

Contaminants in the Water Supply

The Challenge:

Map of All Unregulated Contaminant Monitoring (UCMR) Systems with Detections of Hexavalent Chromium:



Source: Eurofin Eaton Analytical.

Our Industry's Solutions:

Meeting Maximum Contaminant Levels

This allowable concentration of a health contaminant is determined by the treatment and cost feasibility. The Maximum Contaminant Level Goal (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health, however MCLGs are non-enforceable public health goals. The water treatment industry provides solutions for homes to meet these goals.

Treating Aesthetic and Health Contaminants.

Point-of-Use and Point-of-Entry (POU/POE) - whole house or at the tap water treatment - technologies can be used to treat aesthetic contaminants, such as iron, hardness minerals, hydrogen sulfide that might cause staining, poor taste and odor, or health contaminants, such as chromium that can potentially harm the resident.

Product Certification.

The American National Standards Institute (ANSI) accredits certification bodies (ex. WQA Gold Seal and WQA Sustainability Programs) to test and certify products to the material safety requirement and contaminant reduction claim(s) as specified by the standard. Products that display the certification body's seal provides assurance that they have been rigorously tested and meet the requirements of the standard, program policies, and plant inspection policies. Visit WQA.org for a full list of WQA certified products.

Professional Certification.

Professional certification allows consumers to reach professionals that have an expertise in water chemistry and POU/POE - whole house or at the tap water treatment - water quality improvement. Visit WQA.org to find a water treatment provider and certified professionals in your area.

Contaminants in the Water Supply



Point-of-Use & Point-of-Entry Technologies Provide Feasible Solutions

Pollutants can appear in the water supply by natural and man-made occurrences, such as chromium. To monitor these pollutants, the EPA sets allowable concentrations of health contaminants. The procedure for receiving a Maximum Contaminant Level (MCL) is broken into tiers and many contaminants are still moving through the process. Unregulated contaminants do not require testing and monitoring.

Fortunately, the help control the pollutants that enter the water after leaving the municipal treatment facility or private well, the use of POU/POE systems - whole house or at the tap water treatment - can ensure that everyone has water that is up to standard. By helping everyone receive the treatment they need exactly where they need it, the United States can realize its goals of public health in a cost-effective and reliable way.

Contaminated Water Supply Effects Around the Country

New York Times (Aug. 26, 2013) reported that there are millions of individual cases of waterborne diseases occurring yearly and the related hospitalization costs approach \$1 billion each year. In West Virginia, *New York Times* (Aug. 6, 2014) reported that in January a chemical used in the processing of coal leaked from a ruptured storage tank into the Elk River, contaminating the water supply for about 300,000 people. In Toledo, Ohio the water supply for over 400,000 people was declared unsafe because of the presence of microcystins, a toxin released by algae blooms in Lake Erie.



Chromium



Potential Health Effects:

Nausea, gastrointestinal distress, stomach ulcers, skin ulcers, allergic reactions
 Kidney and Liver damage, reproductive problems, Lung and nasal cancer

Treatment Methods (POU/POE):

Hexavalent Chromium:

- Reverse Osmosis
- Distillation
- Strong Base Anion Resin
- Weak Base Anion Resin

Trivalent Chromium:

- Reverse Osmosis
- Distillation
- Strong Acid Cation

Organic Complexes:

- Reverse Osmosis
- Distillation
- Strong Acid Cation

About WQA:

The Water Quality Association (WQA) has thousands of members nationwide and internationally, including major corporations as well as family-owned businesses that are involved in the water treatment industry.

Dedicated to consumer education and public awareness, the Water Quality Association is a not-for-profit trade group of businesses that provide treatment solutions for safe, clean water throughout the world – in homes, schools, commercial and industrial settings, and more. WQA promotes best practices for superior products and environmental sustainability with the guidance of respected, independent standards. Its labs conduct rigorous testing and certification, and training programs promote professionalism and ethics. Learn more: wqa.org