



## Comparison Chart

	BiCarbus <small>Activated</small>	Copper Silver Ionization (CSI)	Hyper-Temperature >140°F	Hyper- Chlorination*	Ultraviolet (UV) Light	Ozone	Point of Use (POU) Filters
Removes inside-of-pipe biofilm (slime), to include Legionella: <a href="#">as per swab test</a>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Filter's upstream side becomes biofilm growth center
Enables abatement of free-floating (planktonic) bacteria, to include Legionella	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	At point of application only, zero residual effect. Cannot be used on cold water lines.	<input checked="" type="checkbox"/>	At point of application only, zero residual effect	At point of application only, zero residual effect	<input checked="" type="checkbox"/>
Removes carbonate scale in pipes, on machinery (e.g. dishwashing machines) and on fixtures (e.g. shower heads)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enables municipal chlorine to penetrate further into facility (removed scale does not consume chlorine)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduces energy usage via scale removal from heat exchangers (may be significant)	<input checked="" type="checkbox"/>	Energy usage increase for anode activation (minimal)	Energy usage increase for hyper-temperature equipment operation (may be significant)	<input type="checkbox"/>	Energy usage increase for light operation (minimal)	Energy usage increase for ozone production (minimal)	<input type="checkbox"/>
Effective in ice machines for slime abatement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warrantied for enabling bacteria remediation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	At point of application only, zero residual effect	<input type="checkbox"/>	At point of application only, zero residual effect	At point of application only, zero residual effect	<input checked="" type="checkbox"/>
Does not require operator's license, certification, or permit ( <i>see local regulations</i> )	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Does not require special storage/handling	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Downstream mixing valves required	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Does not require special transportation and spill procedures	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Safe on downline equipment and appliances	<input checked="" type="checkbox"/>	May stain porcelain	Scale may buildup on mixing valves	May cause metal corrosion, pinhole leaks and increase heavy metals in water	<input checked="" type="checkbox"/>	May damage downstream rubber/plastic seals and parts	<input checked="" type="checkbox"/>
No additional equipment maintenance required	<input checked="" type="checkbox"/>	Regular chamber cleaning and CSI anode replacement	Possible periodic mixing valve replacement due to scale buildup	<input checked="" type="checkbox"/>	Regular chamber cleaning and UV light replacement	<input checked="" type="checkbox"/>	Regular filter replacement
Does not change appearance or taste of water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Non-Hazardous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See DHHS (NIOSH) 73-11009	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

\* Hyper-Chlorination is defined as a facility where chlorine, in the form of chlorine gas, monochlorides, chloramines, chlorine dioxide, etc., is added on-site, above levels provided by the local municipality

General References: 1) EPA 810-R-16-001, 2) Appl Environ Microbiol. 1987 Feb; 53(2): 447-453, 3) <https://legionella.org/faqs>, 4) <https://www.cdc.gov/legionella/index.html>, 5) OSHA 29 CFR 1910.1200