

Arsenic

Arsenic occurs naturally in rocks and soil, water, air, and plants and animals. According to the USEPA, it can be further released into the environment through natural activities such as volcanic action, erosion of rocks and forest fires, or through human actions. High arsenic levels can also come from certain fertilizers and animal feeding operations. Industry practices such as copper smelting, mining and coal burning also contribute to arsenic in our environment.

Higher levels of arsenic tend to be found more in ground water sources than in surface water sources (i.e., lakes and rivers) of drinking water. Arsenic is odorless and tasteless.

Non-cancer effects can include thickening and discoloration of the skin, stomach pain, nausea, vomiting; diarrhea; numbness in hands and feet; partial paralysis; and blindness. Arsenic has been linked to cancer of the bladder, lungs, skin, kidney, nasal passages, liver, and prostate.

EPA has set the arsenic standard for drinking water at .010 parts per million (10 parts per billion) to protect consumers served by public water systems from the effects of long-term, chronic exposure to arsenic.

It is found in two forms or species: Arsenic III & Arsenic V.

For drinking water high in arsenic, distillers can provide a reliable and consistent method to remove both of these species.

Reverse osmosis is also used, but works better when the water has been pre-chlorinated or ozonated, so that any Arsenic III in water has been converted to Arsenic V before the reverse osmosis system.

We also offer point-of-use arsenic specific filter systems that can easily installed under the kitchen sink for point-of-use drinking water. These systems use the high capacity iron oxide based media. Filters remove both Arsenic III and Arsenic V.

For whole house treatment, or for small communities, we offer custom systems for specific applications. Typically these systems employ a special metal oxide media designed for arsenic removal and do not require regeneration. At the end of the filter run, the media is safe for disposal at a designated landfill, as the arsenic is locked up in the filter media. Pretreatment and total system design is important.