

Operation Water Biology

Glossary



Biological Filtration

The use of bacteria and natural biological processes to remove **contaminants** from water.

Bio-oxidization

When a substance has been **oxidized** by bacteria.

Chloramine

A chemical created by the reaction between ammonia and chlorine. Used as a **disinfectant** in drinking water distribution systems.

Chlorine Demand

A way of describing the minimum amount of chlorine that is needed to disinfect a water sample. The more **contaminants** there are the higher the chlorine demand will be because chlorine is used up as it removes contaminants from water.

Contaminant

A substance that is undesirable and/or harmful and has a higher than acceptable concentration, or is found somewhere that it should not be found.

Dilution

Reducing the concentration of a chemical. For the purposes of OWB this is accomplished by increasing the volume of the chemical solution by adding water.

Disinfection / Chlorination Byproducts

The results of using chlorine to remove **contaminants** from water. Chlorine reacts with other substances in water and they form other chemicals called byproducts. It can be dangerous if they build up in drinking water supplies.

Disinfect

The act of destroying harmful microorganisms.



Free Chlorine

Chlorine that has not yet reacted with any **contaminants**. The kind of chlorine added to drinking water supplies and swimming pools for the purpose of **disinfection**.

Floc

A set of particles that were once suspended in a solution but are now stuck together in a larger clump. Created by flocculating chemicals or by some kinds of bacteria.

Iron Bacteria

A kind of bacteria that are specialized to gain energy from performing **bio-oxidization** reactions on iron. These bacteria grow anywhere that there is iron in water and often appear in drinking water supplies. It is possible to use iron bacteria in the water treatment process to remove iron from the water.

Oxidized

One of the results of an oxidation-reduction chemical reaction. A substance becomes oxidized by combining with oxygen and taking an electron from another substance.

Reduced

One of the results of an oxidation-reduction chemical reaction. A substance becomes reduced when it gives an electron to another substance.

Total Chlorine

The combination, or sum, of the chlorine that has not yet reacted with any **contaminants (free chlorine)** and the chlorine that has reacted with something (**chloramine** and other **chlorination byproducts**).