

Drug Intelligence Brief



DRUG ENFORCEMENT ADMINISTRATION
INTELLIGENCE DIVISION

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HEROIN SIGNATURE PROGRAM: 2002

Background

Since 1977 DEA's Intelligence Division has used data from the Heroin Signature Program (HSP) as indicators of the geographic origins of heroin available at the wholesale level in the United States. Under this program, DEA's Special Testing and Research Laboratory conducts annual in-depth chemical analyses of between 600 and 900 heroin samples that come from seizures and purchases made in the United States. The analyses determine the samples' source areas, because the production process in each of the world's heroin-producing regions—South America (primarily Colombia), Mexico, Southeast Asia (primarily Burma), and Southwest Asia (primarily Afghanistan)—has a unique chemical “signature.” The source areas for approximately 90 percent of the samples analyzed can be identified each year.

Year-to-year fluctuations in the proportion of heroin originating from each source area may reflect shifting law enforcement priorities, changes in trafficking patterns, or exceptionally large seizures that may boost a source area's representation in the HSP. To achieve a comprehensive assessment of heroin importation and trafficking in the United States, HSP data must be merged with investigative intelligence, drug production estimates, and seizure statistics. Throughout this Drug Intelligence Brief, data is presented by calendar year, and the analytical results reported are for heroin seized or purchased in that particular year.

Signature analysis is the only scientifically based source of information currently available on the origins of heroin encountered in the U.S. drug market. HSP data are reported annually and provide the basis for percentages for both the number of seizures from each source area, as well as the net weight of heroin seized from each area. The program is continually validated by associating authentic source country samples with the results of chemical analysis.

2002 HSP DATA

For 2002, the overwhelming majority (80%) of the heroin analyzed by weight was from South America. South American (SA) heroin has accounted for the majority of the heroin analyzed under HSP for the last 8 years. (See Figure 4.)

Figure 1. PERCENTAGES BY WEIGHT AND SOURCE AREA

Percentage points are based on the net weight of all seizures and purchases from each geographic area sampled under the program.

	MEXICO	SOUTH AMERICA	SOUTHEAST ASIA	SOUTHWEST ASIA
2001	30	56	7	7
2002	9	80	1	10

- SA heroin, analyzed by weight, increased from 56 percentage points in 2001 to 80 in 2002, while Mexican heroin dropped from 30 percentage points to 9.
- The range of the total weight of SA heroin exhibits analyzed was similar in both years.
- The total weight of Mexican heroin samples analyzed was 60 kilograms in 2002; the preceding year it was 292 kilograms. (See Figure 2.)
- In 2001, 8 seizures of Mexican heroin, which ranged from 12 to 74 kilograms, were analyzed. Seizures of Mexican heroin at these weights are an anomaly from past years. Most often, single-seizure amounts range from 1 to 5 kilograms, the quantity normally brought across the border per smuggling venture. Only one double-digit seizure, 11 kilograms, was submitted for analysis in 2002.
- The number of samples of Mexican heroin analyzed, 101, was the same for both 2001 and 2002. The numbers of samples analyzed for the other source areas were similar in both years. (See Figure 3.)
- The percentage by weight of Southeast Asian (SEA) heroin analyzed decreased. The percentage fell from 7 to 1. In 2001, 65 kilograms of seized or purchased SEA heroin were tested, but one seizure at the Port of Elizabeth, New Jersey, totaled 58 kilograms. The following year, a total of only 7 kilograms was submitted for analysis. (See Figure 2.)

Figure 2. SEIZURES AND PURCHASES BY WEIGHT AND SOURCE AREA
in kilograms

	MEXICO	SOUTH AMERICA	SOUTHEAST ASIA	SOUTHWEST ASIA
2001	292	554	65	69
2002	60	559	7	70

Figure 3. NUMBER OF SAMPLES TESTED BY SOURCE AREA

	MEXICO*	SOUTH AMERICA	SOUTHEAST ASIA	SOUTHWEST ASIA
2001	101	591	18	91
2002	101	562	12	81

*The same number of samples was analyzed in 2001 and 2002.

Figure 4. HEROIN SIGNATURE PROGRAM DATA: 1977-2002

Geographic Source Area Distribution (in percent*)				
Based on Net Weight of Heroin Seized and Analyzed				
	MEXICO	SOUTHEAST ASIA	SOUTHWEST ASIA	SOUTH AMERICA
1977	89	9	2	**
1978	82	15	3	**
1979	48	13	39	**
1980	38	11	51	**
1981	36	10	54	**
1982	34	14	52	**
1983	33	19	48	**
1984	32	17	51	**
1985	39	14	47	**
1986	42	22	36	**
1987	42	25	33	**
1988	29	46	25	**
1989	27	56	17	**
1990	21	56	23	**
1991	21	58	21	**
1992	10	58	32	**
1993	8	68	9	15 ***
1994	5	57	6	32
1995	5	17	16	62
1996	20	8	20	52
1997	14	5	6	75
1998	17	14	4	65
1999	24	10	6	60
2000	17	8	16	59
2001	30	7	7	56
2002	9	1	10	80

*The percentages are based on samples for which a signature was identified. In 2002, approximately 90 percent of the samples were classified.

** = Not Applicable (The signature for heroin from South America was not developed until 1993.)

***The signature for heroin from South America was not developed until July 1993; therefore, this figure represents only partial-year data.

Bold numbers indicate the dominant source area.

This report was prepared by the Domestic Strategic Unit, Office of Strategic Intelligence. This report reflects information received prior to January 2004. Comments and requests for copies are welcome and may be faxed to the Intelligence Production Unit, Intelligence Division, DEA Headquarters, at (202) 307-8726.