

ARSENIC STATISTICS¹
U.S. GEOLOGICAL SURVEY

[All values are in metric tons (t) arsenic content unless otherwise noted]

Last modification: November 8, 2012

Year	Production	Shipments	Imports	Exports	Stocks	Apparent consumption	Unit value (\$/t)	Unit value (98\$/t)	World production
1900	0	NA	1,980	NA	NA	1,980	130	2,600	6,170
1901	206	NA	2,400	NA	NA	2,610	110	2,200	5,190
1902	929	NA	2,790	NA	NA	3,030	90	1,800	5,340
1903	420	NA	2,870	NA	NA	3,290	100	1,700	3,820
1904	25	NA	2,340	NA	NA	2,360	100	1,800	3,500
1905	518	NA	2,640	NA	NA	3,150	100	1,900	13,100
1906	506	NA	2,740	NA	NA	3,240	190	3,400	NA
1907	1,200	NA	3,550	NA	NA	4,750	140	2,400	NA
1908	NA	NA	3,530	NA	NA	3,920	130	2,300	NA
1909	834	NA	2,250	NA	NA	3,090	110	2,000	NA
1910	1,030	NA	2,980	NA	NA	1,950	80	1,400	6,810
1911	2,150	NA	2,500	NA	NA	3,470	90	1,500	12,800
1912	2,160	NA	3,790	NA	NA	4,290	100	1,700	27,600
1913	1,730	NA	2,770	22.5	NA	2,770	128	2,100	13,400
1914	3,210	NA	2,200	0.263	NA	4,300	109	1,780	11,500
1915	3,780	NA	1,930	3.67	NA	4,740	116	1,880	13,300
1916	4,110	NA	1,330	0.661	NA	4,850	176	2,640	13,300
1917	4,220	4,220	2,310	42.6	NA	5,030	408	5,190	16,400
1918	4,340	4,340	3,890	30.0	NA	5,610	350	3,770	23,200
1919	4,140	4,140	4,180	0	NA	7,150	291	2,750	19,000
1920	7,900	7,900	4,780	5.18	NA	10,500	411	3,350	27,900
1921	4,230	3,290	2,960	8.92	NA	4,430	222	2,020	16,200
1922	6,420	6,890	2,830	5.36	NA	7,630	313	3,040	23,500
1923	10,200	9,800	7,690	NA	NA	16,800	357	3,400	47,300
1924	13,900	9,930	6,280	NA	NA	16,000	291	2,780	47,200
1925	8,320	8,460	6,740	NA	NA	14,900	143	1,330	50,300
1926	4,640	8,110	5,520	NA	NA	13,400	93	858	41,100
1927	8,060	7,940	8,820	NA	NA	16,500	109	1,020	39,900
1928	9,730	8,080	7,890	458	NA	15,700	116	1,110	43,200
1929	11,400	9,990	9,280	948	NA	19,000	116	1,110	46,000
1930	11,700	12,000	7,610	1,100	NA	19,200	116	1,140	49,600
1931	11,800	9,460	5,540	1,750	NA	13,900	116	1,250	51,000
1932	8,720	8,570	4,890	2,120	NA	11,900	116	1,390	51,500
1933	7,310	8,100	7,500	2,020	NA	14,000	116	1,460	27,300
1934	8,990	10,700	9,900	2,660	NA	18,600	109	1,330	38,200
1935	9,780	8,700	10,610	1,610	NA	18,500	102	1,210	41,600
1936	10,600	10,700	12,380	2,120	NA	22,100	102	1,190	42,200
1937	11,500	12,100	13,590	2,810	NA	22,500	95	1,070	42,400
1938	11,500	9,040	9,950	2,820	NA	17,200	87	1,010	52,200
1939	15,300	15,400	10,610	3,880	3,780	23,300	87	1,020	42,800
1940	17,200	16,000	6,980	2,690	4,770	21,700	102	1,190	40,400
1941	22,300	23,900	7,320	4,230	3,100	29,800	116	1,290	46,000
1942	19,700	21,300	11,230	1,120	1,500	32,300	116	1,160	47,700
1943	21,400	22,300	11,100	3,260	781	32,000	116	1,100	50,200
1944	24,800	23,700	6,850	2,990	1,900	28,900	116	1,080	51,800
1945	16,700	17,000	9,660	2,570	1,580	26,200	116	1,060	42,100
1946	7,010	8,270	9,560	2,640	323	17,100	146	1,220	31,800
1947	12,900	12,500	9,620	2,310	713	21,400	175	1,280	42,400
1948	12,800	10,300	6,460	1,330	3,240	16,700	178	1,210	40,900
1949	8,790	6,990	3,260	989	5,030	10,200	160	1,100	26,500
1950	9,120	11,900	10,320	987	1,700	22,000	168	1,130	35,700

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1951	11,100	9,860	10,460	1,210	3,320	19,800	189	1,190	47,400
1952	10,800	6,350	3,190	1,180	7,740	9,430	175	1,070	37,100
1953	7,470	7,770	3,320	845	7,430	11,000	160	978	20,600
1954	9,040	7,910	3,430	541	8,560	11,200	160	971	26,100
1955	7,400	8,020	5,120	598	7,950	13,000	160	975	30,900
1956	8,380	13,000	4,530	643	3,320	17,400	160	960	33,700
1957	7,210	8,780	7,100	805	1,740	15,700	160	930	30,900
1958	7,900	7,510	6,640	678	2,140	14,000	160	904	27,500
1959	3,560	4,970	13,400	307	727	18,300	131	734	32,100
1960	9,400	NA	8,930	439	NA	12,800	131	722	39,400
1961	1,850	NA	13,500	322	NA	14,400	116	635	40,500
1962	2,060	NA	11,000	477	NA	14,200	116	629	34,100
1963	1,720	NA	10,200	199	NA	15,000	148	791	36,600
1964	5,290	NA	12,700	687	3,160	17,100	153	804	39,900
1965	8,450	NA	10,900	NA	1,030	16,900	166	859	38,600
1966	6,460	NA	13,100	NA	893	16,700	147	737	39,500
1967	3,430	NA	19,100	NA	687	18,300	166	810	44,600
1968	4,190	NA	17,700	NA	275	16,400	178	836	46,400
1969	7,070	NA	12,800	NA	1,580	14,100	189	841	37,700
1970	9,900	NA	13,400	NA	4,400	13,900	189	795	37,500
1971	5,150	NA	12,400	NA	8,170	13,500	189	762	37,800
1972	7,070	NA	10,050	NA	9,340	13,000	189	738	31,400
1973	6,390	NA	9,960	NA	10,000	22,000	189	695	35,200
1974	4,600	NA	10,150	NA	7,280	25,200	379	1,250	37,200
1975	5,080	NA	8,720	NA	1,580	15,400	382	1,160	30,700
1976	4,530	NA	3,370	W	1,990	9,700	382	1,090	26,100
1977	3,370	NA	5,090	W	2,060	12,000	382	1,030	23,200
1978	3,980	NA	7,910	232	206	13,400	677	1,690	23,300
1979	4,530	NA	8,950	734	68.7	15,600	706	1,590	22,400
1980	3,400	NA	9,000	1,150	NA	12,400	925	1,830	23,600
1981	4,050	NA	14,300	396	68.7	20,000	1,160	2,090	33,100
1982	8,000	NA	12,100	2,010	1,510	16,200	1,160	1,970	34,500
1983	7,300	NA	10,090	64.3	2,350	13,600	961	1,570	31,900
1984	6,800	NA	12,500	57.5	2,500	17,300	961	1,510	35,600
1985	2,200	NA	14,200	120	681	18,100	961	1,460	40,300
1986	0	NA	20,800	164	280	21,100	961	1,430	39,600
1987	0	NA	21,600	50	174	21,900	1,050	1,500	47,200
1988	0	NA	22,000	120	75.7	22,300	961	1,320	40,400
1989	0	NA	22,400	126	75.7	22,300	786	1,030	49,400
1990	0	NA	20,700	149	75.7	20,500	670	836	40,400
1991	0	NA	21,800	233	NA	21,600	728	871	34,800
1992	0	NA	24,000	94	NA	23,900	845	981	34,700
1993	0	NA	21,600	364	NA	21,300	757	854	31,900
1994	0	NA	21,600	79	NA	21,500	932	1,030	35,400
1995	0	NA	22,500	430	NA	22,300	961	1,030	35,600
1996	0	NA	21,400	36	NA	21,400	961	1,000	32,500
1997	0	NA	23,700	61	NA	23,700	903	917	31,800
1998	0	NA	30,200	177	NA	30,100	932	932	30,500
1999	0	NA	23,300	1,350	NA	22,000	845	826	31,600
2000	0	NA	24,500	41	NA	24,400	932	882	47,500
2001	0	NA	25,000	57	NA	24,900	815	751	45,000

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2002	0	NA	19,700	100	NA	19,600	961	871	47,200
2003	0	NA	21,700	173	NA	21,600	990	877	52,800
2004	0	NA	7,020	220	NA	6,800	932	804	43,800
2005	0	NA	9,150	3,270	NA	5,870	477	398	45,400
2006	0	NA	10,500	3,060	NA	7,450	462	373	46,100
2007	0	NA	7,770	2,490	NA	5,280	507	399	40,800
2008	0	NA	5,180	1,050	NA	4,130	553	419	39,300
2009	0	NA	5,100	354	NA	4,740	582	442	36,400
2010	0	NA	5,300	481	NA	4,820	582	435	35,400
2011	0	NA	5,630	705	NA	4,910	641	465	34,700

NA Not available. W Withheld to avoid disclosing company proprietary data.

¹Compiled by D.A. Buckingham (retired), W.E. Brooks (retired), and D.L.Edelstein.

Data are calculated, estimated, or reported. See notes for more information.

Arsenic Worksheet Notes

Data Sources

Sources of data for the arsenic worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB) and its predecessor, Mineral Resources of the United States (MR); Mineral Commodity Summaries (MCS) and its predecessor, Commodity Data Summaries (CDS); and Mineral Facts and Problems (MFP). Years of publication and corresponding years of data coverage are listed in the References section below. In addition, some data came from U.S. Bureau of Mines Information Circular 9382 (Loebenstein, 1994).

Production

Domestic production is defined as crude and refined arsenic reported in terms of arsenic content. Production data were not available for 1900 and 1908. Domestic arsenic production ceased after 1985. Data for 1960, 1970, and 1980 came from Loebenstein (1994). Data for 1961–69 and 1971–79 are from the MFP. Other data are from the MR and the MYB.

Shipments

Domestic producer shipments are reported in terms of arsenic content. Data on shipments are not available prior to 1917 and after 1959. Data are from the MR and the MYB.

Imports

Data include arsenic metal, and the arsenic content of arsenic compounds such as trioxide (white arsenic), sulfides (mostly ore); calcium, lead, and sodium arsenic imports to the United States, excluding these compounds, arsenic green, arsenic purple, and sheep dip. Contained arsenic is calculated using the percentage of arsenic in each compound, when compounds are combined the average arsenic grade is used. Data are totaled on an annual basis. Data are from the MR and the MYB.

Exports

Data include the arsenic content of arsenic metal and ore, arsenic trioxide (white arsenic), calcium, and lead arsenic compounds exported from the United States. Contained arsenic is calculated using the percentage of arsenic in each compound, when compounds are combined the average arsenic grade is used. Data are totaled on an annual basis. Export data are not available prior to 1913, for 1919, 1923–27 and 1965–75. Data are withheld because they are proprietary for 1976–77. Data for 1978–86 and 1989–95 are from the MCS. All other data are from the MR and the MYB.

Stocks

Data are reported in terms of the arsenic content of producer stocks. Stock data are not available prior to 1939 and for 1960–63, 1980, and 1991 to the most recent year. Data for 1964–81 are from the MFP. All other data are from the MR and the MYB.

Apparent Consumption

Apparent consumption data for the arsenic spreadsheet are a combination of published and calculated consumption data. Apparent consumption is estimated for 1900, 1907, and 1909 using the following equation:

$$\text{APPARENT CONSUMPTION} = \text{PRODUCTION} + \text{IMPORTS} - \text{EXPORTS} \pm \text{STOCK CHANGES.}$$

When arsenic data for a particular category other than apparent consumption were unavailable, data were presumed to be zero in making the above calculation.

Apparent consumption is estimated by interpolation for 1908. Published apparent supply data are used for 1902 to the most recent year. Published apparent consumption data are used for 1910–59 and 1984–95. Published apparent demand data from the MFP are used for 1960–83. Published apparent consumption data from the MYB are used for 1996 to the most recent year.

Unit Value (\$/t)

Unit value is defined as the value of 1 metric ton (t) apparent consumption of arsenic content. Excluding 1908, data are estimated using the market price in U.S. dollars per ton of arsenic trioxide. Data for 1908 is the average of the 1908 market price range for arsenic trioxide. The market price of arsenic trioxide was converted to a value for the contained arsenic by dividing the arsenic trioxide price by the percentage of arsenic contained in arsenic trioxide (75.7 percent). Data for 1900–96 are from the MR and the MYB. Data for 1997 to the most recent year are from the MCS.

Unit Value (98\$/t)

The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

World Production

Data are the world production of arsenic trioxide in terms of arsenic content. Data are not available for 1906–09. Data are from the MR and the MYB.

References

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