

Arsenic (As)

What is Arsenic?

Arsenic is a naturally occurring element widely distributed in the earth's crust as well as throughout the environment in the air, water, and land. In the environment, arsenic is combined with oxygen, chlorine, and sulfur to form inorganic arsenic compounds. Arsenic is naturally present at high levels in the groundwater of a number of countries, including the United States. Arsenic in animals and plants combines with carbon and hydrogen to form organic arsenic compounds.

Does Arsenic have any additional names?

No, but there are two main forms – inorganic arsenic and organic arsenic.

What are the known health effects?

Toxicity of arsenic to humans is well known, and ingestion of as little as 100 mg can result in severe poisoning. Amounts in water are normally much lower, but low concentrations still can lead to chronic symptoms. It may take several years for arsenic poisoning to become apparent. Ingestion of inorganic arsenic leads to a number of health effects as follows:

Cancerous effects: skin, bladder, lung, kidney, nasal passages, liver, and prostate cancer

Non-cancerous effects: cardiovascular, pulmonary, immunological, neurological, and endocrine disruption effects.

How does exposure occur?

People are exposed to elevated levels of inorganic arsenic through drinking contaminated water, using contaminated water in food preparation and irrigation of food crops, industrial processes, eating contaminated food, and smoking tobacco.

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 Arsenic permitted in drinking water is 5 ppb; water supplied by the MLTMUA system has a detected maximum of 1 ppb.

How can I reduce exposure?

Arsenic in drinking water can be removed at point of use by reverse osmosis and distillation.

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

https://www.wqa.org/Portals/0/Technical/Technical%20Fact%20Sheets/2014_Arsenic.pdf

<https://www.atsdr.cdc.gov/toxprofiles/tp2.pdf>