

Benzo(A)Pyrene (C₂₀H₁₂)

What is Benzo(A)Pyrene?

Benzo(a)pyrene is part of a group of chemicals called Polycyclic Aromatic Hydrocarbons (PAH). Benzo(a)pyrene is found in nature from the eruption of volcanoes and forest fires. Yet this chemical compound is also man-made. Benzo(a)pyrene can be found in surface water, tap water, rainwater, groundwater, wastewater and sewage sludge. Man-made releases of benzo(a)pyrene are to the air, where sunlight turns the chemical into a dry form that falls to the ground and breaks down in the soil. This chemical results from burning plants, wood, coal, and operating cars, trucks and other vehicles. The major indoor sources of benzo(a)pyrene in the air are wood-burning fireplaces and stoves, and tobacco smoking. There is no known industry production or use of benzo(a)pyrene.

Does Benzo(A)Pyrene have any additional names?

No

What are the known health effects?

Some people who drink water containing benzo(a)pyrene well in excess of the maximum contaminant level (MCL) for many years may experience reproductive difficulties and may have an increased risk of cancer.

How does exposure occur?

Breathing air containing benzo(a)pyrene in the workplace. This can occur if you work in coking, coal-tar and asphalt production plants, or in smokehouses or where local trash is burned. You can also breathe benzo(a)pyrene from cigarette smoke, wood smoke, vehicle exhaust, asphalt roads or smoke from burning farm plants. Contact with benzo(a)pyrene in the air, water, or soil near a waste site, or another polluted site. Eating grilled or charred meats. You can also be exposed through contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods. Drinking contaminated water or cow's milk. Nursing infants may be exposed through breast milk, especially if the mother lives near a waste site containing benzo(a)pyrene.

Is this contaminant regulated?

Yes, and water supplied to Mount Laurel MUA customers is in compliance with USEPA and NJDEP requirements. The maximum concentration of Benzo(A)Pyrene permitted in drinking water is .2 ppb; water supplied by the MLTMUA system has not reported any detections of Benzo(A)Pyrene.

How can I reduce exposure?

Benzo(A)Pyrene in drinking water can be removed at point of use by granular activated carbon.

Additional information regarding Benzo(A)Pyrene, including the information referenced, can be found at:

<https://www.atsdr.cdc.gov/toxfaqs/tfacts69.pdf>

<https://ohiowatersheds.osu.edu/node/1550>

<https://www.health.state.mn.us/communities/environment/risk/docs/guidance/gw/bapinfosheet.pdf>