

DRUG ENFORCEMENT ADMINISTRATION 2001 DOMESTIC MONITOR PROGRAM



Heroin

Domestic Monitor Program

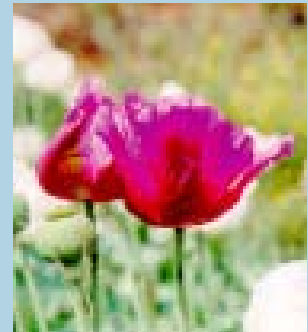




Drug Enforcement Administration

2001 DOMESTIC MONITOR PROGRAM

Drug Intelligence Report



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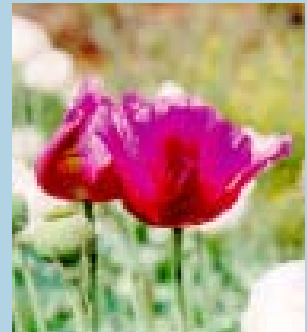
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Domestic Monitor Program



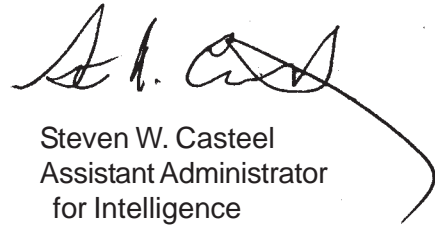
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EXECUTIVE SUMMARY

The Drug Enforcement Administration's (DEA) Domestic Monitor Program (DMP) provides data on the source, cost, and percent of purity 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). 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 heroin market east of the Mississippi River, while Mexican black tar and brown powder heroin clearly dominates the market west of the Mississippi. The DMP remains an important assessment and analytical tool for the DEA, the law enforcement community, and drug policy makers, and drug abuse researchers throughout the nation.



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Background

The Domestic Monitor Program (DMP), a retail-level heroin-purchase program, provides data on the purity, price, and origin of street-level heroin, available in major metropolitan areas of the United States, to federal, state, and local law enforcement, drug policy makers, and drug abuse researchers. Each quarter, the DEA Intelligence Division provides funding for the purchase of retail-level heroin samples in 23 metropolitan areas. Each heroin purchase subsequently undergoes in-depth chemical analyses at the DEA Special Testing and Research Laboratory (SFL1) 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, particular attention is paid to the DMP results for New York City because it remains the nation's largest heroin user market. In addition, much of the white powder heroin available in East Coast markets is obtained in New York City. Between 1979 and 1991, the number of DEA offices participating in the program fluctuated between 6 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 and marketing practices; availability and geographic source.

2001 DMP Results: A Look at the Numbers

DEA offices in each city in which 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 and analyzed by the SFL1. 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. Of the samples purchased, 743 were "qualified samples," meaning they met the standard for inclusion in this report: they tested positive for heroin; they weighed enough for the SFL1 to conduct a geographical source analysis; and the results of that analysis were conclusive. Among valid samples, 375 were classified as SA heroin; 329 were classified as Mexican (MEX) heroin; 32 were classified as Southwest

¹ For an explanation of signature analysis and other terms used in this report, see Appendix on page 13.

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Heroin Samples: Origin, Purities, and Prices

	1999	2000	2001
SEA samples	26	5	7
SEA percent pure	38.8	26.7	18.9
SEA price per milligram pure	\$0.50	\$0.83	\$0.52
SWA samples	9	26	32
SWA percent pure	36.8	34.6	37.4
SWA price per milligram pure	\$0.80	\$0.47	\$0.62
MEX samples	287	294	329
MEX percent pure	23.9	20.8	21.6
MEX price per milligram pure	\$0.90	\$1.60	\$1.27
SA samples	307	355	375
SA percent pure	42.3	48.0	48.6
SA price per milligram pure	\$0.80	\$0.76	\$0.83

Asian (SWA) heroin; and 7 were classified as SEA heroin.

SA heroin samples continued to have the highest average purity of 48.6 percent; SEA had the lowest purity of 18.9 percent. MEX heroin averaged 21.6 percent purity, and SWA heroin averaged 37.4 percent pure in 2001. At US\$0.52, SEA heroin samples had the lowest average price per milligram pure, and Mexican samples had the highest average price: US\$1.27 per milligram pure. SWA heroin averaged US\$0.62 per milligram pure. SA heroin prices averaged US\$0.83. The 2001 numbers for price per milligram pure and for

purity of the samples are compared to 1999 and 2000 in the table to the left.

The most dramatic changes were found with regard to SEA heroin. In 1999, seven different DMP cities purchased 26 exhibits of SEA heroin. In 2001, SEA heroin was purchased in only two cities and totaled only seven exhibits. The fact that it was purchased in only two cities, combined with the over 50 percent decline in purity between 1999 and 2001, may suggest decreased availability.

Another dramatic change occurred in the number of SWA heroin samples purchased as part of the program, which more than tripled between 1999 and 2001. For example, in 1999, only Detroit and Washington, DC, made multiple SWA heroin purchases. In 2000, five cities made multiple SWA

heroin purchases. In 2001, four cities made multiple SWA heroin purchases, with Washington, DC, alone making 13. The increase in the number of samples purchased and the stable purity levels indicate an increased availability of SWA heroin. This conclusion is further supported by the decline in SWA heroin prices since 1999.

Finally, the SA heroin figures are notable for their stability. The past 3 years have seen little change in price or purity at the street level, indicating stable supply and demand.

Metropolitan Area Trends: A Look at the Cities

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

Eastern Region

	Average Purity Per Sample	Average Price Per Milligram Pure
Atlanta	49.23%	\$1.36
Baltimore	26.54	0.32
Boston	56.05	1.00
Chicago	20.00	0.67
Detroit	51.27	0.74
Miami	20.98	1.10
New Orleans	39.69	2.24
New York City	56.55	0.98
Newark	68.47	0.33
Orlando	50.49	0.72
Philadelphia	73.26	0.40
San Juan	45.99	0.39
Washington, DC	28.37	0.66

to be unique to each metropolitan area, and any attempt to calculate national “averages” leads to numbers that do not accurately reflect the trends. For example, in Philadelphia, Pennsylvania, SA heroin, which averaged more than 70 percent pure, dominated the market in 2001. Purity levels in Philadelphia often exceeded 90 percent, and heroin sold for US\$0.40 per milligram pure. On the other hand, in Seattle, Washington, MEX heroin samples, which averaged only 8 percent pure, dominated the market in 2001. Prices averaged US\$1.95 per milligram pure.

Western Region

	Average Purity Per Sample	Average Price Per Milligram Pure
Dallas	13.11%	\$1.39
Denver	17.73	1.01
El Paso	41.80	0.45
Houston	11.34	1.53
Los Angeles	16.00	1.00
Phoenix	40.66	0.36
San Diego	45.36	0.26
San Francisco	10.09	1.87
Seattle	08.05	1.95
St. Louis	13.56	3.52

Generally speaking, the heroin market in the United States is geographically divided by the Mississippi River. East of the Mississippi River, particularly in the Northeast where the largest U.S. heroin user population is located, SA heroin dominated the market in 2001, as it has in past years. Mexican black tar and, to a lesser extent, Mexican brown powder heroin dominated the market west of the Mississippi River. Of the DMP samples that could be classified, 91 percent of those purchased in the East were SA heroin. West of the Mississippi River, 98 percent of the samples purchased were classified as MEX heroin. There were no SWA heroin samples purchased west of the Mississippi River.

Atypical DMP samples in 2001 included five purchases of SEA heroin and one purchase of SA heroin in Dallas; two MEX heroin purchases

in New York; and one SA heroin purchase in Houston. The SEA heroin purchases in Dallas were made in September and December 2001. These purchases averaged 17 percent pure and cost US\$0.59 per milligram pure. The SA heroin in Dallas was purchased in December 2001. Analysis determined it to have a purity level of 21.3 percent and a cost of US\$0.36 per milligram pure, making it one of the more potent and cheapest samples purchased in Dallas in 2001. The SA heroin sample in Houston was purchased in April 2001. It was analyzed to be 86.8 percent pure and cost US\$0.24 per milligram pure, making it the most potent sample purchased in Houston in 2001. (Note: MEX heroin dominated the Houston market in 2001, and averaged only 9.30 percent pure. As a result, the arrival of this nearly pure SA heroin may mark the beginning of a public health crisis in Houston.) In New York, the two MEX heroin purchases were made on the same date, at the same intersection, and were purchased from the same dealer. They averaged only 1.25 percent pure and cost US\$11.41 per milligram pure. (Note: SA heroin dominated the New York market in 2001, averaging 59 percent pure and selling for US\$0.52 per milligram pure. As a result, this weaker MEX heroin is not likely to corner the market.)

More telling than the changes in the overall averages were the individual changes in purity and average price in the participating cities in 2001.

Atlanta

Heroin purity decreased from 52.9 percent in 1999 to 48.7 percent in 2000, but rebounded slightly to 49.23 percent in 2001; the average price was US\$1.36 in 2001. One area in Atlanta, known as “The Bluff,” has historically been the hub of heroin distribution in the North Georgia region and much of the surrounding states. Traditionally, open air drug markets

have operated on street corners, and this practice continued in 2001. It is common for individuals to purchase heroin in the open, on the streets, at all hours of the day. Twenty-four of the 25 qualified samples purchased in Atlanta in 2001 were determined to be SA heroin. The remaining sample was SWA heroin.

Baltimore

Purity increased in 2001 to 26.54 percent essentially on par with 1998 levels. However, at US\$0.32, prices continued to be among the lowest in the nation. The availability of heroin continues to plague the Baltimore metropolitan area and its suburbs. In fact, both law enforcement and medical officials in Baltimore consider heroin the city’s most significant drug problem. Heroin can be purchased in the numerous open air markets of West and East Baltimore in either “raw” (undiluted) or “scrambled” (cut) form. Prices for raw heroin range from US\$20 to US\$40. Raw heroin was often sold in vials, much like crack cocaine. Cut heroin is available throughout Baltimore and is easily obtained by suburban users, particularly in East Baltimore where “drive through” sales exist on numerous street corners. In Baltimore, 27 qualified samples were purchased in 2001. Twenty-one were SA heroin and six were SWA heroin.

Boston

After a 10-point increase in purity from 1999 to 2000, purity levels in 2001 dropped 5 points to 56.05 percent. However, the New England area continues to be flooded with high-quality heroin, routinely exceeding the national purity average of 37 percent. In 2001, prices dropped to US\$1 per milligram pure. Twenty-nine qualified samples were purchased in Boston in 2001. All 29 were determined to be SA heroin.

Chicago

Heroin-purity levels have fallen by one third since 1997, from 31 percent to 20 percent in 2001. According to DMP data, prices have remained stable since 1997. Chicago and Dallas were the only DMP cities to purchase heroin from three different source areas in 2001. In Chicago, samples were determined to be SA (16), SWA (7), and SEA (2) heroin.

Dallas

Purity levels continued to decline in Dallas from their 1999 peak. However, they have not yet reached 1997 levels. Although prices nearly doubled from US\$0.76 in 2000 to US\$1.39 in 2001, they are still significantly below the price of US\$4.16 in 1997. The decline in purity is mostly attributable to the low purity of MEX heroin. While only one SA heroin sample was purchased in Dallas in 2001, it was nearly twice as pure as the MEX samples. In addition to the 1 SA heroin sample and 32 MEX heroin samples, Dallas also purchased 5 SEA heroin samples.

Denver

Purity levels in Denver peaked in 1998, at 39.5 percent. Since then, average purity has fallen by over half, to 17.73 percent in 2001. Prices in 2001 fell to US\$1.01, but remain significantly higher than 1997 prices of US\$0.62. Heroin remains widely available in Denver, where the majority of retail sales take place in the lower downtown area. Street-level weight is usually sold in the form of MEX black tar heroin. In fact, all qualifying purchases made in 2001 as part of the DMP were MEX heroin.

Detroit

Heroin-purity levels in Detroit remain high and stable, averaging 51.27 percent in 2001. Prices in Detroit, continuing an upward trend, rose again in 2001. A large number of the DMP samples

from Detroit were not qualified samples, so a more precise analysis of the data is not available.

El Paso

Purity levels in El Paso have fallen since the city was added to the DMP in 1999. As a result, purity levels in 2001 averaged 41.80 percent, down from a high of 56.7 percent in 1999. However, prices fell by nearly a third from 2000 to 2001, from US\$0.62 to US\$0.45. Of the 40 projected annual DMP purchases for El Paso in 2001, only 16 were actually made. While 15 of the 16 were qualified samples, the sample size was insufficient to make a precise analysis.

Houston

Purity levels in Houston fell to 11.2 percent, their lowest level in years and well below their 1998 peak of 34.8 percent. Prices are still well below 1998 levels—US\$1.53 in 2001 and US\$2.43 in 1998. On August 11 and 12, 2001, 14 individuals died as a result of drug overdoses in Houston and surrounding Harris County. Preliminary toxicology tests conducted by the Harris County Medical Examiner's Office revealed that all 14 overdose victims tested positive for the presence of cocaine and opiates in their bodies. No DMP purchases in Houston in 2001 contained a detectable amount of cocaine. However, the DMP purchases did include one SA heroin sample that was determined to be more than 86 percent pure.

Los Angeles

Heroin-purity levels have fallen by nearly a third from their peak of 27.7 percent in 1998 to 16.54 percent in 2001. Prices in 2001 were essentially stable. In 2001, all qualified samples purchased in Los Angeles were MEX heroin. Its widespread availability ensured that black tar heroin dominates in the Los Angeles area.

Miami

In 2001, heroin purity in Miami fell to 20.98 percent. However, a review of purity levels in Miami shows broad fluctuations in recent years, from a low of 7.8 percent to a high of 23.1 percent. As would be expected, broad fluctuations are also evident in heroin prices, ranging from a low of US\$1.10 in 2001 to a high of US\$3.21 in 2000. All of the qualified samples purchased in Miami in 2001 were determined to be SA heroin.

New Orleans

Purity levels rose dramatically in New Orleans in 2001, to 39.69 percent, representing a 50 percent increase over 2000 and nearly a 40 percent increase over 1997 levels. In that same time frame, prices have fluctuated from a low of US\$1.33 in 1999 to a high of US\$2.75 in 2000. In 2001, prices dropped slightly to US\$2.24. New Orleans purchased 30 qualified samples as part of the DMP in 2001. Twenty-nine were SA heroin and one was SWA heroin.

New York City

New York City traditionally has had high heroin-purity levels, and 2001 was no exception. Purity levels in 2001 were 56.55 percent, down from 63.3 percent in 2000; essentially mirroring 1999 levels. However, prices more than doubled from 1997 in 2001, rising to US\$0.98 after 4 years of relatively stable prices. SA heroin is the most common type of heroin encountered by the DMP in New York City. Of the 48 qualified samples purchased in 2001, 46 were SA heroin, and the remaining two were MEX heroin.

Newark

Like New York, Newark traditionally has high heroin-purity levels as reflected by the 2001 data. In 2001, purity levels dropped only

slightly from 72.3 percent to 68.47 percent. Purity levels in 2001 mirror 1999 levels, 68.47 percent and 68.6 percent respectively. Prices have remained stable the last 3 years, and averaged US\$0.33 per milligram pure in 2001. As in New York City, SA heroin dominates the market in Newark. All 40 samples purchased in Newark were determined to be SA heroin.

Orlando

After a steep increase between 1999 and 2000, purity levels in Orlando declined from 59.1 percent in 2000 to 50.49 percent in 2001. Prices rose from US\$0.66 per milligram pure in 2000 to US\$0.72 in 2001, the highest price since 1997. Heroin abuse remained high in the Orlando area in 2001, and continued to be the most serious drug threat to that area. Heroin-related overdose deaths remained high in Central Florida. Thirty-nine qualified samples were purchased in Orlando in 2001. All were determined to be SA heroin.

Philadelphia

As has been the case in recent years, heroin purity in Philadelphia leads the nation. In 2001, the purity level averaged 73.26 percent and was essentially stable compared to 2000 (74 percent). Prices were stable, as well, at US\$0.39 per milligram pure in 2000 and US\$0.40 in 2001. However, since 1997, heroin prices in Philadelphia have risen nearly 67 percent, from US\$0.24 to US\$0.40. SA heroin dominated the street-level market in 2001. Of the 40 purchases made in the DMP program, all 37 qualified samples were determined to be SA heroin.

Phoenix

In the past 5 years, heroin-purity levels in Phoenix have doubled, from 20.5 percent in 1997 to 40.66 percent in 2001. At the same time, prices have fallen dramatically, from US\$0.69 per milligram pure in 1997 to US\$0.36 in 2001. The Maricopa

County Medical Examiner's Office released a report, covering January through April 2001, that identified heroin as being present in 40 of the 170 cases (24 percent) of drug-related or drug-induced deaths in Maricopa County. Heroin was the only drug present in 16 of the cases. In addition, heroin was present in 37 drug-induced overdoses, and one drug-related homicide. Heroin was present with methamphetamine in four cases that resulted in death, and heroin was present with cocaine in four cases that resulted in death. All 37 qualified samples purchased in Phoenix in 2001 were MEX heroin.

San Diego

In 2001, heroin-purity levels in San Diego fell to 45.36 percent, to their lowest level since 1997. Prices in 2001 were similar to those in recent years: US\$0.26 per milligram pure. MEX heroin dominated the DMP purchases in San Diego in 2001. In fact, all 40 purchases were determined to be MEX heroin.

San Francisco

Heroin-purity levels in San Francisco continued their downward trend, from 25.9 percent in 1997 to 10.09 percent in 2001. In addition, the price per milligram pure nearly tripled from US\$0.69 in 2000 to US\$1.87 in 2001. This increase in price is even more dramatic when compared to 1998 prices and 1999 prices, US\$0.33 and US\$0.46 per milligram pure respectively. As a result, heroin prices in San Francisco bear watching for 2002. MEX heroin is the heroin of choice in San Francisco. It is readily accessible on the streets in select districts of the city, to include the Mission District of San Francisco. Some drug retailers sold speed balls—a mixture of heroin and cocaine in small amounts. In fact, two of the DMP purchases were speedballs.

San Juan

Heroin-purity levels in San Juan reached 45.99 percent, a 5-year low in 2001. Prices rose in 2001 to US\$0.39 per milligram pure. Even though that number represents an increase over 2000 prices, it is essentially similar to 1997 and 1998 prices. SA heroin dominated the DMP purchases in San Juan in 2001. Thirty-six qualified samples were purchased, with all 36 determined to be SA heroin.

Seattle

Heroin-purity levels in Seattle, in 2000 and 2001, were the lowest in the nation at 12.9 percent and 8.05 percent, respectively. Prices increased significantly between 2000 and 2001; from US\$1.14 per milligram pure to US\$1.95. This represents more than a 100-percent increase over 1997 prices. MEX heroin represented all 30 qualified samples purchased in Seattle in 2001. Despite Seattle's proximity to Vancouver, British Columbia, no SEA heroin was purchased as part of the DMP in the prior 3 years.

St. Louis

A comparison of DMP purchases for St. Louis from 1994 to 1998 shows a nearly three-fold increase in the overall purity of street-level heroin. However, since 1998, the purity of street-level heroin has been decreasing, with the average purity for 2001 being 13.56 percent. This decline in purity was accompanied by a dramatic increase in price per milligram pure, from US\$2.75 in 2000 to US\$3.52 in 2001. That price is the highest recorded in St. Louis since at least 1997. MEX heroin dominated the DMP purchases in St. Louis. All 35 qualified samples were determined to be MEX heroin.

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Washington, DC

Purity levels have risen slowly in Washington, DC, since 1997—from 21.1 percent to 28.37 percent in 2001. Prices fell in 2001 to US\$0.66 per milligram pure. Washington, DC, was unique among the DMP cities in that its 27

qualified samples were divided nearly equally between SA and SWA heroin. The 14 SA heroin samples were more pure and expensive than the 13 SWA heroin samples.

DMP Percent of Purity By City 1997-2001

	1997	1998	1999	2000	2001
Atlanta	54.6	57.8	52.9	48.7	49.23
Baltimore	22.6	27.0	34.3	23.6	26.54
Boston	66.4	61.4	51.7	61.9	56.05
Chicago	31.0	24.8	20.9	22.7	20.00
Dallas	07.0	11.8	15.2	14.8	13.11
Denver	31.3	39.5	16.5	19.7	17.73
Detroit	36.5	46.7	53.4	46.2	51.27
El Paso			56.7	45.2	41.80
Houston	16.3	34.8	14.5	16.7	11.20
Los Angeles	24.9	27.7	27.2	23.5	16.54
Miami	08.2	16.0	07.8	23.1	20.98
New Orleans	28.2	29.7	24.7	23.7	39.69
New York City	62.5	63.6	56.3	63.3	56.55
Newark	68.6	60.7	66.4	72.3	68.47
Orlando	59.8	62.4	46.6	59.1	50.49
Philadelphia	79.5	71.0	69.4	74.0	73.26
Phoenix	20.5	33.8	38.1	42.3	40.66
San Diego	44.7	57.6	54.3	49.0	45.36
San Francisco	25.9	26.0	19.9	16.1	10.09
San Juan	61.2	54.5	46.2	57.0	45.99
Seattle	19.8	21.0	21.3	12.9	08.05
St. Louis	19.7	24.0	23.0	15.4	13.56
Washington, DC	21.1	24.3	24.1	24.1	28.37

Geo Probes: A Look at New Cities

Beginning in 2001, DEA began a new initiative within the DMP called Geographical Probes, or Geo Probes for short. The purpose of Geo Probes is to gain additional intelligence information about existing and emerging heroin markets in areas outside traditional DMP areas. In order to accomplish that mission, DEA made funds available for five heroin sample purchases in each of the following cities: Bridgeport, Connecticut; Camden, New Jersey; and Kansas City, Missouri.

In Bridgeport, all five samples were determined to be SA heroin, averaging 44.82 percent pure and costing US\$0.85 per milligram pure. The heroin market in Bridgeport is similar to that in nearby Boston, where SA heroin also dominated the market in 2001. As expected, the samples from Bridgeport were less pure than the Boston samples, 44.82 percent as compared to 56.52 percent. Interestingly, the heroin in Bridgeport was cheaper per milligram pure than the heroin purchased in Boston: US\$0.85 and US\$1.10, respectively.

In Camden, all five samples were SA heroin. The samples averaged 80.64 percent pure, and cost US\$0.40 per milligram pure. The purity of those samples is higher than heroin purity in Philadelphia, Newark, or New York City. The price per milligram pure mirrored that for heroin in Philadelphia.

Heroin-purity levels in Kansas City averaged nearly 16 percent. All five samples were MEX heroin and cost US\$1.60 per milligram pure. The heroin purchased in Kansas City was slightly more pure than that purchased in St. Louis (13.39 percent). In addition, the heroin purchased in Kansas City was more than 50-percent cheaper than the heroin purchased in St. Louis, US\$1.60 versus US\$3.98.

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DMP Price Per Milligram Pure 1997-2001

	1997	1998	1999	2000	2001
Atlanta	\$1.09	\$0.83	\$0.82	\$1.70	\$1.36
Baltimore	0.74	0.52	0.35	0.39	0.32
Boston	0.87	1.21	1.08	1.37	1.00
Chicago	0.68	0.58	0.68	0.54	0.67
Dallas	4.16	1.06	0.99	0.76	1.39
Denver	0.62	0.76	1.40	1.72	1.01
Detroit	1.20	1.19	0.63	0.69	0.74
El Paso			0.32	0.62	0.45
Houston	2.20	2.43	1.16	1.04	1.53
Los Angeles	0.97	0.46	0.43	0.93	1.00
Miami	2.06	1.63	2.23	3.21	1.10
New Orleans	2.08	2.69	1.33	2.75	2.24
New York City	0.46	0.50	0.57	0.42	0.98
Newark	0.62	0.36	0.37	0.33	0.33
Orlando	1.51	0.50	0.61	0.66	0.72
Philadelphia	0.24	0.29	0.34	0.39	0.40
Phoenix	0.69	0.35	0.34	0.37	0.36
San Diego	0.30	0.25	0.21	0.29	0.26
San Francisco	0.63	0.33	0.46	0.69	1.87
San Juan	0.40	0.42	0.58	0.29	0.39
Seattle	0.81	1.30	1.02	1.14	1.95
St. Louis	2.85	2.05	2.34	2.75	3.52
Washington, DC	1.08	0.76	1.13	1.05	0.66

DMP Heroin Samples: Origin, Purities, and Prices 1990-2001

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
SEA samples	105	175	76	96	121	39	51	34	42	26	5	7
SEA percent pure	29.1	40.8	34.4	32.2	39.7	44.6	35.0	35.1	35.8	38.8	26.7	19.0
SEA price per milligram pure	\$1.34	\$1.30	\$1.20	\$1.07	\$0.90	N/A	N/A	N/A	\$0.69	\$0.50	\$0.83	\$0.52
SWA samples	31	75	11	37	10	4	9	12	13	9	26	32
SWA percent pure	13.1	43.6	55.8	47.2	35.9	35.3	30.4	25.3	32.1	36.8	34.6	37.4
SWA price per milligram pure	\$3.18	\$1.60	\$0.94	\$1.04	\$0.89	N/A	N/A	N/A	\$1.47	\$0.80	\$0.41	\$0.62
MEX samples	117	236	162	160	199	223	217	257	259	287	294	329
MEX percent pure	14.4	15.1	25.6	27.8	27.0	29.7	29.2	25.3	33.5	23.9	20.8	21.6
MEX price per milligram pure	\$2.60	\$2.68	\$2.04	\$1.39	\$1.31	N/A	N/A	N/A	\$0.68	\$0.90	\$1.61	\$1.27
SA samples	N/A	N/A	N/A	48	146	202	228	175	278	307	355	375
SA percent pure	N/A	N/A	N/A	59.3	59.0	56.2	50.3	53.7	52.6	42.3	48.1	46.6
SA price per milligram pure	N/A	N/A	N/A	\$0.63	\$0.55	N/A	N/A	N/A	\$0.56	\$0.80	\$0.76	\$0.83

Note: SA Heroin Signature Analysis developed in 1993

2001 Heroin Purity Levels: Highest and Lowest Individual Exhibits

Heroin Source	Lowest Percent Purity		Highest Percent Purity	
	Location	Percent Pure	Location	Percent Pure
Mexico*	Seattle	8.1	San Diego	45.4
South America**	Chicago	19.6	Philadelphia	73.6
Southeast Asia	Dallas	17.0	Chicago	20.7
Southwest Asia	Baltimore	18.0	Detroit	61.1

* Two Mexican heroin samples were purchased in New York City in 2001; they averaged 1.25 percent pure.

** One South American heroin sample was purchased in Houston in 2001; it was determined to be 86.8 percent pure.

Appendix: Definitions

Adulterants: Pharmacologically active substances, such as caffeine, monoacetylmorphine, 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 SFL1 for source.

Unknown: A sample of heroin analyzed by the SFL1, but for which the result of the analysis does not match any of the standard classifications (See Heroin Signature Classification).

Domestic Monitor Program



