

Drug Enforcement Administration Office of Diversion Control



NATIONAL FORENSIC LABORATORY INFORMATION SYSTEM

NFLIS Special Report Synthetic Drugs, 2001–2004

September 2005



Highlights

- This NFLIS Special Report presents findings on synthetic drugs including methamphetamine, amphetamine, PCP, MDMA, and MDA. From 2001 to 2004, nearly 1 million of these selected synthetic drug items were analyzed by state and local forensic laboratories in the United States, representing about 13% of all items analyzed.
- The vast majority of the illicitly manufactured synthetic drugs included in this report were identified as either methamphetamine (89%) or MDMA (7%). In addition, 2% were identified as PCP, 2% as amphetamine, and less than 1% as MDA.
- Nationally, the number of methamphetamine items identified by state and local laboratories did not significantly change between 2001 and 2004. Yet reporting of methamphetamine significantly increased in certain regions over this 4-year period, most notably in the South. In the South, methamphetamine items reported more than doubled from 6,534 in the 1st quarter of 2001 to 13,156 in the 4th quarter of 2004.
- On a national level, the reporting of MDMA significantly decreased from 2001 to 2004, declining 54% from 5,427 items reported in the 1st quarter of 2001 to 2,506 in the 4th quarter of 2004. MDMA declined in each of the four census regions, especially in the South and Northeast.
- According to EPIC's Clandestine Laboratory Seizure System (CLSS), the number of clandestine methamphetamine labs seized by law enforcement increased 25% between 2001 and 2004 from 13,539 to 16,927. The largest increases occurred in Southern states, most notably in South Carolina, Virginia, North Carolina, West Virginia, Florida, and Louisiana. Other states experiencing large increases in laboratory seizures included Hawaii, Pennsylvania, and New York.



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Message from the DEA: National Synthetic Drugs Action Plan

Synthetic drugs, especially methamphetamine and MDMA, or “Ecstasy,” pose a significant threat to the nation. In the past 5 years, the use of synthetic drugs has climbed dramatically, a fact that lends urgency to the effort to control them. The Department of Justice Criminal Division’s Narcotic and Dangerous Drug Section, in cooperation with the Drug Enforcement Administration and several other agencies and in consultation with various components of the Department of Health and Human Services, has developed the National Synthetic Drugs Action Plan to combat these drugs—to prevent use, treat the addicted, and disrupt production and the marketplace for these drugs. The Action Plan provides a blueprint for action under the President’s National Drug Control Strategy and brings together various domestic and international efforts to attack and disrupt the trade in these synthetic drugs. Highlights are below.

Prevention

- Develop an early warning and response system
- Enhance public outreach efforts focusing on synthetic drugs
- Improve education and training on pharmaceuticals
- Develop best practices to assist drug-endangered children
- Research and develop targeted prevention programs
- Improve data on afflicted geographic areas
- Examine the use of prescription narcotics

Treatment

- Increase treatment
- Research treatment for synthetic drug abuse
- Develop guidelines for juvenile drug treatment
- Develop early response treatment protocols
- Study options for treatment in the criminal justice system
- Expand dissemination of treatment best practices

Regulation of Chemicals and Drugs

- Support stronger state controls on precursor chemicals
- Remove the [ephedrine and pseudoephedrine] blister pack exemption
- Regulate the chemical spot market
- Determine licit chemical needs
- Enable import controls on bulk ephedrine and pseudoephedrine
- Limit online chemical sales
- Strengthen cooperation with Mexico
- Enhance coordination and information exchange with Canada
- Strengthen the Multilateral Chemical Control System
- Exchange information with chemical-producing countries
- Educate store employees
- Encourage voluntary controls by retail pharmacies and stores
- Work with manufacturers to reformulate abused pharmaceutical products
- Support state prescription monitoring programs

Law Enforcement

- Target pseudoephedrine and iodine smuggling to and from Mexico
- Focus on Canadian synthetics and chemical smugglers
- Investigate ties between Canadian and Mexican criminals
- Investigate Asian and European sources of synthetic drugs
- Enhance the methamphetamine profiling effort
- Review laboratory cleanup resources
- Apply updated clandestine laboratory cleanup guidelines
- Increase prosecutor and LEA training
- Make full use of charging and sentencing options
- Increase access to civil penalty case experts
- Prevent exploitation of mail services
- Improve intelligence efforts related to synthetic drugs
- Target raves, where drug use is facilitated
- Consider new legislation on club drugs
- Strengthen controls on Internet sales
- Increase Internet investigations
- Target OxyContin and Vicodin diversion
- Seek updated sentencing guidelines for club drugs
- Share law enforcement best practices

NATIONAL AND REGIONAL ESTIMATES

This NFLIS report presents findings on illicitly manufactured synthetic drugs including methamphetamine, amphetamine, PCP, MDMA, and MDA. From 2001 to 2004, nearly 1 million of these selected synthetic drug items were analyzed by state and local laboratories in the United States, representing more than 13% of all drugs analyzed during this period (Table 1).

Methamphetamine remains the most commonly reported synthetic drug in NFLIS. In 2004, an estimated 227,720 methamphetamine drug items were analyzed by state and local laboratories. Methamphetamine is the third most common drug reported in NFLIS, accounting for nearly 12% of all drugs reported and ranking only behind cannabis/THC and cocaine. Among other synthetic drugs included in this report, about 7% were identified as MDMA, 2% as PCP, 2% as amphetamine, and less than 1% as MDA.

Methamphetamine continues to dominate in the West and the Midwest, accounting for more than 90% of the synthetic drugs reported within these regions. In the South, 80% of synthetic drugs were identified as methamphetamine and nearly 15% as MDMA. In contrast, in the Northeast, 48% of synthetic drugs were reported as MDMA, 30% as PCP, 12% as methamphetamine, and 7% as amphetamine.

Figure 1. Distribution of synthetic drugs by region, 2001–2004.

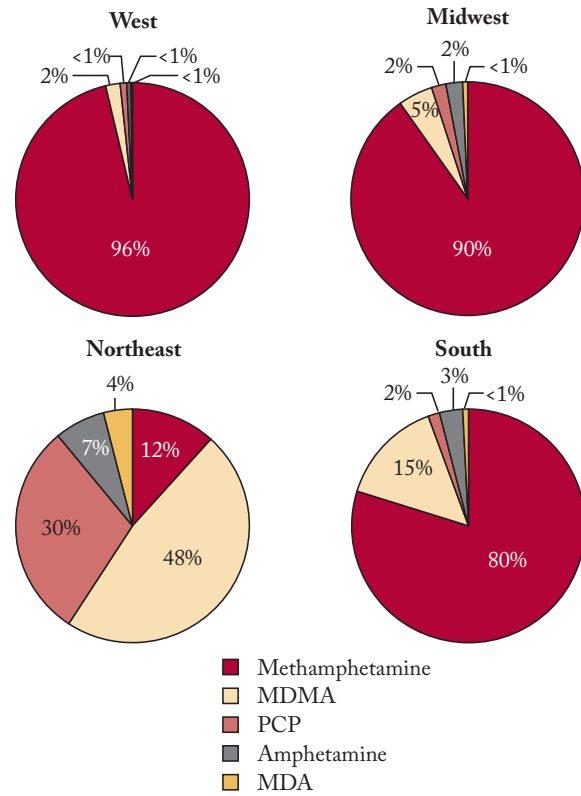


Table 1 NATIONAL ESTIMATES FOR SELECTED SYNTHETIC DRUGS
Estimated number and percentage of selected synthetic drugs, 2001–2004.

Drug	Total		2001		2002		2003		2004	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Methamphetamine*	842,431	89.40%	199,271	85.30%	210,579	87.90%	204,861	91.40%	227,720	92.30%
MDMA	61,388	6.50%	23,838	10.20%	18,124	7.60%	9,887	4.40%	9,540	3.90%
PCP	18,667	2.00%	4,940	2.10%	5,450	2.30%	4,642	2.10%	3,635	1.50%
Amphetamine*	15,278	1.60%	3,966	1.70%	3,877	1.60%	3,505	1.60%	3,930	1.60%
MDA	4,686	0.50%	1,513	2.00%	1,525	0.60%	1,200	0.70%	1,973	0.50%
<i>Total Synthetic Drug Items</i>	942,451	100.00%	233,528	100.00%	239,556	100.00%	224,095	100.00%	246,797	100.00%
<i>Total Analyzed Items</i>	7,102,191		1,830,221		1,821,714		1,715,597		1,734,658	
<i>% Identified as Synthetic Drugs</i>		13.30%		12.80%		13.20%		13.10%		14.20%

Note: Percentages may not sum to 100% due to rounding.

* May include licit drug products.

QUARTERLY TRENDS

National trends

This section describes national trends for the estimated number of synthetic drugs analyzed by state and local laboratories in 3-month increments between 2001 and 2004. The number of methamphetamine items reported by state and local laboratories did not significantly change between 2001 and 2004 ($\alpha = .05$) (Figure 2). In contrast, MDMA declined 54% from 5,427 in the 1st quarter of 2001 to 2,506 in the 4th quarter of 2004 (Figure 3). Among the other synthetic drugs, PCP was the only drug to significantly change, declining 39% over the 4-year period (Figure 4).

Figure 2. Methamphetamine by quarter, 2001–2004.

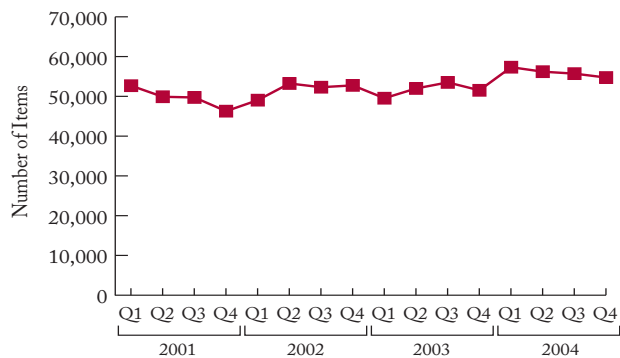


Figure 3. MDMA by quarter, 2001–2004.

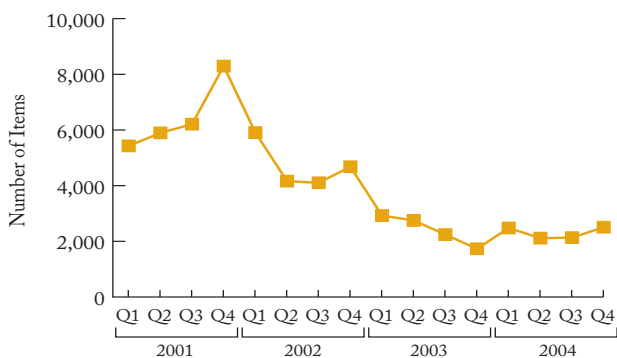
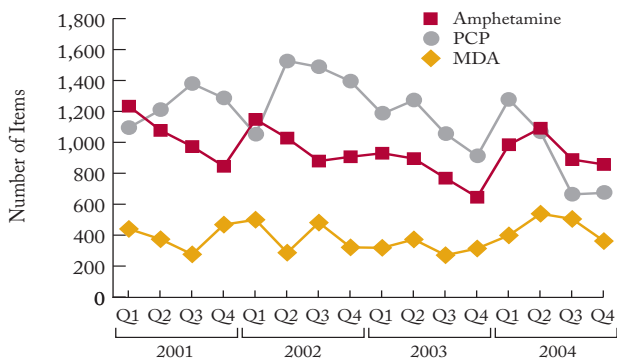


Figure 4. Amphetamine, PCP, and MDA by quarter, 2001–2004.



Regional trends adjusted for population

This section presents regional trends per 100,000 persons age 15 or older for the top two synthetic drugs. By region, the reporting of methamphetamine significantly increased in the South and Northeast between 2001 and 2004 (Figure 5). In the South, methamphetamine items reported more than doubled from 8 to 17 per 100,000 (6,534 items to 13,156 items). Methamphetamine also significantly increased in the Northeast (from 46 items to 416 items), although it continues to be reported in the Northeast at a rate far lower than in the other regions. Meanwhile, methamphetamine continues to be reported most frequently in the West, where in 2004 it was reported at a rate 4 times higher than in the South and 5 times higher than in the Midwest. MDMA decreased in each of the census regions, most notably in the South and Northeast (Figure 6). In the South, MDMA decreased from 3.3 to 1.7 per 100,000 (from 2,589 items to 1,353 items). In the Northeast, MDMA decreased from 3.0 to 0.7 per 100,000 (from 1,275 items to 300 items).

Figure 5. Methamphetamine by region, 2001–2004.*

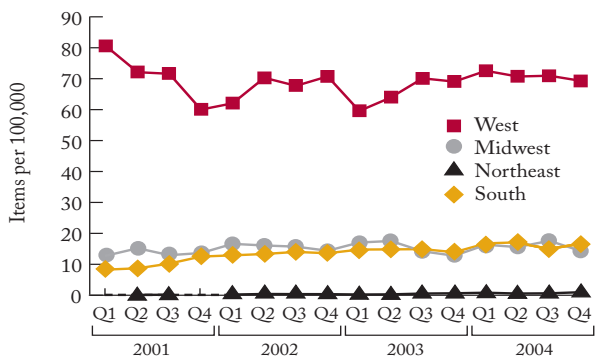
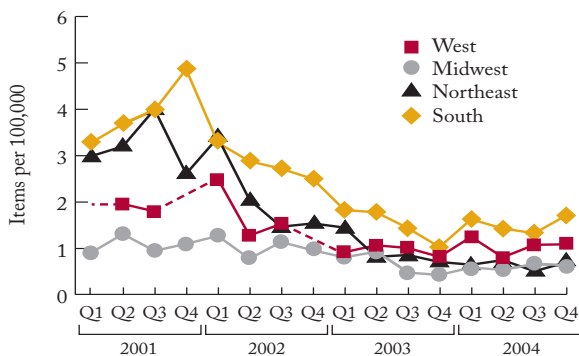


Figure 6. MDMA by region, 2001–2004.*



* A dashed line implies unstable estimates due to small sample sizes.

METHAMPHETAMINE REPORTED IN NFLIS BY STATE

Methamphetamine abuse and trafficking have been spreading eastward over the past decade. While a high concentration of methamphetamine trafficking and abuse remains in the West, drug control agencies have experienced increasingly larger problems with methamphetamine in the Midwest and parts of the South.² NFLIS data capture some of this regional movement in methamphetamine, as reflected by the types of drugs reported by forensic laboratories over time (Figures 7 and 8). Since 2001, more states have been identifying higher percentages of methamphetamine relative to their overall drug

caseloads. For example, in 2001 methamphetamine accounted for 20% or more of the overall drug caseloads for laboratories in 11 NFLIS states. Nine of these states were in the West, and two were in the Midwest. In comparison, in 2004, 18 states reported methamphetamine levels of 20% or higher. Of these, 11 were in the West, 4 were in the Midwest, and 2 were in the South.

²EPIC National Clandestine Laboratory Seizure System, 2003 data, as cited in *National Synthetic Drugs Action Plan*, 2004. Executive Office of the President, Office of National Drug Control Policy.

Figure 7. Percentage of Drugs Reported in NFLIS as Methamphetamine, 2001.

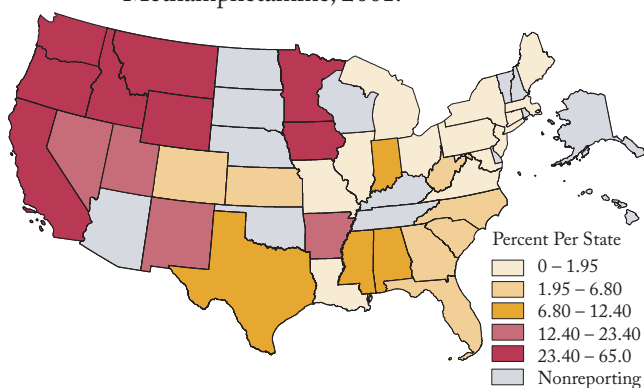
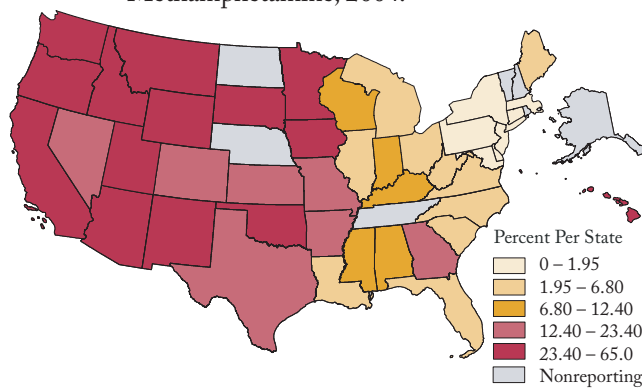


Figure 8. Percentage of Drugs Reported in NFLIS as Methamphetamine, 2004.

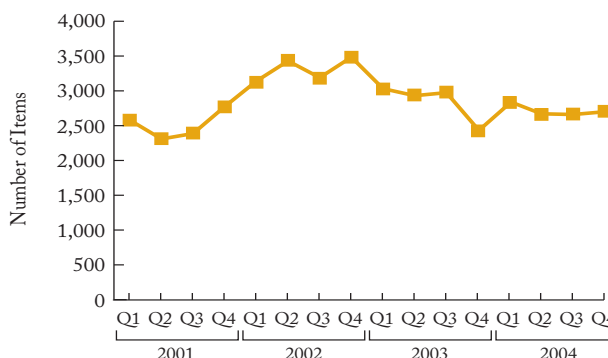


METHAMPHETAMINE PRECURSOR CHEMICALS REPORTED IN NFLIS

There are at least a dozen synthetic routes to methamphetamine, but most utilize one of three precursors: ephedrine, pseudoephedrine, or 1-phenyl-2-propanone (commonly known as phenylacetone, or P2P). Ephedrine and pseudoephedrine are alkaloids that can be extracted from ma huang (the ephedra plant) or synthesized from other chemicals. Phenylacetone is an industrial chemical that can only be synthesized from other chemicals. In the U.S., pseudoephedrine tablets continue to be the primary precursor in the manufacture of methamphetamine. Ephedrine and pseudoephedrine are commercially available as a bulk chemical or as an ingredient (decongestant) in numerous medications and herbal remedies. More than 95% of clandestine methamphetamine laboratories used ephedrine or pseudoephedrine from over-the-counter pharmaceutical preparations. In NFLIS, state and local laboratories reported an estimated 45,553 drug items as ephedrine or pseudoephedrine between 2001 and 2004 (Figure 9). Nationally, the number of drug items reported as

ephedrine or pseudoephedrine increased from the 2nd quarter of 2001 through the 2nd quarter of 2002 (2,390 items to 3,430 items). Since then, the number of reported items has gradually declined to 2,700 in the 4th quarter of 2004. Within regions, there were increases in drug items reported in both the South and West. None of these increases, either at the national or regional levels, statistically significant ($\alpha = .05$).

Figure 9. Pseudoephedrine and ephedrine by quarter, 2001–2004.



METHAMPHETAMINE LABORATORY SEIZURES

Domestic seizures of illegal methamphetamine laboratories have increased sharply in recent years. According to EPIC's Clandestine Laboratory Seizure System (CLSS), the number of methamphetamine laboratories seized by U.S. law enforcement agencies increased 25% between 2001 and 2004, from 13,539 to 16,927. California remains the state with the highest methamphetamine production levels, in part because of the large "super labs" in that state.² However, there has been a sizable increase in the number of smaller, independent

clandestine laboratories in the Midwest and South. As shown in Figures 9 and 10, the largest increases in methamphetamine laboratory seizures occurred in Southern states, most notably in South Carolina, Virginia, North Carolina, West Virginia, Florida, and Louisiana. Overall, methamphetamine laboratory seizures more than doubled in 21 states between 2001 and 2004. Of these states, 11 were in the South, 6 in the Midwest, 2 in the Northeast, and 2 in the West.

Figure 10. Number of Methamphetamine Clandestine Laboratories Seized by State, 2001.

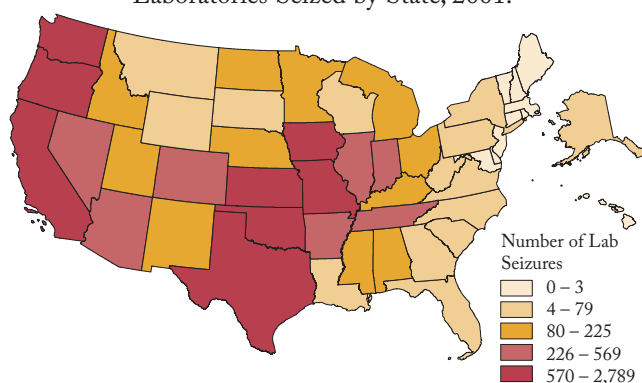
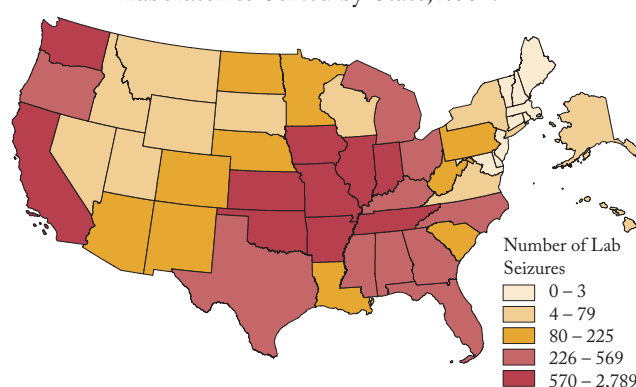


Figure 11. Number of Methamphetamine Clandestine Laboratories Seized by State, 2004.



SYNTHETIC DRUGS REPORTED IN STRIDE

The DEA's System To Retrieve Information from Drug Evidence II (STRIDE) collects results of substance evidence analyzed at DEA laboratories across the country. STRIDE includes results for drug cases submitted by the DEA, other federal law enforcement agencies, and some local police agencies. While STRIDE captures both domestic and international drug cases, the following data only reflect results for drugs obtained in

the U.S. A total of 46,875 synthetic drugs were reported in STRIDE, representing about 20% of all drug items reported. Overall, from 2001 to 2004 about 72% of synthetic drugs reported were identified as methamphetamine and 20% as MDMA. Similar to the trend found in NFLIS, methamphetamine gradually increased in STRIDE from 2001 to 2004, while MDMA declined sharply over this period.

SYNTHETIC DRUGS MOST FREQUENTLY IDENTIFIED IN STRIDE, 2001–2004

Drug	Total		2001		2002		2003		2004	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Methamphetamine	33,750	72.0%	7,804	65.0%	8,569	69.1%	8,919	75.8%	8,458	79.0%
MDMA	9,417	20.1%	3,422	28.5%	2,685	21.6%	1,866	15.9%	1,444	13.5%
PCP	1,410	3.0%	282	2.4%	380	3.1%	502	4.3%	246	2.3%
GHB/GBL	925	2.0%	140	1.2%	464	3.7%	132	1.1%	189	1.8%
MDA	754	1.6%	150	1.3%	173	1.4%	203	1.7%	228	2.1%
Amphetamine	619	1.3%	200	1.7%	133	1.1%	144	1.2%	142	1.3%
<i>Total Selected Synthetic Drug Items</i>	46,875	100.0%	11,998	100.0%	12,404	100.0%	11,766	100.0%	10,707	100.0%
<i>Total Analyzed Items</i>	229,482		61,729		60,763		55,160		51,830	
<i>% Identified as Synthetic Drugs</i>		20.4%		19.4%		20.40%		21.3%		20.7%

Note: Percentages may not sum to 100% due to rounding.

Acknowledgement

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