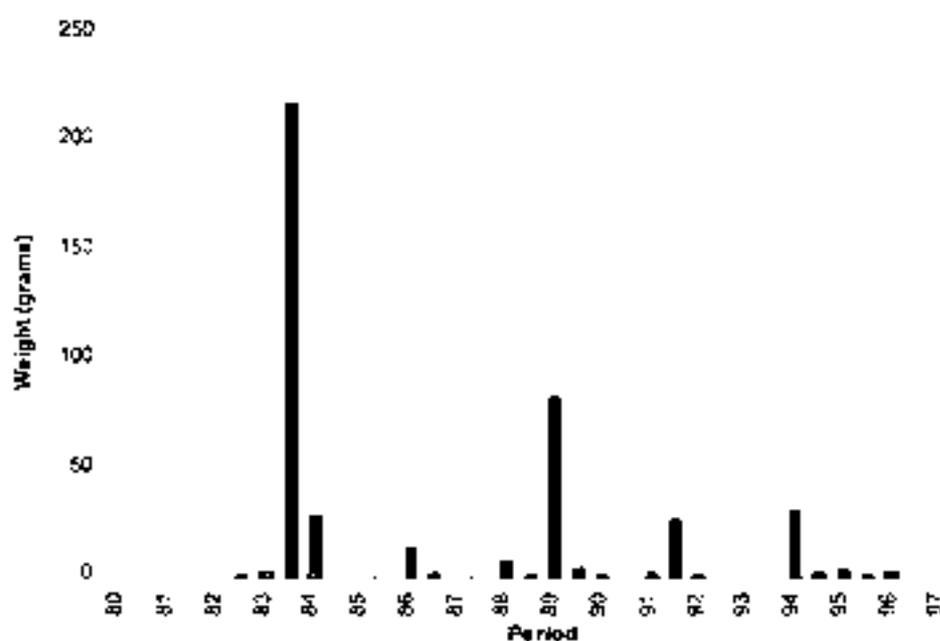
Table 19: No. & purity of samples containing cocaine received by ACTGAL, 1980-97

Period	Total Number	% of Samples		Total Weight (grams)	Average % Cocaine	Standard Deviation
		Total	Non-Cannabis			
January to June 1980	6	1.8	11.3	0.01		
July to December 1980	0	0	0	0		
January to June 1981	1	0.4	2.0	0.1		
July to December 1981	0	0	0	0		
January to June 1982	0	0	0	0		
July to December 1982	5	2.0	7.5	0.8		
January to June 1983	4	1.3	8.7	2.9	34.6 (2)	
July to December 1983	8	4.0	11.9	217.8	80.2 (15)	20.3
January to June 1984	2	0.7	2.0	28.2	32.7 (2)	3.3
July to December 1984	5	1.8	6.3	0.9	87.1 (1)	
January to June 1985	1	0.3	1.0	0.3		
July to December 1985	0	0	0	0		
January to June 1986	5	1.2	4.6	13.7	47.0 (1)	
July to December 1986	2	0.8	2.9	1.8	65.0 (1)	
January to June 1987	1	0.2	0.5	0		
July to December 1987	0	0	0	0		
January to June 1988	1	0.3	0.8	6.9	85.0 (1)	
July to December 1988	5	1.5	2.7	0.9		
January to June 1989	5	1.2	3.9	\$3.4	73.6 (2)	23.5
July to December 1989	2	0.7	1.9	4.5	0.7 (1)	
January to June 1990	13	2.5	11.6	0.8	17.1 (1)	
July to December 1990	0	0	0	0		
January to June 1991	1	0.3	1.8	1.8		
July to December 1991	1	0.3	1.8	26.7	87.0 (1)	
January to June 1992	1	0.2	1.8	1.0		
July to December 1992	4	1.3	4.9	0		
January to June 1993	0	0	0	0		
July to December 1993	2	0.5	1.5	0		
January to June 1994	8	1.2	8.5	31.2	29.6 (5)	7.8
July to December 1994	2	0.5	1.7	1.5	33.5 (1)	
January to June 1995	2	0.3	1.1	3.9	55.2 (2)	9.3
July to December 1995	2	0.4	0.8	0.5	17.2 (1)	
January to June 1996	4	0.5	2.2	2.5	0.2 (1)	
July to December 1996	0	0	0	0		
January to June 1997	0	0	0	0		
July to December 1997	3	0.6	1.4	0		
Average	3	0.7%	3.0%		46.6%	

Note: Purity was not determined for all samples, figures in brackets indicate the number assayed

Source: ACTGAL Data Collection

Figure 27: Wgt of cocaine samples received by ACTGAL, 1980-97



See Table 20 for details of the peaks in 1983, 1984, 1989, 1991 and 1994
 Source: ACTGAL Data Collection

Table 20: Large cocaine seizures received by ACTGAL, 1980-97

Year	Month	Weight of Powder (grams)	Purity
1982	October	51.6	95% ^a
1983	November	58.4 ^a	95% ^a
1983	December	97.5	94% ^a
1983	December	6.9	65% ^a
		3.1	52% ^a
1984	June	28.2 ^{ab}	30% ^a
1986	February	17.9	47% ^a
1989	June	81.2	90% ^a
1991	October	26.7	87% ^a
1994	April	22.9	29% ^a

Samples not separated by lines are from the same seizure

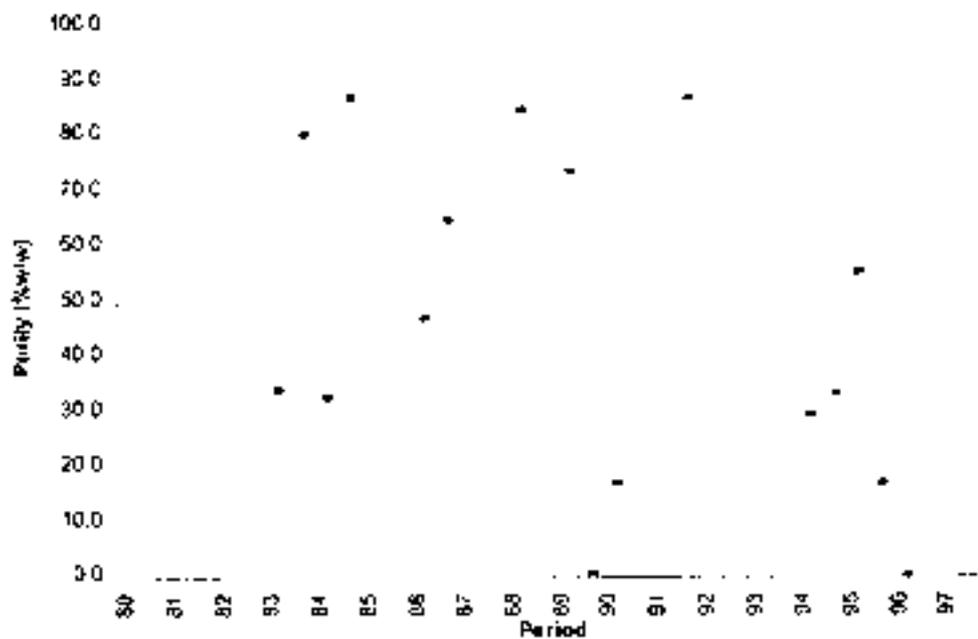
^a Found in a letter addressed to the snowy mountains snow fields

^{ab} Found in a letter

^a Percentage refers to the HCl salt of cocaine

Source: ACTGAL Data Collection

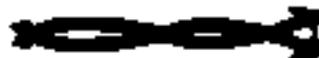
Figure 28: Purity of cocaine samples received by ACTGAL, 1980-97



Bars indicate one standard deviation of multiple results.

Source: ACTGAL Data Collection

The purity of the cocaine samples seized from 1980 to 1997 varies greatly. The purity of the cocaine in the large seizures however is generally high, indicating that the cocaine is usually cut after importation into the ACT. Purity figures for other Australian jurisdictions show the same variation (ABCJ 1994, 1995, 1996, 1997).



10. LSD

LSD does not appear to have been a popular drug of use in the 1980s as few seizures were made. In the 1990s LSD became more popular as shown by the steady increase in the number of LSD samples. As with the designer amphetamines it is difficult for the police to target distributors and users of LSD, therefore the number of samples may not accurately reflect the level of use in the community.

Table 21: No. & dosage level of samples containing LSD, received by ACTGAL, 1980-97

Period	Total Number	% of Samples		Total Doses	Average LSD/ Dose (µg)	Standard Deviation
		Total	Non-Cannabis			
January to June 1980	2	0.6	1.8	22	70.0 (1)	
July to December 1980	0	0	0	0		
January to June 1981	1	0.4	2.0	4	15.0 (1)	
July to December 1981	0	0	0	0		
January to June 1982	1	0.3	1.2	51	52.6 (1)	
July to December 1982	1	0.4	1.5	1		
January to June 1983	0	0	0	0		
July to December 1983	0	0	0	0		
January to June 1984	0	0	0	0		
July to December 1984	0	0	0	0		
January to June 1985	0	0	0	0		
July to December 1985	1	0.3	1.1	13		
January to June 1986	2	0.5	1.8	3		
July to December 1986	0	0	0	0		
January to June 1987	0	0	0	0		
July to December 1987	0	0	0	0		
January to June 1988	0	0	0	0		
July to December 1988	0	0	0	0		
January to June 1989	0	0	0	0		
July to December 1989	0	0	0	0		
January to June 1990	0	0	0	0		
July to December 1990	0	0	0	0		
January to June 1991	0	0	0	0		
July to December 1991	3	1.0	3.4	22		
January to June 1992	0	0.0	0	0		
July to December 1992	2	0.6	2.4	205	28.0 (2)	12.9
January to June 1993	0	0.0	0	0		
July to December 1993	2	0.5	1.5	8		
January to June 1994	3	0.4	3.1	119	24.3 (3)	7.9
July to December 1994	7	1.9	5.8	5059.5	45.6 (6)	15.8
January to June 1995	4	0.6	2.2	14	46.8 (4)	25.1
July to December 1995	4	0.9	1.6	6	53.1 (4)	19.0
January to June 1996	10	1.2	5.5	53	38.8 (10)	17.1
July to December 1996	6	0.9	3.3	125.5	41.3 (6)	8.5
January to June 1997	1	0.1	0.4	20		
July to December 1997	2	0.4	0.9	10	19.2 (1)	
Average	1.4	0.5%	1.2%		39.5 µg/Dose	

Note: Dosage level not determined for all samples, figures in brackets indicate the number assayed
Source: ACTGAL Data Collection

LSD is generally presented impregnated into small paper squares called 'tiles', 'tabs' or 'tickets'. These 'tiles' usually have designs printed on one side (Figure 29). LSD is also found impregnated into small cylinders called 'microdots' (Figure 30).

Figure 29: Paper 'tiles' impregnated with LSD, strawberry design, received by ACTGAL,

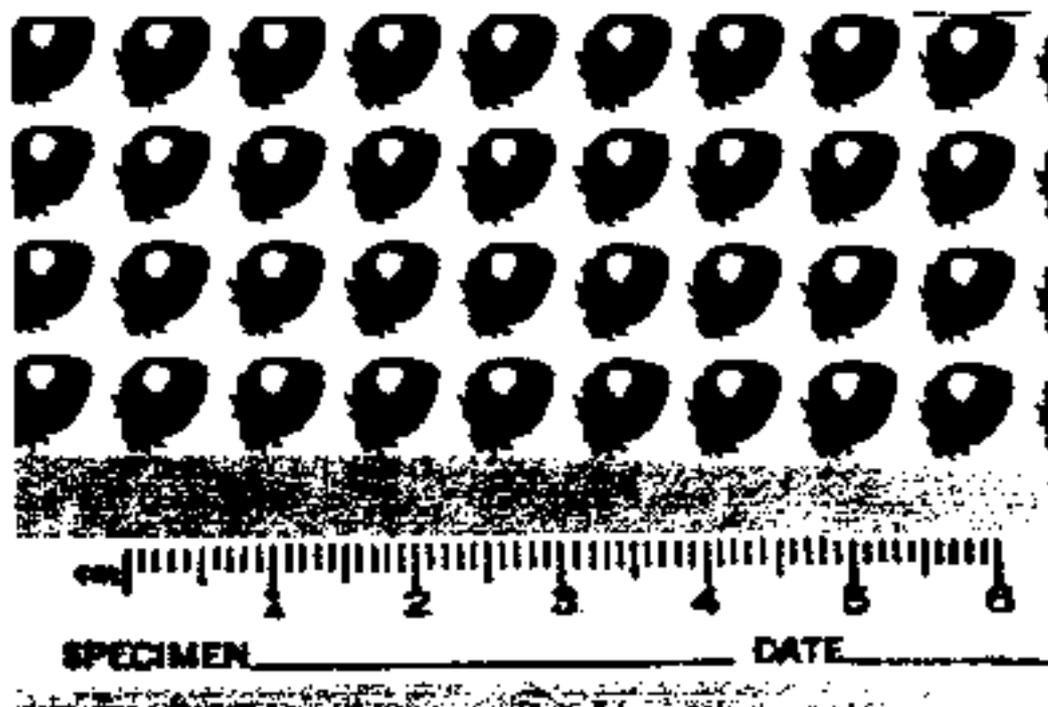
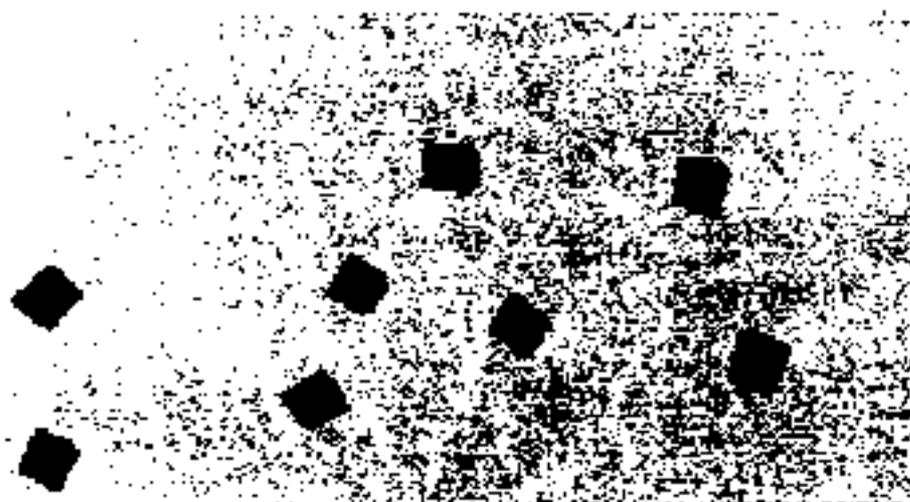


Figure 30: 'Microdots' impregnated with LSD, received by ACTGAL



Overseas police intelligence believes that the world supply of LSD is produced by a small number of people in San Francisco, USA. The drug is then shipped across the USA and overseas predominantly to the UK and Netherlands for preparation into dosage forms such as 'tiles' and 'microdots'. Australian police intelligence believes that the LSD available in Australia originates from overseas with the postal system as the preferred method of importation (ABCI 1994, 1995, 1996, 1997).

Australian LSD seizures indicate a resurgence of LSD popularity in the 1990s with dosage levels lower than those seen in the 1960s when LSD was at its most popular. Average dosage levels in the 1990s are 30µg to 80µg per tile (ABCI 1994, 1995, 1996, 1997). The majority of LSD samples seized in the ACT are within this range. The resurgence of LSD use has been through the 'rave' and 'dance' party culture where it is predominantly used by teenagers and young adults, generally from middle class backgrounds who have little or no contact with police. LSD dealers at these events are generally poly drug dealers who deal in other drugs such as the designer amphetamines. Dealing in LSD alone is not common (ABCI 1995).

The ACT data shows no evidence to suggest that the pattern of LSD use in the ACT is any different to that of the rest of the country.

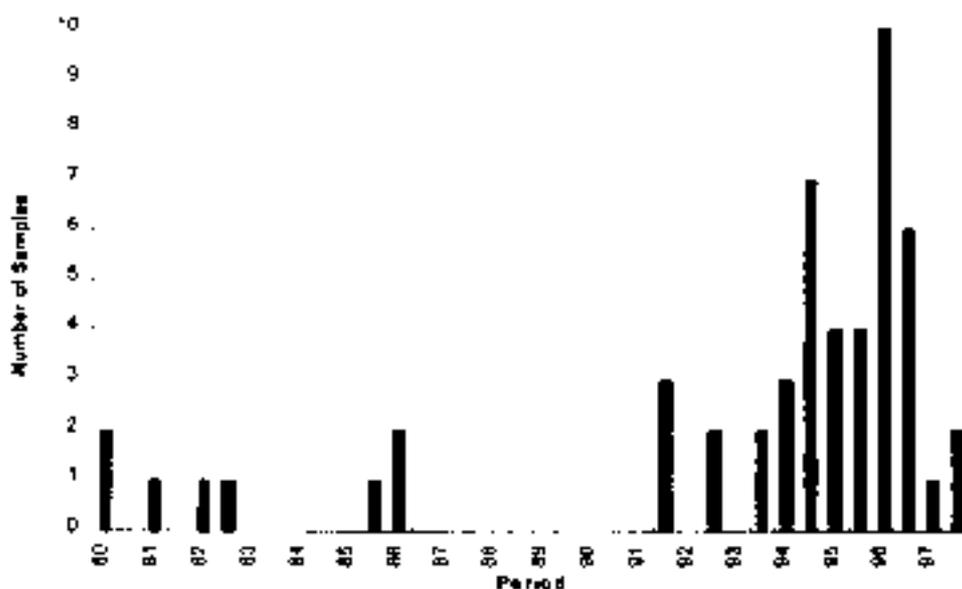
Australian health surveys generally have not distinguished between LSD and other hallucinogenic drugs such as some of the designer amphetamines. Therefore there is little information specifically on LSD use trends.

From 1985 to 1995 the proportion of the Australian population aged 14 years and over who have tried hallucinogens has remained constant at approximately 7%. Only cannabis has been tried by a greater proportion of the population. The proportion of the population who have used hallucinogens in the previous year has fluctuated but remained at 2% or below. This latter figure indicates that the number of current users is low (CDHES 1995, DSHS 1994).

In the ACT in 1996 approximately 11% of year 12 students stated they had tried LSD and other hallucinogens and 9% in the last year (Phung H et al, 1998). This indicates a high level of use among ACT year 12 students.

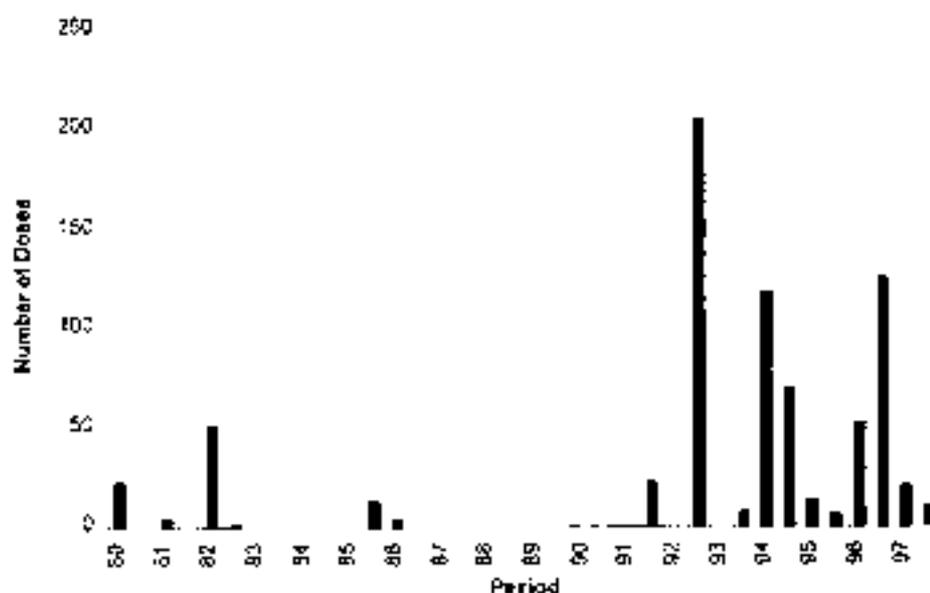
This apparent contradiction between relative arrest or sample numbers and relative use levels is not unexpected. As with individuals who use amphetamines and cocaine those who use hallucinogens do not tend to attract police attention. Police in a number of jurisdictions have reported the involvement of motor cycle gangs in the distribution of LSD (ABCI 1997).

Figure 31: Samples containing LSD received by ACTGAL, 1980-97



Source: ACTGAL Data Collection

Figure 32: No. of LSD doses received by ACTGAL, 1980-97



See Table 22 for details of the peaks in 1992, 1994, and 1996

Large Seizure in 1994 of 4990 'Tiles', not included

Source: ACTGAL Data Collection

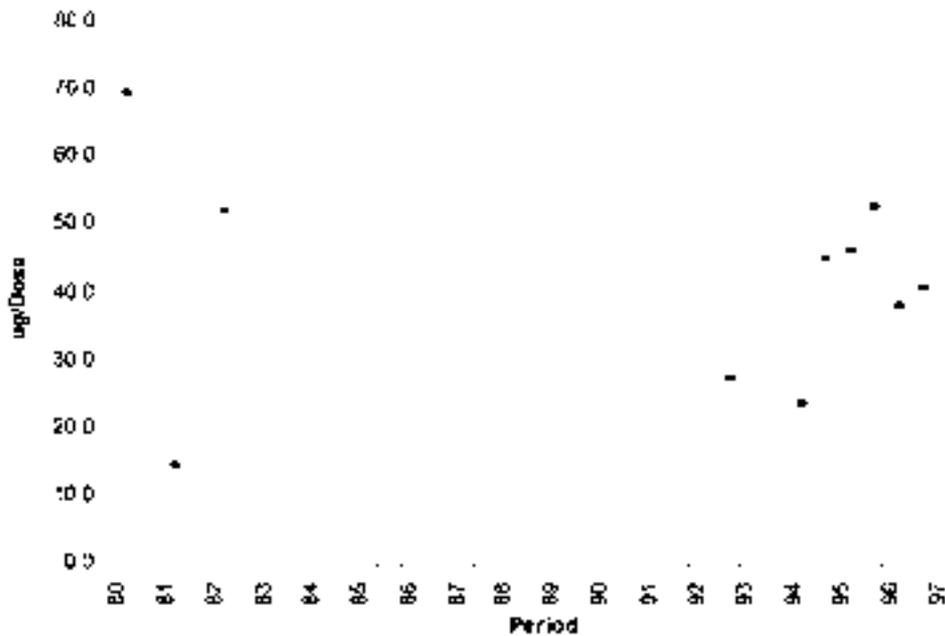
Table 22: Large LSD seizures received by ACTGAL, 1980-97

Year	Month	Number of Doses	Purity
1982	February	51 'Tiles'	53µg LSD per 'Tile'
1992	September	130 'Tiles'	37µg LSD per 'Tile'
1992	November	75 'Tiles'	19µg LSD per 'Tile'
1994	June	100 'Tiles'	17µg LSD per 'Tile'
1994	July	48 'Tiles'	50µg LSD per 'Tile'
1994	October	10 Perforated Sheets Containing 4990 'Tiles'	57µg LSD per 'Tile'
1996	May	33 'Microdots'	38µg LSD per 'Microdot'
1996	November	67 'Tiles'	32µg LSD per 'Tile'
		40 'Tiles'	41µg LSD per 'Tile'

Samples not separated by lines are from the same seizure.

Source: ACTGAL Data Collection

Figure 33: Dosage level of samples containing LSD received by ACTGAL, 1980-97



*Bars indicate one standard deviation of multiple results
Source: ACTGAL Data Collection*



11. Psychotropic Mushrooms

There are several species of psychotropic mushrooms which grow wild in the ACT region. Some use of these mushrooms has been reported and seizures of dried mushrooms have occurred. However there is no evidence of a significant level of use of psychotropic mushrooms in the community.

Table 23: Psychotropic mushroom received by ACTGAL, 1980-97

Year	Month	Weight (mg)	Drug
1981	April	5000	Psilocybin, Psilocin
1984	April	40000	Psilocybin
1984	April	9500	Muscarine
1985	December	6800	Psilocybin, Psilocin
1988	June	34200	Psilocin

Source: ACTGAL Data Collection

12. Anabolic Steroids

Anabolic steroids are testosterone or testosterone like drugs with anabolic activity which are generally taken orally or injected intramuscularly. Police intelligence indicates that the use of these drugs is on the increase particularly by athletes, security personnel and body builders. These drugs are used to enhance physical performance and cosmetic appearance and reported side effects include increased aggression and irritability (ABCI 1994, 1996).

The extent of criminal involvement in anabolic steroids is very difficult to determine due in part to a lack of constant pro active interaction taken by law enforcement. Police report that it is difficult to penetrate user groups to determine the extent of the problem (ABCI 1996).

Anabolic steroid preparations intended for veterinary or human use are used. Veterinary preparations are used because they are cheaper and easier to obtain.

In 1993, 0.3% of the Australian population aged 14 years and over had used steroids. This level was doubled in 1995. The proportion of the population who had used steroids in the previous year also increased from 0.1% in 1993 to 0.2% in 1995 indicating that the number of current users is also increasing (DHFS 1995).

In the ACT in 1996, 2.9% of male and no female year 12 students reported that they had used steroids with the same proportion of males stating they had used steroids in the past year (Phung H et al. 1998). This indicates that steroid use is occurring among ACT year 12 students.

In 1995 the police in the ACT targeted the sale of anabolic steroids resulting in a jump in the number of samples received by ACTGAL. Many of the liquid preparations had authentic manufacturers labels indicating they were for human use but contained veterinary anabolic steroid products. Police believe that the dealers were personally using the expensive human use anabolic steroid preparations then refilling the containers with inexpensive veterinary anabolic steroid preparations for resale under the original label. This practice of refilling vials of pharmaceutical preparations with veterinary products has been reported by other forensic laboratories and police elsewhere in Australia (ABCI 1996).

Table 24: Samples containing steroids received by ACTGAL, 1980-97

Period	Total Number	% of Samples		Incorrectly Labelled Preparations
		Total	Non-Cannabis	
July to December 1988	1	0.3	0.5	0
January to June 1989	0	0	0	-
July to December 1989	0	0	0	-
January to June 1990	1	0.2	0.9	-
July to December 1990	0	0	0	-
January to June 1991	1	0.3	1.8	0
July to December 1991	0	0	0	-
January to June 1992	0	0	0	-
July to December 1992	0	0	0	-
January to June 1993	0	0	0	-
July to December 1993	1	0.3	0.8	0
January to June 1994	3	0.4	3.1	0
July to December 1994	1	0.3	0.8	1
January to June 1995	48	7.3	26.4	11
July to December 1995	52	11.1	21.3	7
January to June 1996	2	0.3	1.1	1
July to December 1996	0	0	0	-
January to June 1997	5	0.6	2.1	0
July to December 1997	16	3.2	7.3	4
Average	6.9	1.3%	3.5%	

Source: ACTGAL Data Collection

14. Clandestine Laboratories

A variety of clandestine laboratories have been detected by the police in the ACT region over the period of the study. Some have been unsuccessful and most have been small operations. Only the laboratory detected in 1985 was both successful and a large scale operation. It was also the only known case involving a person with formal training in organic chemistry.

Due to the volatile, corrosive, toxic and flammable nature of the chemicals used, the inherent hazards of a laboratory and the lack of knowledge possessed by the personnel involved, such laboratories pose serious dangers to both the community and investigating personnel.

Table 26: Clandestine laboratories detected in the ACT, 1980-97

Year	Month	Synthesis
1985	March	Methamphetamine from phenylacetic acid (452 grams powder containing 86% methamphetamine).
1987	April	Heroin from codeine using the 'homebake' method.
1990	December	Heroin from codeine using the 'homebake' method.
1993	December	Suspected unsuccessful attempt at amphetamine synthesis
1994	October	Suspected unsuccessful attempt at methamphetamine synthesis from pseudoephedrine.
1994	December	Heroin from codeine using the 'homebake' method *
1996	October	Unsuccessful attempt at methcathinone synthesis by oxidation of pseudoephedrine. Recipe obtained from the internet. *
1997	July	Importation of precursors for gamma hydroxy butanoic acid (fantasy) by mail. Precursors purchased from a company in Hawaii. Information obtained from the internet.

* *Laboratory not operating at time of police seizures. Methcathinone is a stimulant similar in structure to ephedrine*

Source: ACTGAL Data Collection

The clandestine laboratory detected in 1996 was attempting to synthesise methcathinone. The recipe was obtained from the internet along with information on methcathinone. Much of this information was incorrect or misleading. The laboratory detected in 1997 had purchased precursors for the synthesis of gamma hydroxy butanoic acid (fantasy) from a company in Hawaii. The ordering information had been obtained from the internet. Many of the clandestine laboratories detected in Australia have obtained recipes for the synthesis of drugs and information on the drugs from the internet.

The low number of clandestine laboratories detected in the ACT suggests that they are only an occasional problem in the ACT.

The illicit non-designer amphetamines consumed in Australia are predominantly produced domestically in clandestine laboratories. These have become a major problem in the large states. Many of the laboratories employ elaborate methods of concealment, are on isolated rural locations or on mobile trailers to reduce the chance of detection (ABCJ 1994, 1995, 1996, 1997). Methamphetamine is the main amphetamine produced in these laboratories due to the simplicity of the process by which pseudoephedrine can be converted to methamphetamine. Pseudoephedrine is a common drug available without a prescription. All jurisdictions including the ACT have reported that motor cycle gangs are often involved in the set up and running of these laboratories as well as the distribution of the end products (ABCJ 1994, 1994, 1996, 1997).

There are reports of manufacturers obtaining precursors and chemicals from different states through bogus companies and by theft. Also pseudoephedrine has been stolen from pharmaceutical supply companies for the sole purpose of conversion to methamphetamine in clandestine laboratories.

As a response to the growing clandestine problem Australian states and territories have introduced precursor controls. Schedule 7 of the ACT *Poisons and Drugs Act 1978* was amended for this purpose in 1994. Police report that these measures have reduced the quantities of amphetamines produced. However they fear that this will result in the increased importation of amphetamines or precursors and chemicals for the clandestine laboratories (ABCI 1994, 1995, 1996, 1997). Recently there has been an increase in the quantities of amphetamines produced in the Asian countries which is of concern, as organisations already involved in the importation of heroin from these countries can easily commence importing amphetamines (ABCI 1997).

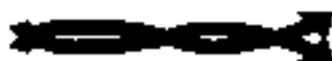
There is a trend towards the use of trained chemists as 'cooks' in clandestine laboratories who apparently become involved due to financial hardships (ABCI 1996).

Clandestine laboratories do not pose the same problem in the ACT as they do in the large states. However there is no reason for this not to change in the near future. Due to the tight knit nature of the organisations involved it is difficult for the police to determine the full extent of the problem at any one time.



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Health Series publications

The Epidemiology Unit of the Department of Health and Community Care has developed an on-going health series of publications to inform health professionals, policy developers and the community on health status in the Territory. Information contained therein will assist in the development of appropriate policy and service delivery models, the evaluation of programs, and an understanding of how the ACT compares with Australia as a whole with regard health status.

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