

Selenium (Se)

What is Selenium?

Selenium is a naturally occurring mineral element that is distributed widely in nature in most rocks and soils. In its pure form, it exists as metallic gray to black hexagonal crystals, but in nature it is usually combined with sulfide or with silver, copper, lead, and nickel minerals.

Does Selenium have any additional names?

No.

What are the known health effects?

Selenium has both beneficial and harmful effects. Low doses of Selenium are needed to maintain good health. However, exposure to high levels can cause adverse health effects. Short-term oral exposure to high concentrations of Selenium may cause nausea, vomiting, and diarrhea. Chronic oral exposure to high concentrations of Selenium compounds can cause a disease called selenosis, characterized by hair loss, nail brittleness, and neurological abnormalities.

How does exposure occur?

The general population is exposed to very low levels of Selenium in air, food, and water. The majority of the daily intake comes from food.

Is this contaminant regulated?

Yes, and water supplied to customers of Mount Laurel MUA is in compliance with USEPA and NJDEP requirements. The maximum concentration of Selenium permitted in drinking water is 50 ppb; water supplied to MLTMUA customers has not had a detection of Selenium.

How can I reduce exposure?

Selenium can be removed from drinking water using reverse osmosis and distillation.

Additional information regarding selenium, including the information referenced, can be found at:

<https://www.atsdr.cdc.gov/toxfaqs/tfacts92.pdf>

<https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/chemical-hazards-in-drinking-water/selenium>