



Chlorine and Chloramine

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Chlorine, one of 90 natural elements on our planet, was first recognized as an element by English chemist, Sir Humphrey Davy. He discovered it as a greenish-yellow gas, which he named on the basis of the Greek word khloros, for greenish-yellow. In 1810 he suggested the name "chloric gas" or "chlorine."

Chlorine and the products of chlorine chemistry such as chloramine are used to make drinking water safe, destroy life-threatening germs, produce life-saving drugs, and ensure a plentiful food supply. After the start of chlorinating the drinking water in the United States in 1904, life expectancy went from 49 years to 70 years by 1950.

One of the most effective and economical germ-killers, chlorine also destroys and deactivates a wide range of dangerous germs in homes, hospitals, swimming pools, hotels, restaurants, and other public places.

Chlorine's powerful disinfectant qualities come from its ability to bond with and destroy the outer surfaces of bacteria and viruses.

First used as a germicide to prevent the spread of "child bed fever" in the maternity wards of Vienna General Hospital in Austria in 1846, chlorine has been one of society's most potent weapons against a wide array of life-threatening viruses, and bacteria.

Now, 150 years later chlorination of our drinking water has become one of our first lines of defense against **bioterrorism**.

The "Generic Basic Water System Evaluation" by the Institute of Homeland Security for water districts, recommends that they test to assure that a chlorine residual is still present at distant points in their distribution systems. The result has been a dramatic increase of the chlorine and chloramine content in our municipal water systems over the last two years. Without this prompt action by our government and the water districts, we could well have had a disastrous biological attack by now.

Before 9/11, a part per million (ppm) or so of chlorine or chloramine going into a water main was sufficient to assure a safe drinking water. Since 9/11, and the real threat of bioterrorism, water districts have wisely started adding sufficient chlorine or chloramine to still have the recommended residual at the end of the line.

The result is that chlorine residuals of 2-3 ppm can be found in many places. This is more chlorine than is recommended for a swimming pool.

While we do need the higher chlorine levels to keep our drinking water safe, chlorine can play havoc with water treatment equipment. High chlorine levels can cause:

- Substantially reduced the life of water softener resin.
- Substantially reduced the life and capacity of Deionizers.
- Cause cartridge filter degradation.
- Reduced life of activated carbon filters.
- Oxidation of Reverse Osmosis (RO) membranes.

Call us at (800) CAL-WATER to get two free chlorine test strips by mail. If you find high chlorine levels in your water supply, we can help.

For more information on chlorine and chloramine visit the following links:

<http://www.homelandsecurity.org/journal/Articles/watersafetyguidelines.htm>

http://www.c3.org/chlorine_knowledge_center/whitepapercl.html

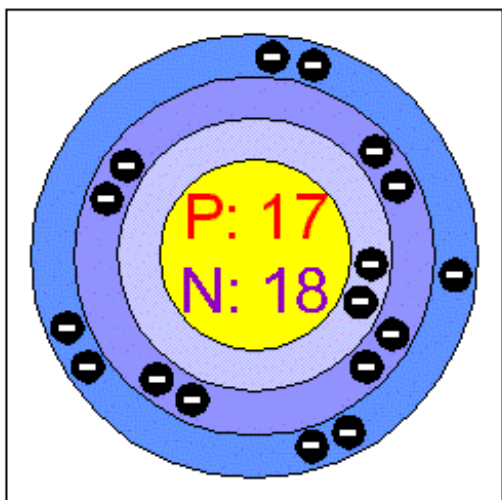
<http://www.eurochlor.org/tools/glossary/glossary.htm>

http://c3.org/chlorines_everyday_uses/before.html

<http://www.clorosur.com/ingles/products.html>

Chlorine - Element

Atomic Structure



Name: **Chlorine**
Symbol: **Cl**
Atomic Number: 17
Atomic Mass: 35.4527 amu
Melting Point: -100.98 °C
Boiling Point: -34.6 °C
Classification: Halogen
Density @ 293 K: 3.214 g/cm³
Color: green

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