

What can aquarium owners do to remove chloramines?

Household, restaurant, and commercial fish tank owners will need to change their current chlorine removal process to remove chloramines. The appropriate products or carbon filtration equipment for removing chlorine and ammonia will be available in most pet aquariums stores prior to the conversion.

Can home remedies for treating aquarium water such as boiling water, using salts and letting water sit still for a few days remove chloramines?

NO. Home remedies such as boiling, using salts, and having water sit still are not sufficient methods to remove chloramines. Unlike chlorine, which only takes a few days to evaporate when sitting still, chloramines can remain in water for a few weeks. The best way for fish owners to remove chloramines is to use a water conditioner that contains a dechlorinating chemical. This chemical is available at pet supply stores.

Is chloraminated water safe for plants and other pets besides fish, reptiles, and amphibians that live in water?

YES. Chloraminated water is just as safe as chlorinated water for plants and animals that do not live in water. Chloramines are only dangerous for animals that take them directly into their bloodstream.

3. Why do Commercial/Industrial Consumers with Process Equipment Sensitive to Water Quality have to take precautions with chloraminated water?

Chloramines may have adverse effects on Process Equipment that is sensitive to water quality Contact your process equipment supplier/process engineer for further instructions.

Will pool owners need to treat chloraminated water differently?

As with chlorinated water, pool owners will need to maintain the same chlorine residuals as before to prevent algal and bacterial growth. Pool suppliers can provide owners with additional information. Pool owners current chlorine testing kits will still work after chloramination.

How will chloramine affect household plumbing, pipes and water heaters?

After the conversion, rubber parts on some household plumbing and water heaters may degrade faster than previously experienced. Plumbing hardware supply stores can provide further information and assistance.

FOR FURTHER INFORMATION:

**Call: John Kehoe, P.Eng. Manager,
Union Water Supply System
(519) 326-1668**

**Or go to: www.leamington.ca
keyword: Water Quality Report**



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**Important
Information about
Changes to your
Water Supply**



Water Treatment and
Disinfection Using
Chloramination

How will it affect you?

DISINFECTION OF DRINKING WATER USING CHLORAMINATION

What is changing in Your Water Supply?

The Union Water Supply System supplies water to Leamington, Kingsville, the north-east part of Essex and the south-west part of Lakeshore. The system is changing its disinfection process from chlorination (adding Chlorine) to chloramination (adding chlorine and ammonia).

Why are we doing this?

The Union Water System had a number of adverse water samples and boil water advisories in 2000 and 2001. Because of this, the system undertook a number of studies to find the cause and to recommend a solution. These studies looked into the possible presence and sources of coliform bacteria which were causing the adverse water samples and boil water advisories. One of the recommendations was that the water system disinfect using chloramination as a way of reducing the possibility of further adverse water samples. Chloramines last longer than chlorine which is important in a water distribution system as large as the Union Water System. There are over 500 kilometres of water mains in our system. The edges of the system are over 30 kilometres from the water treatment plant.

When will this happen?

The schedule for starting to use chloramination will be during the last week of December 2003 or during the first two weeks in January 2004. Newspaper and radio announcements will be made closer to that time announcing the actual date. Where to get more information is listed at the end of this pamphlet.

What is chloramination?

A Chloramine is a combination of chlorine and a small amount of ammonia. Chloramination is the process that adds chloramine to drinking water. Many cities in Canada and elsewhere have been using chloramination for decades to purify drinking water and eliminate the bacteria that cause waterborne diseases.

How do chlorine and chloramines kill bacteria?

Both Chloramines and Chlorine kill bacteria by bonding with and oxidizing the organic compounds of which bacteria are made in a free radical process.

What are the benefits of chloramination?

- ⇒ Chloramine is a more stable and persistent disinfectant. It preserves the quality of purified water as it travels through the distribution system.
- ⇒ Chloramination helps to reduce disinfection by-products such as trihalomethanes (THM's) in the water.
- ⇒ Chloramine reduces the taste and odour of chlorine in tap water.

What are trihalomethanes (THM's)?

THM's are chemical compounds that form when chlorine mixes with naturally occurring organic material in water. These compounds are suspected carcinogens. The Ministry of the Environment and Health Canada have set a standard of 100 parts per billion (ppb), as the safe maximum level of THM in drinking water, based on a lifetime of consumption. Chloramination will reduce the amount of THM's that are produced.

IS CHLORAMINATED WATER SAFE?

Chloraminated water is safe for all the normal uses of the municipal water supply including, drinking, bathing, cooking, cleaning scrapes or cuts, laundry, and watering the garden.

Exceptions:

Kidney Dialysis Patients, Aquarium & Process Equipment Owners

1. Why do kidney dialysis patients have to take special precautions with chloraminated water?

Dialysis patients can drink, bathe and cook with chloraminated water, but they cannot use chloraminated water in the dialysis process. Chloraminated water can be toxic if it enters directly into the bloodstream, which occurs during the dialysis process. It is safe for dialysis patients to drink chloraminated water because the digestive process neutralizes and destroys chloramines before they enter the blood stream. Dialysis patients should call their doctor for more information on the potential dangers and the precautions they must take.

2. Why do fish owners have to take precautions with chloraminated water for fish, reptiles, and amphibians that live in water?

As with chlorine, chloramines are very harmful to fish (saltwater and freshwater), reptiles and amphibians that live in water. They take chloramines right into their bloodstream through their gills and therefore they must be protected from them.

