

# Selenium (Se)



**Selenium** belongs to the group of non-metallic elements like Sulphur. The amount of selenium in minerals in nature is relatively scarce and most of this element is extracted as a by-product of copper refining. Selenium burns spontaneously in the air with a blue flame creating selenium dioxide.

**Se**  
Selenium

[Ar] 3d<sup>10</sup> 4s<sup>2</sup> 4p<sup>4</sup>

Atomic number protons/electrons	Neutrons (most common isotope)	Atomic weight (amu)	Atomic radius (pm)
<b>34</b>	<b>46</b>	<b>78.97</b>	<b>120</b>

## Functions/Health effect:

Selenium is an essential trace element. Small amounts play crucial roles in the human body. Amongst many others, it is responsible for healthy thyroid function, it forms so-called selenoproteins and several enzymes which provide antioxidant properties and help protect our DNA.

## Sources:

Brazil (para) nuts are by far the best source of selenium. In fact, a single nut may contain higher daily dose of this element than is required. Other noteworthy sources of this element are fish and shellfish, beef, turkey, eggs, and various legumes.

Although selenium deficiency is rare in developed countries, it may still occur, especially in areas with lower concentrations of selenium in the soil. On the other hand, consuming foods high in selenium may also be dangerous, with symptoms varying from hair loss, skin rash, fatigue to metallic taste in the mouth.

The recommended daily dose of selenium for a typical adult male is 55 micrograms per day, which can be found in three large eggs. An average Brazil nut will provide you with 96 micrograms of this element, almost twice the daily dose.

## Did you know that?

Some plants require high levels of selenium to survive. Spotting these plants growing in nature is therefore a good indicator of high selenium content in the soil.

In 1870's it was discovered that selenium chemically reacts to light. Thanks to this property it is extensively used in photocells and light sensors.

Food  
division

