



The impact of increased chloramine use in water treatment on the foodservice industry

Chloramines can affect quality throughout your foodservice operation



Over half of the United States is provided water treated with chloramines



Chloramines

56%

Other

44%



Drinking water

Unfiltered chloramines can cause the following taste attributes in your water: salty, bitter, chlorine-like, musty, soapy, sour, geranium-like. A study by Krasner and Barret identified 0.5 ppm as the taste and odor threshold for when chloramines start to taste and smell bad.¹



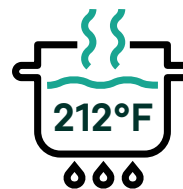
Hot beverages

Unlike chlorine, chloramine doesn't dissipate quickly when water is heated. According to a study, while chlorine reduces to half its initial concentration within 1.8 hours of boiling, chloramines take significantly longer, dissipating over 26.6 hours.³ Unfiltered chloramines can cause an off taste and odor in your hot beverages.



Cold beverages

Chloramines can negatively impact the taste and odor of your cold beverages. A leading soda manufacturer requires base filtration to reduce total chlorine and/or chloramines to less than 0.5 ppm to ensure consistent product quality.²

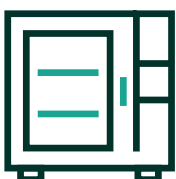


Chlorine dissipation:

1.8 hours

Chloramine dissipation:

26.6 hours



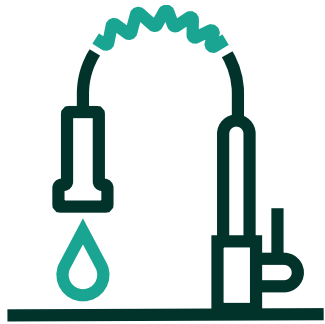
Steam equipment

Chloramines can cause oxidation and corrosion in your valuable steam equipment and can damage O-rings, seals and gaskets, and other valuable equipment. This may result in **unexpected service calls and shorter equipment life which may cause expensive repairs or replacements.**



Your solution to solving chloramine issues

Standard water filters that work for reducing chlorine may not have the capability to reduce chloramines at the required capacity or water demand needed in foodservice facilities. Most water filtration solutions are not certified per NSF/ANSI 42 for the reduction of chloramines. The filtration systems that carry NSF/ANSI 42 certification for chloramine use catalytic-activated carbon and may be inadequate for a restaurant or coffee shop with high water demand.



To meet the rigors of the foodservice industry, Solventum created a catalytic carbon water filtration system with superior chloramine reduction capacity. This innovation is founded on modifying clean coconut-shell activated carbon and catalyzing it to increase the functional active sites on the carbon and facilitate high flow rates.



In select CLX models, the carbon block is preceded by a pleated 0.2-micron microporous membrane which helps with high sediment life and reduction of cysts per NSF 53 standards. The microporous membrane also reduces waterborne bacteria from incoming water as demonstrated with 99.99% reduction of surrogate organism *E. coli* (ATCC 11229) and *P. fluorescens* (ATCC 49642) in lab tests performed by Solventum.



99.99%
reduction of waterborne bacteria



Certification

3M™ High Flow Filters CLX Series is certified per NSF/ANSI standard 42 for the reduction of chlorine taste and odor and chloramine, which may be a **requirement for major beverage-syrup suppliers, equipment manufacturers and local inspectors or regulators.**



Sustainability

From a sustainability standpoint, 3M™ High Flow Filters CLX Series is also certified by Water Quality Association to WQA/ASPE/ANSI Standard S-803 for Sustainability Attributes.



Certified to NSF standards

The CLX Series features catalytic carbon-block technology and is tested and certified to NSF/ANSI 42 and select models to NSF/ANSI 53 cyst reduction.



WQA sustainability

Solventum's long-standing commitment to sustainable development through environmental protection, social responsibility and economic progress has resulted in Solventum Purification and Filtration achieving Water Quality Association (WQA) Sustainability Certification under the WQA Product Sustainability Standard S-803. Certified by the Water Quality Association to NSF/ANSI 372 for low lead.

Read the full white paper and explore the complete lineup at [3M.com/CLX](https://www.3m.com/CLX)



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1. Krasner, S. a. (1984). Aroma and flavor characteristics of free chlorine and chloramines. Proc. AWWA water quality technology conference (pp. 381-398). Denver, Colorado: AWWA
2. Coca-Cola North America (CCNA) Base Filtration Water Treatment Specification for Foodservice. (2022, March 18). Retrieved from Coke Solutions: <https://www.cokesolutions.com/content/dam/cokesolutions/us/documents/foodservice-quality/foodservice-quality-Food-Service-Water-Treatment-Unit-Spec-Final.pdf>
3. DeLange, A. (2001, July 29). Experiments in Removing Chlorine and Chloramine From Brewing Water.

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70-2016-0410-8