

Chloramines

Beginning in the fall of 2013, the Town of Winnsboro will use chloramines instead of chlorine to disinfect water. Beginning the week of September 2nd implementation will occur.

Many cities in the United States, including City of Columbia and Chester Water Authority along with the City of Camden use chloramines as a disinfectant. Chloraminated water is the same as chlorinated water for all normal uses we have for water.

However, there are two groups of people who need to take special care with chloraminated water: **kidney dialysis patients and fish owners**. Chloramines must be removed from water used in kidney dialysis process and from water that is used in fish tanks or ponds. This brochure will help you understand chloramines. If you think you might be affected by this change, we urge you seek professional assistance.

This affects all Town of Winnsboro customers (except customers in the Blythewood area). These customers are already being served chloraminated water purchased thru the City of Columbia.

What are Chloramines?

Chloramines are a combination of chlorine and ammonia which is used to kill potentially harmful bacteria in water. Chloramines have been used safely throughout the United States and Canada for many years

Why is the Town of Winnsboro changing to chloramines?

Like many other communities, Americans has experienced elevated levels of trihalomethanes (THM's) when using chlorine as a disinfectant. Chlorine reacts with naturally occurring organic materials in the source water to form THM's

THM's are suspected carcinogens. State and Federal regulations currently set a standard of 80 parts per billion as a maximum level of THM's allowed in water. The use of chloramines will enable the Town of Winnsboro to continue to provide its customers with water that is both safe to drink and aesthetically appealing. The US Environmental Agency recommends chloramines as a disinfectant and as a way to avoid THM formation.

Why are chloramines a problem for kidney dialysis patients and fish owners?

Chloramines are harmful when they go directly into the bloodstream. In the dialysis process, water comes in contact with the blood across a permeable membrane. Chloramines in dialysis water would be toxic, just as chlorine in dialysis water would be toxic. A condition called hemolytic anemia can occur if this toxin is not removed completely. Fish also take chloramines directly into their bloodstreams.

What special precautions should kidney dialysis patients take?

Chlorine and Chloramines must be removed from the water used in kidney dialysis machines. There are two ways to accomplish this, by adding ascorbic acid or by using granular activated carbon treatment.

Medical centers that perform dialysis are responsible for purifying the water that enters the dialysis machines. All medical facilities have been notified of this change to chloramines

Dialysis systems already pretreat their source water to remove chlorine. However, some modifications will be necessary to remove the chloramines.

Home dialysis service companies can usually make the needed modifications, but you should check with your physician to be certain. If you have any questions, please consult your physician.

What Special precautions should fish owners take?

Chloramines should be removed from water that is used in fish tanks and ponds. This includes lobster tanks at grocery stores and restaurants, as well as fish containers at bait shops.

Chloramines are toxic to fish reptiles, turtles and amphibians, just as chlorine is toxic and must be removed. You may not have to remove the chlorine from your aquarium water, however, because it disappears rapidly on its own. This is **not** the case with chloramines and steps must be taken to remove chloramines.

Chloramines can be removed from the water by using a water conditioner containing a dechlorinator or by using granular activated carbon. These are available at your pet store. If you have any questions, please consult your pet store.

What are the effects of ammonia on fish?

Ammonia can be toxic to fish, although all fish produce some ammonia as a natural by product. Ammonia is also released when chloramines are chemically removed. Although ammonia levels may be tolerable in individual tanks or ponds, commercial products are available at pet supply stores to remove excess ammonia. Also, biological filters, natural zeolites and pH control methods are effective in reducing the toxic effects ammonia.

If chloramines are harmful to fish, how can people safely drink the water?

Chloraminated water is no different than chlorinated water for all of the normal uses we have for water. Water that contains chloramines is totally safe to drink. The digestive process neutralizes the chloramines before they reach the bloodstream. Even kidney patients can drink and bathe in chloraminated water.

Can pregnant women and children drink chloraminated water?

Yes. Everyone can drink water that contains chloramines.

Can you safely wash an open wound with chloraminated water?

Yes. It is safe to use chloraminated water in cleaning an open wound because virtually no water enters the bloodstream that way.

Will chloramines affect your swimming pool?

No. You will still need free chlorine residual to retard algae and bacteria growths. DPD test kits measure free chlorine residuals and can be used with confidence. Contact your local pool supply stores for specific information.

Will chloramines change the pH of the water?

No. The pH of the Town of Winnsboro system will still remain in the range of 7.0 to 8.0.

Can you safely water plants vegetable or fruit and nut trees?

Yes. The small amount of chloramines should have no effects on plants of any type. Beneficial bacteria will generally be protected by the soil in which they live. Chloramines will be removed because of the high chlorine demand in the soil.

Do most home water purifiers remove chloramines?

Most home purifiers are not designed to remove chloramines. Consult your manufacturer for specific information.

Will chloramines dissipate, or dissolve, out of water?

No. Unlike chlorine, which dissipates when water sits for a few days, chloramines may take weeks to dissipate

Will chloramines be removed by boiling the water?

No, boiling is not an effective method of removing chloramines from water. The only practical methods of removing chloramines from water are using a water conditioner which contains a dechlorinator or by using granular activated carbon.

Will chloraminated water used for agricultural purposes have any effect on fish in adjacent streams?

Most water which runs into streams and ponds would be agricultural, landscaping or storm water drainage. After water has been used for one purpose, it probably would not have enough residual chloramine to affect fish.

Where to call?

If you have any questions about the treatment process, please call the Town of Winnsboro Water Treatment Plant at 1-803-635-4121. Or visit the EPA web site at http://water.epa.gov/lawsregs/rulesregs/sdwa/mdbp/chloramines_index.cfm