

● ARSENIC

EZ Series: Continuous Monitoring of Arsenic

**Key Applications: Production of drinking water,
beverages, bottled water, food**

Sources for Arsenic contamination in our water supplies come from natural deposits in the ground and from industrial and agricultural production. Since Arsenic is highly toxic and chronic low dose exposure has significant longterm health effects, Arsenic needs to be removed during water treatment. Monitoring the success of the removal process is essential to ensure consumer safety and regulatory compliance.

Features EZ6000 Series Analysers

- Continuously monitor Total Arsenic and Dissolved Arsenic (As^{3+} and As^{5+})
- Accurate at low levels; detection limit of 1 $\mu g/L$
- Multiple stream analysis (1-6 streams)
- Analogue and digital communication options

**Explore the full range of parameters and technologies.
Call your Hach representative today, or visit
hach.com/ez-series**



[Watch the Video](#)

[Get Product Info](#)

[More Resources](#)

The Why, Where and How of Arsenic Monitoring

About

Arsenic occurs naturally in the environment, often as sulfides. The main resources of exploitable arsenic ores can be found in France, Sweden, Russia, Chile and Mexico. Usually, however, arsenic ore is extracted as a byproduct when mining for copper, lead or cobalt. Sources for Arsenic contamination in our water supplies come from natural deposits in the ground and from industrial and agricultural production. Arsenic is used in pesticides, fungicides, rat poison, fertilizers and even some medication. The semiconductor industry utilizes Arsenic as an alloy component. Additionally, the burning of coal results in Arsenic emissions and contaminated ashes.

Regulatory

Chronic low dose exposure to Arsenic leads to low blood perfusion, anemia and malignant tumors. According to the WHO Arsenic is harmful to developing fetuses and children, affecting their cognitive development, memory and intelligence in a negative way.

The EU Drinking Water Directive limits Arsenic in drinking water to 10 µg/L, the same limit applies to groundwater.

The US Environmental Protection Agency (EPA) sets Arsenic levels in drinking water at 10 µg/L. The same limit applies to bottled water, regulated by the FDA. Some states, however, have set stricter levels for their drinking water (5 µg/L).

Arsenic in the Beverage Industry and Drinking Water Production

While it can also be found in food like rice, contaminated drinking water and beverages are the most common way for humans to ingest Arsenic. There are several process options to remove Arsenic from contaminated water sources: adsorption, coagulation/flocculation, ion exchange, oxidation and membrane technologies. The method of choice is influenced by the individual water's pH level, and the concentration of trivalent As(III) and quinquevalent As(V). Monitoring the success of the treatment is essential to consumer safety and compliance.

Arsenic Monitoring Solutions

EZ6000 Series Arsenic Analysers use voltammetry technology and are available in several models:

EZ6000	Arsenic As(III), dissolved
EZ6001	Arsenic As(III+V), total dissolved
EZ6200	Arsenic, total

Standard measuring range: 1 - 20 µg/L

Options

- Monitoring of up to 6 sample streams per analyser, reducing cost per sampling point
- Analogue and/or digital outputs for communication
- Self-cleaning sample preconditioning panel