

A simplified solution for analyzing anions in drinking water

Monitoring of various water sources, such as surface water, groundwater and drinking water, for anions is critical to protecting public health and ensuring a safe and clean environment.

Doing so right at the source water or the drinking water facility is very beneficial because results will be obtained much faster and treatment processes can be adjusted and modified faster.

Sources of anions in drinking water



- Multiple ions separated, identified and quantified
- Applicable to a wide variety of ions and charged molecules
- Many methods use direct injection with no manual preparation
- Very sensitive ppm to ppb levels; even lower depending on detection methods
- Determination of selected ions at percent levels
- Regulatory limits and MCLs are typically lower

Discrete Industrial Analysis (DIA)/ Flow Injection Analysis (FIA)/ Segmented Flow Analysis (SFA)

- Limited by number of channels

- · Most common and widely accepted method for measuring anions in drinking water

Discrete analyzerscomplimentary method

- Suitable for multiparameter analysis
- Simultaneous pH and conductivity measurement
- High throughput with ease of use
- Harsh carcinogenic chemicals like cadmium coil
- Labor intensive and can require expert users

Ion-selective electrodes

- Prone to interferences
- Limited shelf life
- Multiple methods required. Periodic calibration and maintenance

Anions are monitored to prevent adverse health and

environmental impacts



NO,

- High concentration can cause methemoglobinemia
- Increased heart rate
- Low blood pressure
- Anemia
- Headaches and stomach issues
- Greatest risk to infants

Suspected carcinogen

High amounts increase the risk of forming disinfection byproducts which can be carcinogens





CI-

High amounts produce a bad taste and can corrode metals, like pipes

NO₃ Promotes algal growth in rivers and lakes

High amounts produce a bad taste and odor as well as corrode copper pipes

P0₄³⁻

S042-

High amounts can promote algal growth resulting in algae blooms which produce harmful toxins



Regulatory methods

- United States Environmental Protection Agency (US EPA) methods 300 and 300.1
- European Union (EU)



Drinking Water Directive 98/83/EC



Find out more at thermofisher.com/inuvion

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