

Environmental Health

FAST FACTS

Water Chlorinators

It is important to have a safe drinking water source. Surface water from lakes, rivers, streams and springs is often contaminated with germs. If people drink this water, they can become ill.

Ground water supplies, particularly those very close to the surface, such as dug wells, can also become contaminated. For surface water and dug wells, a treatment device is often needed to make the water safe for drinking. One of the most common treatment devices is the chlorinator.

What type of chlorinator should be used?

For some small water supplies, the type most commonly used is the hypochlorinator. The hypochlorinator works by pumping a chlorine solution into the water supply which disinfects the water. When chlorine remains in contact with the water for 20 minutes or more, it can kill most of the disease-causing germs in the water. The contact time must be at least 20 minutes, otherwise the water cannot be considered safe for drinking.

The type of chlorinator used most often injects chlorine into the water line. While the chlorinator can operate independently of the water pump, it is usually connected to the water pump so that they can both operate at the same time.

What type of chlorine mixture should be used?

A hypochlorite solution is the chlorine usually injected into the water by the hypochlorinator. Hypochlorite comes in different chlorine strengths in powder or liquid form. Regardless of the type of chlorine used, it is important to know the strength. Information about the amount of available chlorine in the product is printed on the label.

How much contact time is needed?

The contact time between the water and the chlorine solution is critical for ensuring a safe water supply. A contact chamber big enough to ensure 20 minutes of contact time must be provided after the hypochlorinator injection point. This contact chamber is in addition to a conventional pressure tank.

Does the water need to be tested for chlorine?

Water treated with a hypochlorinator must be tested daily for chlorine content. To do this, a chlorine kit is required. The most effective test kits use a chemical called DPD for the test solution. This test solution can be used in either a liquid or tablet form.

The test kits should be used to make sure the “free available chlorine” in the water is between 0.5mg/l (ppm) and 1.0mg/L (ppm).

What needs to be done if the chlorine is low?

If testing shows the free available chlorine residual drops below 0.5mg/l(ppm), it needs to be increased to a safe level right away. Most hypochlorinators can be adjusted to increase or decrease the amount of dosing solution being injected into the water. Also, the chlorine content of the dosing solution can be increased or decreased.

Water used by the public, in restaurants or resorts, should be tested every day for the free chlorine residual. The results should be recorded in a book and held for one year. The Ministry of the Environment must be notified if a chlorinator is installed on a communal water supply.

Do chlorinators kill all germs?

Chlorinators may not remove parasites. A special filter may be needed.

For further information on chlorinators, call the Environmental Health department of the Haliburton, Kawartha, Pine Ridge District Health Unit.

Adapted from information provided by Muskoka-Parry Sound Health Unit