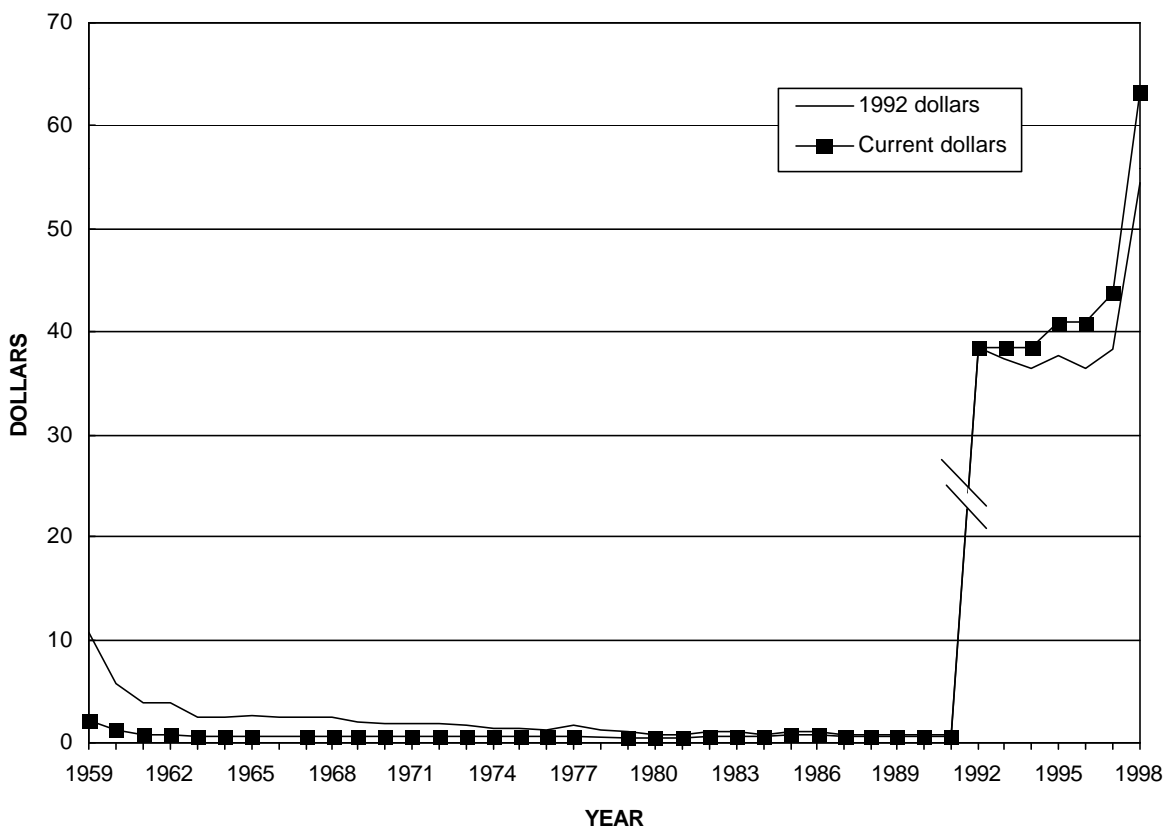


### Annual Average Primary Cesium Price (Dollars per gram)



Cesium, the most electropositive and least abundant of the five naturally occurring alkali metals, was discovered spectroscopically in 1860 (Perel'man, 1965, p. 1). The first cesium metal was produced in 1881. Because cesium is not mined domestically, the United States is completely dependent on imports. Historically, the most important use for cesium has been in research and development, primarily in chemical and electrical applications.

Owing to the small size of the industry, quoted cesium prices are those of individual companies. The cesium price varies with the purity of the material and inversely with the quantity purchased. Cesium metal has been marketed in purities ranging from 99% to 99.98%.

The annual prices presented in the graph and table may not be comparable from year to year owing to differences in purities, quantity of material purchased, and/or the source

of the price. For example, prior to 1960, the prices published in the U.S. Bureau of Mines Minerals Yearbooks were for purchases of less than 1 pound of cesium metal. From 1960 through 1991, the cesium metal prices published in the Yearbooks were for purchases of at least 1 pound of material and are significantly lower than the pre-1960 prices owing to discounts for the larger quantity purchased. The prices for 1992 through 1998 represent the price charged for a 1-gram ampoule of 99.98%-pure cesium metal and are an order of magnitude higher than the 1960 to 1991 prices.

#### Reference Cited

Perel'man, F.M., 1965, Rubidium and caesium: New York, The Macmillan Co., 144 p.

**Annual Average Primary Cesium Price**  
(Dollars per gram)

Year	Price	Year	Price	Year	Price	Year	Price
1959	2.23	1969	0.52	1979	0.50	1989	0.69
1960	1.19	1970	0.52	1980	0.50	1990	0.69
1961	0.83	1971	0.52	1981	0.50	1991	0.69
1962	0.83	1972	0.52	1982	0.66	1992	38.50
1963	0.52	1973	0.52	1983	0.66	1993	38.50
1964	0.52	1974	0.52	1984	0.66	1994	38.50
1965	0.58	1975	0.52	1985	0.72	1995	40.80
1966	NA	1976	0.52	1986	0.72	1996	40.80
1967	0.58	1977	0.66	1987	0.66	1997	43.70
1968	0.58	1978	NA	1988	0.66	1998	63.30

NA Not available

Note:

The data in the table above were compiled from information in various U.S. Bureau of Mines Minerals Yearbooks, U.S. Bureau of Mines Mineral Commodity Summaries, and U.S. Geological Survey Mineral Commodity Summaries. It is believed that the data in the previously mentioned publications were obtained from the sources listed below.

1959, Average of the prices attributed to American Potash & Chemical Corp. & Penn Rare Metals Co.

1960, 99+%-pure cesium, 10-pound lots.

1961-62, Penn Rare Metals Division, Kawecki Chemical Co., 99.9%-pure cesium, 1- to 9-pound lots.

1963-64, Average of the range of prices for 99+%-pure cesium in American Metal Market.

1965, Average of the range of prices for 99.6%-pure cesium, 1- to 9-pound lots attributed to the Penn Rare Metals Division of Kawecki Chemical Co.

1967-68, Average of the range of prices for 99.5%-pure cesium, 1- to 9-pound lots attributed to the Penn Rare Metals Division of Kawecki Chemical Co.

1969, Average of the range of prices for 99+%-pure cesium.

1970-77, Average of the range of prices for 99+%-pure cesium in American Metal Market.

1979-1981, American Metal Market yearend price for 99+%-pure cesium.

1982-86, KBI Division, Cabot Corp., average of the yearend price for technical- and high-purity-grade cesium.

1987-88, KBI Division, Cabot Corp., average of the yearend price for technical- and high-purity-grade cesium in lots of less than 50 pounds.

1989-91, KBI Division, Cabot Corp.

1992-98, Alfa Aesar and other chemical catalogs. Prices for purchases of 99.98%-pure cesium in 1-gram ampoules.