

DRUG ENFORCEMENT ADMINISTRATION 2002 DOMESTIC MONITOR PROGRAM



Heroin



Domestic Monitor Program

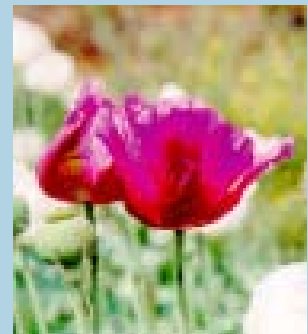




Drug Enforcement Administration

2002 DOMESTIC MONITOR PROGRAM

Drug Intelligence Report



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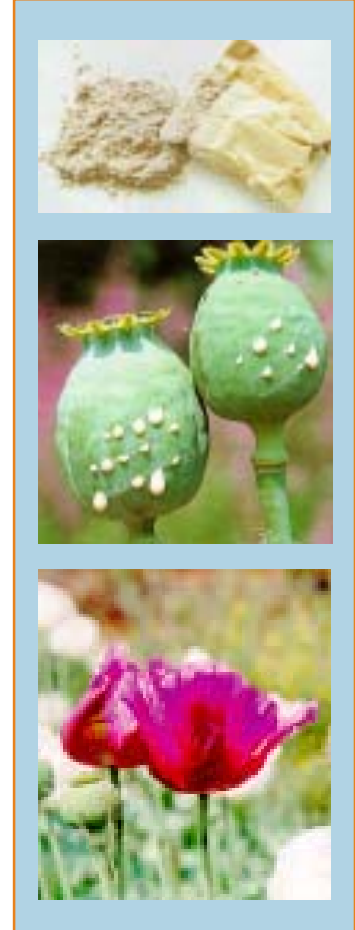
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Domestic Monitor Program



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EXECUTIVE SUMMARY

The Drug Enforcement Administration's (DEA) Domestic Monitor Program (DMP) provides data on the price, purity, and geographic source of heroin being sold at the retail or street level in 23 U.S. cities. The data contained in this report are based on actual undercover heroin purchases made by the DEA on the streets of these cities. Since the inception of the DMP, the program has documented the rise of heroin purity, and the steady decline of its price (average price-per-milligram pure) throughout the United States. Additionally, the DMP has provided information that, in the early to mid-1990s, clearly showed the infusion of South American heroin into the white-powder heroin market. Today, South America-produced heroin dominates the white-powder market east of the Mississippi River, while Mexican black tar and brown powder heroin clearly dominate the market west of the Mississippi. The DMP remains an important assessment and analytical tool for the DEA, law enforcement officials, drug policy makers, and drug abuse researchers throughout the nation.

Judith E. Bertini
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for Intelligence

Background

The Domestic Monitor Program (DMP), a retail-level heroin purchase program, provides data on the price, purity, and geographic origin of street-level heroin available in major metropolitan areas of the United States to federal, state, and local law enforcement authorities, drug policy-makers, and drug-abuse researchers. In 2002, DEA's Intelligence Division provided funding for the purchase of retail-level heroin samples in 23 metropolitan areas. Each heroin purchase subsequently underwent in-depth chemical analyses at the DEA Special Testing and Research Laboratory (STRL) to determine the purity and, if possible, the geographic source area (signature analysis) of the heroin.¹

The DMP was initiated in the New York Field Division in 1979. To this day, New York City DMP results are particularly important because the city remains the nation's largest heroin-user market, and because much of the white powder heroin available in East Coast markets is obtained there. Between 1979 and 1991, the number of DEA offices participating in this program fluctuated between six and 12. In 1991, the DMP was expanded to include one city in every DEA Field Division. Baltimore, Maryland, was included as a participant in early 1995; Orlando, Florida, in late 1996; and El Paso, Texas, in mid-1999.

Since its inception, the DMP has proven to be a valuable indicator for detecting trends in retail-level heroin trafficking. For example, in the early to mid-1980s, the DMP documented the increasing availability of Southeast Asian (SEA) heroin at the retail level in a number of U.S. cities. In the mid-1990s, data from the DMP revealed significant increases in the amount of South American (SA) heroin available at the retail level, particularly in the metropolitan areas of the northeastern United States.

The goal of the DMP is to provide federal and other drug policy makers and drug abuse researchers with information regarding the nature of the domestic heroin problem at the street level. Additional DMP data analysis reveals changes in heroin price and purity, adulterants and diluents, use patterns, marketing practices, availability, and geographic source.

2002 DMP Results: Qualified Samples

DEA offices in each city where the DMP is conducted are tasked with making 10 street-level heroin purchases per quarter, or 40 purchases per year. The only exception is New York City, which makes 20 purchases per quarter, or 80 per year. As a result, 960 heroin samples should be purchased throughout the year as part of the DMP; however, the total number of samples included in the DMP analysis varies from year to year based on a variety of factors. For example, some exhibits are determined to contain no controlled substance, some are determined to contain cocaine or other controlled substance, and some, while containing heroin, do not contain sufficient heroin to allow for geographic analysis. In other instances, the results of the geographic analysis are inconclusive. Such samples are not included in this analysis. Those that are included are "qualified samples," meaning that price, purity, and geographic source data are available for the exhibit. In 2002, 614 qualified samples were purchased.² Of these, 341 were classified as SA heroin; 241 were classified as Mexican (MEX) heroin; 22 were classified as Southwest Asian (SWA) heroin; and 10 were classified as SEA heroin.

¹ For an explanation of signature analysis and other terms used in this report, see appendix A

² The final quarter of calendar year (CY) 2002 coincided with the first quarter of Fiscal Year (FY) 2003 because, at that time, DEA was operating under a Continuing Resolution, and DMP purchases were not funded in most cities. As a result, fewer total samples were purchased in 2002; and therefore, fewer qualified samples were available for inclusion in this report.

Heroin Samples: Origin, Purities, and Prices*

	2000	2001	2002
SEA samples	5	7	10
SEA percent pure	22.0%	18.1%	23.9%
SEA price per milligram pure	\$0.73	\$0.56	\$0.61
SWA samples	26	29	22
SWA percent pure	39.2%	26.5%	29.8%
SWA price per milligram pure	\$0.55	\$0.42	\$0.75
MEX samples	286	344**	241
MEX percent pure	24.9%	21.0%	27.3%
MEX price per milligram pure	\$0.93	\$1.28**	\$0.70
SA samples	355	386	341
SA percent pure	51.3%	49.7%	46.0%
SA price per milligram pure	\$0.72	\$0.77	\$0.72

* The data in this report were obtained using a different methodology from previous editions of this report. Beginning with this report, DMP data regarding the net weight of each exhibit were obtained directly from DEA's System to Retrieve Data from Evidence (STRIDE) database. According to the Laboratory Operations Manual, the weight of each exhibit weighing less than 10 grams—which includes the DMP exhibits—is reported to two significant figures, for example, 0.86 grams or 6.7 grams. In previous editions of this report, the net weight was obtained directly from the laboratory scale, which calculates weight to a higher degree of accuracy. This change in methodology becomes important in the calculation of the price per milligram pure of the exhibit, which is dependent upon the net weight. As a result, variations will appear in the price per milligram pure for 2000 and 2001, when compared to previous editions of this report.

** This spike in MEX heroin prices was caused, perhaps, by a 1999-2000 drought, which resulted in a severe decline in opium poppy cultivation in Mexico. During 2001, rainfall in key growing areas returned to near normal levels, which allowed opium poppy cultivation to rebound to pre-drought levels.

Nationwide, in 2002, SA heroin samples had the highest average purity—46.0 percent; SEA heroin had the lowest—23.9 percent. MEX heroin averaged 27.3 percent pure, and SWA heroin averaged 29.8 percent pure in 2002. Prices per milligram pure were similar for various types of heroin. At \$0.61, SEA samples had the lowest average price per milligram pure, and SWA samples highest average price—\$0.75 per milligram pure. SA heroin averaged \$0.72 per milligram pure. MEX heroin price averaged \$0.70. 2002 numbers for price per milligram pure are compared to previous years in Table 1.

The price and purity of SA heroin have been remarkably stable for the past several years. The price of MEX heroin dropped considerably between 2001 and 2002. However, the 2002 price is more consistent with the 2000 price level. Due to the small number of both SWA and SEA exhibits, it is difficult to draw trending information based on the data.

2002 DMP Results: City by City

Generally speaking, the heroin market in the United States is divided geographically by the Mississippi River (See appendix E.). East of the Mississippi River, particularly in the Northeast where the largest U.S. heroin-user population is located, SA dominated the market in 2002, as it has in past years. Mexican black tar and, to a lesser extent, Mexican brown powder heroin dominated markets west of the Mississippi River. Of the DMP samples that were able to be classified, 92 percent of those purchased east of the Mississippi River were SA heroin. West of the Mississippi River, 98 percent of the samples purchased were classified as MEX heroin.

In 2002, 369 qualified samples were purchased east of the Mississippi River. Of these 341 were determined to be SA heroin, six were determined to be SEA heroin, and 22 were SWA heroin. Chicago purchased four SEA exhibits, Atlanta purchased one, and Washington, DC, purchased one. Eight of the 22 SWA samples were purchased in the Washington, DC–Baltimore area. The rest were purchased in Atlanta (4), Chicago (4), Detroit (4), New Orleans (1), and New York City (1).

West of the Mississippi River, 245 qualified samples were purchased in 2002; 241 of them were determined to be MEX heroin. The remaining four were SEA and were purchased in Dallas, Texas. Interestingly, those four SEA exhibits averaged only 18 percent pure, lower than the national average for SEA of 23.9 percent.

Even though the DMP is conducted nationwide, the calculation of a national “average” for price and purity is often misleading, because samples reflect local user preferences and market availability. As a result, the heroin market tends to be unique to each metropolitan area, and any attempt to calculate national averages leads to numbers that do not accurately reflect local trends. More telling than the changes in the

national averages were the individual changes in purity and average price in the participating cities in 2002.

Atlanta

Heroin availability was stable in Atlanta in 2002, where heroin remains a commodity primarily obtained in the “Bluff” section of the city. In other sections of Atlanta where heroin was available, intelligence confirmed that the Bluff was the primary local source of supply. In 2002, 34 qualified samples were purchased in Atlanta, 29 of which were SA heroin. Four samples were determined to be SWA and one was SEA. The SWA samples were determined to be 38.0 percent pure. The SEA exhibit was purchased in December 2002. It was determined to be 61.4 percent pure. The average purity of the SA exhibits was 52.4 percent, and ranged in purity from 12.5 percent pure to 93.8 percent pure.

Baltimore

Heroin plagues the Baltimore metropolitan area and its outlying suburbs. In fact, both law enforcement and medical officials in Baltimore consider heroin the city’s most significant drug problem. The high purity of heroin on the street level was responsible, at least in part, for a number of heroin-related hospital emergencies. According to treatment and parole and probation officials, a large number of these medical emergencies occurred among newly released prison inmates who were unaware of the increased potency of the drug, and among inexperienced users. Suburban heroin abusers—particularly teens and young adults—often traveled into Baltimore to purchase heroin. Heroin was also purchased on numerous corners in “open-air markets” of West and East Baltimore in either “raw” (high purity) or “scramble” (cut) form. Raw heroin was commonly sold in vials, much like crack

cocaine, and ranged in purity from over 70 percent to well over 90 percent. Scramble heroin was available throughout the city, packaged primarily in gelatin capsules. Scramble heroin ranged in purity from between approximately 10 percent and 20 percent.

In 2002, 26 qualified purchases were made in Baltimore; 24 of them were SA. The SA exhibits ranged in purity from 7.1 percent to 82.6 percent and averaged 23.6 percent pure. On average, the SA exhibits cost \$0.38 per milligram pure. The remaining two exhibits were SWA, averaging 14.2 percent pure and \$0.33 per milligram pure.

Boston

Heroin remained readily available throughout New England in 2002, selling at low prices and high-purity levels. At the street level, heroin was routinely distributed in clear or colored glassine or wax packets with or without markings. Abuse remained widespread, with continued reports of heroin overdose deaths and other incidences occurring throughout New England.

In Boston, 27 qualified samples were purchased in 2002. They were all determined to be SA heroin, averaging just over 50 percent pure and costing \$1.19 per milligram pure.

Chicago

In Chicago, the availability of heroin, especially of SA heroin, continued to increase during 2002. However, heroin from other geographic source areas was also available. In 2002, 27 qualified exhibits were purchased in Chicago: 19 of them were SA heroin; 4 were SEA heroin; and 4 were SWA heroin. The SA heroin exhibits averaged 20.4 percent pure; the SEA heroin exhibits averaged 20.8 percent pure; and the SWA heroin exhibits 19.8 percent pure. These purity levels suggest a high degree of

uniformity in the heroin market in Chicago. The average price per milligram pure for SA heroin was \$0.43; for SEA heroin \$0.71; and for SWA heroin \$0.39.

The 15th Police District in Chicago has the highest concentration of open-air heroin sales locations in the city. Street gangs control virtually all of these locations. Retail sellers compete with one another on almost every street corner for customers. Many of the customers are young and white from affluent, middle-class Chicago suburbs. The Chicago Police Department estimates that approximately two-thirds of the heroin seized in the city originated in this district and the neighboring 11th District. Because these areas have been identified as the most active heroin retail-sales markets in the city, the majority of the DMP purchases made in the past several years, including in 2002, have occurred in these two districts.

Dallas

In 2002, MEX heroin remained the most readily available type of heroin in Dallas, accounting for 29 of the 33 qualified samples purchased as part of the DMP. However, white heroin has begun to appear in this market. In 2000, no SEA heroin purchases were made in Dallas. In 2001, five such purchases were made. In 2002, four SEA heroin samples were purchased. They averaged 18 percent pure and cost \$0.46 per milligram pure. Analysis of these samples, however, determined that three of them were purchased on the same date and were chemically identical. The MEX heroin samples averaged 17.2 percent pure and cost \$0.75 per milligram pure.

Denver

The majority of heroin sales in Denver have traditionally taken place in the lower downtown area. Street-level weight is usually sold in grams, selling from \$100 to \$150. MEX heroin was the only type encountered in the DMP in Denver in

2002. All 23 qualified samples were MEX heroin. The samples averaged 18.4 percent pure, ranging from 11.8 to 29.3 percent pure. On average, the samples cost \$1.12 per milligram pure, among the highest prices in the western region.

Detroit

In 2002, SA heroin accounted for 12 of the 16 qualified samples purchased in Detroit. Those 12 samples averaged 45.8 percent pure and cost \$0.80 per milligram pure. The remaining four exhibits were SWA heroin, averaging 41.7 percent pure and costing, on average, \$0.62. Chemical analysis determined that two of the SWA heroin exhibits were identical; these two exhibits were purchased 2 days and nearly 5 miles apart.

El Paso

Heroin is readily available in the El Paso metropolitan area and can be purchased city-wide for \$100 per gram. In 2002, only seven qualified samples were purchased in El Paso. They were all MEX heroin, averaging 40.3 percent pure and \$0.27 per milligram pure.

Houston

Intelligence information indicates that the demand for Mexican brown powder heroin declined in the Houston area in 2002. Some heroin users bypassed other heroin sources of supply, and specifically requested white heroin. In November 2002, local police officers arrested a Hispanic male in downtown Houston who was in possession of approximately 1 ounce of white heroin. Laboratory analysis revealed the heroin was at least 87 percent pure, which is more than three times the purity level normally found at the street level in Houston.

Additional information indicates that the following areas are common street-level distribution sites in Houston:

- ◆ The East End, near Canal and Navigation Streets
- ◆ The Greenspoint area
- ◆ The Washington Street area
- ◆ The North Main Street area
- ◆ The Yellowstone area
- ◆ Pasadena, Texas

Prices in Houston ranged from \$20 for street-level quantities of heroin, \$500 for ¼ ounce, and between \$1,600 and \$2,000 for an ounce. In 2002, 39 qualified samples were purchased in Houston. All were MEX heroin. They averaged 28.2 percent pure and cost \$0.64 per milligram pure. The Houston exhibits ranged from 3.7 to 58.8 percent pure. One exhibit contained heroin at 13.9 percent and cocaine at 4.5 percent.

Los Angeles

In 2002, 28 qualified samples were purchased in Los Angeles. All were MEX heroin, averaging 26.5 percent pure and costing \$0.30 per milligram pure. The exhibits ranged in purity from 9.0 to 50.1 percent.

Miami

Twenty-nine qualified samples were purchased in Miami in 2002. All 29 were SA heroin. They averaged 29.4 percent pure and cost \$0.61 per milligram pure. Three of the Miami exhibits contained cocaine: two as a trace substance and one at 0.64 percent.

New Orleans

In 2002, 23 qualified samples were purchased in New Orleans; 22 were determined to be SA heroin at 30.4 percent pure and \$1.65 per

milligram pure. The remaining exhibit was SWA heroin. It was determined to be 40 percent pure and to cost \$1.14 per milligram pure. In 2001, one SWA heroin appeared in the New Orleans DMP. It was determined to be 45.4 percent pure and to cost \$0.37 per milligram pure.

New York City

New York City is one of the most significant heroin destination and distribution centers in the United States. In 2002, heroin was readily available from the various ethnic groups that comprise metropolitan New York City's demographic, while prices were stable and purity high. SA heroin was the most common type of heroin encountered in New York City in 2002. In fact, of the 61 qualified exhibits purchased in 2002, 60 were SA heroin. Analysis revealed they averaged 61.5 percent pure and cost \$0.36 per milligram pure, the lowest price in the nation for SA heroin. The remaining exhibit was SWA heroin at 56.8 percent pure and \$0.23 per milligram pure. In 2001, two samples of MEX heroin were purchased as part of the DMP. No such atypical purchases were made in New York City in 2002.

Newark

In 2002, 27 qualified samples were purchased in Newark; all were SA heroin. Those exhibits were analyzed to be 71.4 percent pure and to cost \$0.39 per milligram pure. That purity level led the nation in 2002, and the price per milligram pure was among the lowest for SA heroin.

Orlando

Orlando's heroin market was very uniform in 2002—all 29 qualified exhibits were SA heroin. Those exhibits were analyzed to be 46.1 percent pure and to cost \$0.63 per milligram pure.

Philadelphia

SA heroin remained widely available throughout Philadelphia during 2002. Although the greater Philadelphia area is generally considered a consumer market for sources in New York City and Miami, the availability of cheap, high-purity, SA heroin in Philadelphia and, in particular, the "Badlands" of North Philadelphia, continued to attract lower-level distributors and users from other states and localities to Philadelphia's street-corner distribution locations. The increased availability of cheaper, higher-purity heroin over the last few years has caused concern throughout Pennsylvania over a growing heroin use problem that reaches all areas and all socioeconomic backgrounds. Heroin's popularity among teens and young adults remained high, as they and other users consumed heroin either by itself or in combination with cocaine or alcohol, a combination that typically leads to overdose deaths. In some areas, heroin overdose deaths have continued to rise in the last few years. For example, the Lackawanna County Coroner's Office reported only 13 drug overdose deaths combined in 1998 and 1999; in 2000, 31 fatal drug overdoses were reported; and in 2001, 22 heroin overdose deaths were reported. Through June 2002, there were 22 heroin overdose deaths reported in Lackawanna County. Similarly, in Lehigh and Northampton Counties, all but one of the drug overdose fatalities were caused by either heroin by itself or heroin in combination with other substances. However, in Allegheny County (western Pennsylvania), the number of heroin overdose deaths continued its decline in 2002 after nearly tripling between 1997 and 2001.

In 2002, heroin purity levels in Philadelphia were among the highest in the nation. Based on the analysis of the 24 qualified exhibits, all of which were SA heroin, the average purity of heroin in Philadelphia was 66.3 percent, and the average cost was \$0.42 per milligram pure.

Phoenix

MEX heroin dominated the market in Phoenix in 2002; all 29 qualified exhibits were determined to be MEX heroin. Those exhibits were analyzed to be 48.9 percent pure, a purity level that led the western region in 2002. Analysis also determined that the DMP samples in Phoenix cost \$0.51 per milligram pure. Table 2 provides a brief overview of heroin purity levels in Phoenix since 2000.

Table 2

Percent of Purity in Phoenix

2000	2001	2002
41.3%	41.3%	48.9%

San Diego

MEX heroin was readily available in Imperial County, as well as San Diego in 2002. In fact, MEX heroin accounted for all 30 qualified samples purchased in San Diego as part of the DMP in 2002. Those exhibits were analyzed to be 47.9 percent pure, a purity level that ranked second only to Phoenix in the western region. Analysis of the San Diego samples determined their cost to be \$0.24 per milligram pure, the cheapest in the western region.

San Francisco

MEX heroin remained readily available throughout this region, specifically in San Francisco's Mission, Tenderloin, Bayview, Bernal Heights, and Portrero Hill Districts. Supplies were also readily available in San Leandro (in Alameda County) and throughout Sonoma County. User quantities of black tar heroin, the heroin of choice throughout the region, were usually packaged in double plastic bags. The DMP results bear this out—all of the 22 qualified samples purchased in San Francisco in 2002 were determined to be MEX heroin. Those exhibits were analyzed to be 12.1 percent pure and to cost \$0.99 per milligram pure.

San Juan

Heroin was readily available in all areas of Puerto Rico in 2002, and was the most widely abused drug in eastern Puerto Rico, particularly in the Fajardo area. The most common areas for buying heroin were the drug "points" in the public housing projects and *barriadas* (marginal neighborhoods). Intravenous injection was the primary means of ingestion. However, a small number of addicts snorted the drug, sometimes mixed with cocaine, in a combination known as a "spitball." SA heroin dominated the market in Puerto Rico and all 27 of the qualified exhibits purchased as part of the DMP in 2002 were determined to be SA heroin. They averaged 36.7 percent pure and cost \$0.48 per milligram pure.

Seattle

MEX heroin dominated the market in Seattle in 2002, accounting for all 16 of the qualified samples purchased there. Those exhibits were analyzed to be 10.5 percent pure, the lowest purity level in the nation, and to cost \$0.89 per milligram pure. The number of needles exchanged at needle exchange program sites provides an indication of the high demand for heroin in the Puget Sound, Washington, and Lane County, Oregon regions. Many of these needles are used for heroin injections, although they can also be used for methamphetamine, insulin, or any other injectable substance. Table 3 shows the number of needles exchanged in King (Seattle) and Pierce (Tacoma) Counties each year since 1998, and the number of needles exchanged in Lane County (Eugene, Oregon) each fiscal year since 2000.

Table 3

Number of Needles Exchanged in King and Pierce Counties in Washington, and Lane County in Oregon

	1998	1999	2000	2001	2002	Total
King County	1,722,499	1,822,326	2,029,243	2,011,198	*	7,585,266
Pierce County	1,255,025	1,466,468	1,622,748	1,743,613	*	6,087,854
Lane County**	*	*	82,571	148,164	156,868	387,603

* Data not available for these years.

**Lane County's data reported by fiscal year.

St. Louis

Heroin abuse and trafficking continued to be a growing concern in the St. Louis area in 2002. Mexican black tar heroin was readily available in the depressed urban areas of St. Louis, and it represented all 18 of the qualified exhibits purchased by the DMP in 2002. Those exhibits were analyzed to be 13.8 percent pure, and to cost \$1.54 per milligram pure. Heroin is typically sold in “buttons” for \$10. Eight to 10 buttons weigh a gram and the heroin is brought into the area from California, Arizona, Texas, and Chicago, Illinois. A comparison of DMP data for St. Louis, from 1994 to 1998, shows a nearly three-fold increase in the overall purity of street-level heroin; however, since 2000, street-level heroin purities have remained stable, as reflected in Table 4.

Washington, DC

The heroin market in Washington, DC, where the heroin trade is well entrenched, was one of the most varied markets in the DMP in 2002. Nineteen qualified exhibits were purchased as part of the DMP. Of that number, 12 were SA heroin, one was SEA heroin, and six were SWA heroin. The 12 SA heroin samples averaged 20.8 percent pure, and cost \$0.79 per milligram pure. The SEA heroin exhibit was 22.7 percent pure, and cost \$0.46 per milligram pure. The

Table 4

St. Louis Street-Level Heroin Purities

	2000	2001	2002
	15.4%	15.4%	13.8%

six SWA heroin exhibits averaged 22.2 percent pure, and cost an average of \$0.47 per milligram pure.

The 14th Street corridor in Northwest Washington, DC, is a magnet for suburban users purchasing high-purity heroin. Distributors in other areas of the District—particularly the eastern quadrants—continue to supply heroin ranging in purities from less than 10 percent to 25 percent. The eastern part of the city was frequented more by well-established sellers and long-term addicts than by suburban users. These neighborhoods experienced a higher volume of trafficking and, therefore, higher levels of associated violence. Washington, DC, Metropolitan Police Department officials also attribute lower levels of violence, in the Northwest corridor and other high-purity heroin distribution areas, to a different mentality on the part of heroin distributors there, who “serve up” heroin to primarily white, suburban customers. According to officials, distributors in these areas “take care of” their customers, who tend to spend several hundred dollars at a time, in order to maintain a regular profit.

Table 5

Highest Individual Exhibits by Purity and Location

	Source	Highest Purity
San Diego	Mexico	71.2%
New York City	South America	96.0
Atlanta	Southeast Asia	61.4
Detroit	Southwest Asia	72.5

Table 6

Lowest Individual Exhibits by Purity and Location

	Source	Lowest Purity
Seattle-Tacoma	Mexico	3.1%
Baltimore	South America	7.1
Chicago	Southeast Asia	9.0
Chicago	Southwest Asia	8.6

Geo-Probes: A Look at New Cities

Beginning in 2001, DEA began a new initiative within the DMP called Geographical Probes, or Geo-Probes. The purpose of the Geo-Probes is to gain additional intelligence about existing and emerging heroin markets in areas outside the traditional DMP areas. In order to accomplish that mission, DEA made funds available for sample heroin purchases in selected cities across the United States. In 2002, those cities were: Huntington Park, California; Broward County, Florida; Holyoke and Worcester, Massachusetts; Warren-Youngstown, Ohio; Eugene-Springfield, Oregon; Austin, Texas; Corpus Christi and Robstown, Texas; Laredo, Texas; and Milwaukee, Wisconsin.

Holyoke and Worcester, Massachusetts

Holyoke and Worcester are source centers for high-quality heroin for surrounding cities and towns in western Massachusetts and Vermont. Numerous overdose deaths and incidents have been attributed to heroin obtained from these areas. In order to determine the purity and the geographic origin of the heroin available in these areas, a Geo-Probe was conducted there during August and September 2002. Five heroin purchases were made, and all five qualified samples determined to be SA heroin. They averaged 49.8 percent pure, and cost, on average, \$0.84 per milligram pure. DMP purchases in nearby Boston averaged 50.3 percent pure, and cost \$1.19 per milligram pure, perhaps an indication of a New York City-based source of supply. In New York City, SA heroin averaged 61.5 percent pure, and sold for \$0.36 per milligram pure in 2002.

Milwaukee, Wisconsin

Intelligence information in 2002 indicated that Milwaukee had a significant heroin presence around the inner city area, with purity levels

occasionally rising to the 60-90 percent range. In order to develop further intelligence regarding this market, a Geo-Probe was conducted in Milwaukee in May and June 2002. This Geo-Probe resulted in the purchase of five exhibits. Unfortunately, only two of them were qualified samples. Those two samples were both determined to be SA heroin at more than 70 percent pure. They cost, on average, \$0.33 per milligram pure. Despite the limited number of qualified samples, the results of this Geo-Probe are compelling in that the average purity of samples in Milwaukee was significantly higher than purity levels in nearby Chicago, which has long been identified as a source city for Milwaukee. In addition, heroin in Milwaukee costs less, on average, than heroin in Chicago. Further information regarding the comparison of prices and purities for SA heroin in Milwaukee, Chicago, and Detroit is detailed in Table 7.

Austin, Texas

In order to gather intelligence on the street-level heroin trade in this college town, a Geo-Probe was conducted in Austin during June 2002. Five heroin exhibits were purchased and all five were qualified samples of MEX origin. They averaged 20.5 percent pure. Two of the exhibits were just over 6 percent pure. The remaining four exhibits, however, averaged just over 30 percent pure, suggesting broad fluctuations in the market that could be dangerous for new users.

Corpus Christi and Robstown, Texas

In December 2002, a Geo-Probe was initiated in Corpus Christi-Robstown after a rash of heroin overdose deaths in that area. Intelligence information indicated that MEX brown powder was the heroin of choice in the Corpus Christi area, and purity levels were generally low. Information obtained from the Geo-Probe confirms this intelligence. Heroin prices averaged from \$20 for a “hit” to \$70 for a gram of MEX brown powder heroin. Four heroin exhibits were purchased as part of the program, and three of them were determined to be MEX heroin. Those three samples averaged 6.83 percent pure.

Laredo, Texas

In mid-August 2002, four individuals—three of them teenagers—died from heroin overdoses. The youngest victim, a 13-year-old girl, also tested positive for cocaine, opiates, and marijuana. All of the victims lived in the same area of Laredo. Two of the victims were known heroin users, and one still had the needle sticking in his arm. This spate of overdose deaths led to the initiation of a Geo-Probe in this area. Six heroin purchases were made between August and December 2002. Five of those purchases were determined to be MEX heroin, averaging 57.6 percent pure. Four of those exhibits were more than 60 percent pure. Interestingly, the only

Table 7

South America Heroin Average Prices and Purities

	Average Price	Average Purity
Milwaukee	\$0.33	71.5%
Chicago	0.43	20.4
Detroit	0.80	45.8

Warren-Youngstown, Ohio

In response to numerous overdose deaths in the Warren-Youngstown area, four heroin purchases were made in that area during May and June 2002, as part of the Geo-Probe program. All four purchases were qualified samples and were determined to be SA heroin, which averaged 48.1 percent pure and \$1.42 per milligram pure. Purity levels in Warren are consistent with those in Detroit, but prices are higher, indicating that heroin sources of supply may be based in Detroit.

exhibit for which a geographic origin could not be determined contained heroin at 8.3 percent pure and cocaine at 73.7 percent.

[Note: Taken together, the three Geo-Probes conducted in south Texas resulted in the purchase of 13 qualified exhibits, averaging 31.6 percent pure, and costing \$0.69 per milligram pure.]

Huntington Park, California

In response to a report of high-purity heroin being sold at the retail level in Huntington Park, a Geo-Probe was conducted there in November and December 2002. Five heroin purchases were made, and all five were determined to be MEX heroin. They averaged 25.8 percent pure and \$0.29 per milligram pure. Even though the average price and purity are consistent with price and purity levels for Los Angeles, one Geo-Probe purchase was determined to be 49.1 percent pure, confirming the intelligence that led to the probe.

Broward County, Florida

A significant increase in overdose deaths in Broward and Palm Beach Counties led to the initiation of a Geo-Probe in Broward County in September and October 2002. Five heroin exhibits were purchased as part of that program; however, only two of those exhibits were qualified samples. The qualified samples were determined to be SA heroin at 17.4 percent pure, costing \$0.76 per milligram pure. The remaining samples were determined to contain cocaine.

Eugene and Springfield, Oregon

In response to a report of street-level heroin prices dropping to \$30 per gram in this area, a Geo-Probe was conducted in Eugene and Springfield in June 2002. Five heroin exhibits were purchased, and all were determined to be

MEX heroin, averaging 10.8 percent pure and \$0.67 per milligram pure. Those numbers are similar to price and purity levels in Seattle. Unfortunately, three of the exhibits were purchased on the same date, in the same general area, and chemical analysis revealed them to be identical.

Appendix A: Definitions

Adulterants: Pharmacologically active substances, such as caffeine, mono-acetylmorphine, procaine, and quinine, which remain in, or are added to, the final heroin product at the completion of the heroin conversion process.

Composite Samples: A limited number of samples can be identified as being part of the same batch and/or as having been purchased from the same dealer(s), based on laboratory analyses and the date and location of the purchases. Samples of this type are combined to form a composite.

Diluents: Pharmacologically inactive substances, such as lactose, mannitol, starch, and sucrose, added to increase bulk.

Heroin Signature Analysis: A program developed by the DEA to identify the geographic source area of a heroin sample. Heroin Signature Analysis is based on an exhaustive chemical profile of authentic samples acquired from each of the four major heroin source areas: South America, Mexico, Southeast Asia, and Southwest Asia.

Heroin Signature Classification: The result of heroin signature analysis. Classifications currently defined include South American (SA), Mexican (MEX), Southeast Asian (SEA), and Southwest Asia (SWA) heroin. Samples meeting these classifications are referred to as qualified samples. When the results of a signature analysis are inconclusive, the sample may be listed as “unknown” or “insufficient weight.”

Insufficient Weight: A sample of heroin that is too small for signature analysis. Generally, an exhibit should weigh at least 1 gram net, including diluents and adulterants. This amount ensures that there are at least 45 milligrams of pure heroin available for signature analysis.

Net Weight: The total weight of the heroin exhibit, including diluents and adulterants, excluding its packaging.

Price Per Milligram Pure: The price of the sample divided by the pure weight expressed in milligrams.

Pure Weight: The weight of the pure heroin determined by multiplying the purity of a sample by its net weight.

Purity: The amount of heroin present compared to all other substances in the sample. Purity is expressed as a percent.

Qualified Sample: A heroin sample that is able to be analyzed and classified by the STRL for source.

Unknown: A sample of heroin analyzed by the STRL, but for which the result of the analysis does not match any of the standard classifications (See Heroin Signature Classification).

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Appendix B: 2000 Heroin Counts, Purities, Prices, and Origin by City

	Southeast Asian Heroin			Southwest Asian Heroin			South American Heroin			Mexican Heroin		
	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price
Atlanta				4	62.0%	\$0.44	20	52.0%	\$1.02			
Baltimore	2	13.1%	\$0.38	1	16.0	0.45	23	25.9	0.30			
Boston							31	60.9	1.28			
Chicago	1	16.9	1.16	5	20.2	0.32	23	23.8	0.48			
Dallas										24	14.7%	\$0.67
Denver										35	21.0	0.84
Detroit	1	52.2	0.41	6	41.4	0.46	23	44.8	0.67			
El Paso										9	47.5	0.36
Houston										30	15.9	1.22
Los Angeles							1	48.1	0.26	35	23.3	0.90
Miami				1	14.7	0.86	25	29.6	1.07			
New Orleans							23	28.7	2.53	1	10.2	0.00
New York City				3	49.9	0.43	41	66.8	0.35			
Newark				1	89.6	0.33	31	71.0	0.32			
Orlando							20	68.7	0.51			
Philadelphia							39	73.8	0.38			
Phoenix										27	41.3	0.37
San Diego										39	49.4	0.30
San Francisco										30	15.4	0.70
San Juan							37	54.0	0.30			
Seattle										27	13.1	1.03
St. Louis										28	15.4	2.74
Washington, DC	1	14.6	1.34	5	30.5	1.04	18	27.0	0.90	1	6.0	1.39
Total	5	22.0	0.73	26	39.2	0.55	355	51.3	0.72	286	24.9	0.93

Report Parameters: Only qualified samples are shown. January 1 to December 31, 2000.

Appendix C: 2001 Heroin Counts, Purities, Prices, and Origin by City

	Southeast Asian Heroin			Southwest Asian Heroin			South American Heroin			Mexican Heroin		
	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price
Atlanta				1	58.0%	\$1.72	27	51.0%	\$1.52			
Baltimore				6	18.3	0.23	22	28.7	0.25			
Boston							30	56.5	1.01			
Chicago	2	20.7%	\$0.45	7	20.8	0.41	16	19.5	0.71			
Dallas	5	17.0	0.60				1	21.3	0.36	37	12.2%	\$1.34
Denver										35	17.7	0.97
Detroit				3	59.6	0.23	12	52.5	0.68			
El Paso										16	42.5	0.44
Houston							1	86.8	0.24	38	9.0	1.55
Los Angeles										30	16.5	0.72
Miami							32	20.8	0.96			
New Orleans				1	45.4	0.37	28	39.3	2.32			
New York City							49	58.2	0.47	2	1.3	11.42
Newark							43	70.5	0.34	1	69.4	0.24
Orlando							38	50.8	0.72			
Philadelphia							37	73.8	0.39			
Phoenix										36	41.3	0.34
San Diego										40	45.4	0.21
San Francisco										36	10.1	1.40
San Juan							36	46.0	0.34			
Seattle										30	13.1	1.39
St. Louis										42	15.4	3.17
Washington, DC				11	21.0	0.46	14	35.4	0.81	1	24.2	0.52
Total	7	18.1	0.56	29	26.5	0.42	386	49.7	0.77	344	21.0	1.28

Report Parameters: Only qualified samples are shown. January 1 to December 31, 2001.

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Appendix D: 2002 Heroin Counts, Purities, Prices, and Origin by City

	Southeast Asian Heroin			Southwest Asian Heroin			South American Heroin			Mexican Heroin		
	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price
Atlanta	1	61.4%	\$0.96	4	38.0%	\$1.88	29	52.4%	\$1.71			
Baltimore				2	14.2	0.33	24	23.6	0.38			
Boston							27	50.3	1.19			
Chicago	4	16.9	1.16	4	19.8	0.39	19	20.4	0.43			
Dallas	4	18.0	0.46							29	17.2%	\$0.75
Denver										23	18.4	1.12
Detroit				4	41.7	0.62	12	45.8	0.80			
El Paso										7	40.3	0.27
Houston										39	28.2	0.64
Los Angeles										28	26.5	0.30
Miami							29	29.4	0.61			
New Orleans				1	40.0	1.14	22	30.4	1.65			
New York City				1	56.8	0.23	60	61.5	0.36			
Newark							27	71.4	0.39			
Orlando							29	46.1	0.63			
Philadelphia							24	66.3	0.42			
Phoenix										29	48.9	0.51
San Diego										30	47.9	0.24
San Francisco										22	12.1	0.99
San Juan							27	36.7	0.48			
Seattle										16	10.5	0.89
St. Louis										18	13.8	1.54
Washington, DC	1	22.7	0.46	6	22.2	0.47	12	20.8	0.79			
Total	10	23.9	0.61	22	29.8	0.75	341	46.0	0.72	241	27.3	0.70

Report Parameters: Only qualified samples are shown. January 1 to December 31, 2002.

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Appendix E: 2002 Heroin Counts, Purities, Prices, Origin, and City by Geographic Region

East	Southeast Asian Heroin			Southwest Asian Heroin			South American Heroin			Mexican Heroin		
	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price
Atlanta	1	61.4%	\$0.96	4	38.0%	\$1.88	29	52.4%	\$1.71			
Baltimore				2	14.2	0.33	24	23.6	0.38			
Boston							27	50.3	1.19			
Chicago	4	20.8	0.71	4	19.8	0.39	19	20.4	0.43			
Detroit				4	41.7	0.62	12	45.8	0.80			
Miami							29	29.4	0.61			
New Orleans				1	40.0	1.14	22	30.4	1.65			
New York City				1	56.8	0.23	60	61.5	0.36			
Newark							27	71.4	0.39			
Orlando							29	46.1	0.63			
Philadelphia							24	66.3	0.42			
San Juan							27	36.7	0.48			
Washington, DC	1	22.7	0.46	6	22.2	0.47	12	20.8	0.79			
West	Southeast Asian Heroin			Southwest Asian Heroin			South American Heroin			Mexican Heroin		
	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price	Number of Samples	Purity	Price
Dallas	4	18.0%	\$0.46							29	17.2%	\$0.75
Denver										23	18.4	1.12
El Paso										7	40.3	0.27
Houston										39	28.2	0.64
Los Angeles										28	26.5	0.30
Phoenix										29	48.9	0.51
San Diego										30	47.9	0.24
San Francisco										22	12.1	0.99
Seattle										16	10.5	0.89
St. Louis										18	13.8	1.54
Total	10	23.9	0.61	22	29.8	0.75	341	46.0	0.72	241	27.3	0.70

Report Parameters: Only qualified samples are shown. January 1 to December 31, 2002.

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