



BIANCA PETERS

# POLONIUM

Element Symbol: **Po**

Atomic Number: **84**

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# POLONIUM

**Element symbol: Po**

**Atomic number: 84**

A naturally occurring element, Polonium was discovered by the Polish scientist Marie Curie in 1898 and named after her homeland.

The most common isotope of polonium is the alpha emitting Po-210 which has a half life of 138 days and is a decay product of uranium.

Polonium is highly toxic when inhaled or ingested, 250,000 times more so than hydrogen cyanide. In fact, for a person of 80kg mass, 0.000001g of Po-210 will cause death. In 2006, former Soviet KGB agent Alexander Litvinenko died an agonising death which was later attributed to poisoning by polonium. Ironically, Marie Curie's daughter died from leukaemia in 1956; it is suspected that the leukaemia was the result of an accidental high exposure to polonium.

Polonium can be used as a trigger for nuclear weapons and as a static eliminating device. Ironically, significant levels of polonium are found in cigarettes; it appears that tobacco plants selectively absorb polonium. Studies suggest that the radiation exposure from "pack and a half/day" smokers is equivalent to 300 chest x-rays per year!

At Australia's largest uranium mine, uranium co-products of copper, gold and silver are routinely analysed to ensure that polonium levels are low.

*Provided by the element sponsor Rose Secen-Hondros*

## ARTISTS DESCRIPTION

Polonium is a chemical element with the symbol Po and atomic number 84, discovered in 1898 by Marie Skłodowska-Curie and Pierre Curie. A rare and highly radioactive element, polonium is chemically similar to bismuth and tellurium, and it occurs in uranium ores. Polonium has been studied for possible use in heating spacecraft. As it is unstable, all isotopes of polonium are radioactive. There is disagreement as to whether polonium is a post-transition metal or metalloid.

(In Wikipedia, The Free Encyclopedia. Retrieved 01:25, July 18, 2011, from <http://en.wikipedia.org/w/index.php?title=Polonium&oldid=439150958>)

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