

# Kinomix™ Metals Removal System

Arsenic problem? Phosphorus problem?  
Iron problem? Manganese problem?

No problem with Kinomix™ from Triple Clear!

Removing metals from water is a critical step in treating both potable water and wastewater. Until now, the only way to guarantee removal to legally mandated limits required expensive membrane or RO systems.

Kinomix™ from Triple Clear Water Solutions is a patented technology that is able to remove metals from water for a fraction of the cost of membranes; with almost no maintenance requirements or power consumption. It is a revolutionary breakthrough in water treatment.

Kinomix™ technology uses a standard oxidizer and a patented static mixing process to quickly coagulate and bind contaminants into large particulates which can easily be filtered out. The method of removal is a simple oxidation-reduction (redox) process wherein hazardous and potentially hazardous contaminants are chemically converted into non-hazardous, more stable, and in some case, inert compounds.

Metals removal simplified.



## Features:

- Instantaneously removes 27 different metallic elements to nearly undetectable table levels including: arsenic III and V, antimony, barium, beryllium, boron, cadmium, chromium, Iron, lead, magnesium, manganese, mercury, phosphorous, selenium, & thallium
- Also proven to remove some Organic and Inorganic Compounds including: Cyanide, Cryptosporidium, Giardia, Sulfides, and Silica
- With no moving parts and almost no maintenance needs
- Works at a broad PH range
- Reduces stress and wear-and-tear on downstream filtering systems
- Produces non-toxic, non-leeching waste
- Installs quickly and easily
- Scales to any size from commercial-industrial to municipal

**Instantaneous results,**

**all at a fraction of the price**

**of any other technology!**

## KINOMIX™ METALS REMOVAL SYSTEM TRAILER



**Kinomix™ Pilot Treatment Trailer Setup at the Billerica WWTP.**



**Kinomix™ Treatment Process in the Pilot Trailer.**



**Influent Flow Meter and No. 1 Kinomix™ Proprietary Mixing Reactor Unit.**

### **Kinomix™ from Triple Clear!**

The heart of the process is the patented and proprietary kinetic-velocity static mixing system which is capable of producing incredible levels of shear stress in water. This mixing process takes the typical oxidation-redox process to levels of efficiency never before produced. In the Kinomix™ System, the metal particles are actually torn to shreds, massively increasing their surface area, and dramatically enhancing their ability to bind to an oxidizer and flocculate. The coagulation particles that result can then be easily removed via basic filtration, settling, or other solids separation technology.

In layman's terms, we massively increase the surface area of the molecule making binding easier than ever. A simple example is a loaf of bread. Before it is sliced, the surface area is just the outer crust. However, once sliced, the amount of surface area is increased by more than 20 times. All that extra surface area makes binding to a flocculant more than twenty times more effective.

Our installations require only an oxidizer as a pre-treatment. If there is already any oxidant/ coagulant required, or in use, that will normally suffice. Otherwise, simple Chlorine in potable water or Ferric for wastewater work well. Then water flows through our static mixing system, and finally into a basic filtration device where the flocculated unwanted metals can be easily removed (a simple sand filter or even settling tank does the job). The resulting waste is nonhazardous, non-toxic, non-leaching, and EPA TCLP and California Title 22 Wet Test compliant water.