

Hitting the Bottle

Bottled Water Basics

If your well water contains bacteria, or any mineral or other chemical which can be dangerous, you may want to use bottled water as a *temporary* solution. Bottled water is much more expensive, per gallon, than tap water, and adds to global warming. If you do use bottled water, you should know the basics about how bottled water is regulated. You should also be aware that you can still be exposed to problems through water used for brushing your teeth, making ice cubes, or washing fruits and vegetables.

Bottled water comes from the same sources as tap water (rivers, lakes, springs, or underground aquifers), and the taste and quality can vary widely. All drinking water, both bottled and tap water, will contain at least small amounts of some contaminants. To make sure that water is safe, the EPA (Environmental Protection Agency) and the US Food and Drug Administration (FDA) set drinking water standards. EPA sets the standards for tap water provided by public water suppliers. The FDA sets standards for bottled water based on EPA standards.

FDA regulates bottled water as a packaged food under the Federal Food, Drug and Cosmetic Act, and has established standards for quality of bottled water. FDA has also established good manufacturing practice requirements for processing and bottling drinking water. Bottlers must test their sources and finished bottled water products at least once a week for microbiological contaminants, and **at least once a year** for physical, chemical, and radiological contaminants. However, neither EPA nor FDA *certify* bottled waters. When purchasing bottled water, know the basics:

- ✓ Artesian water, ground water, spring water, and well water are from an underground aquifer and may or may not be treated.
- ✓ Distilled water is the collection of steam from boiled water. Microbes are killed in this process, and natural minerals are removed.
- ✓ Mineral water is ground water that contains 250 or more parts per million of total dissolved solids.
- ✓ Purified water has been treated, and must contain not more than 10 parts per million (ppm) of total dissolved solids. (If treated by distillation or reverse osmosis, it will also be free of microbes.)
- ✓ Carbonated water, soda water, seltzer, sparkling and tonic waters are considered soft drinks, and are not regulated as bottled water.
- ✓ Sterile water is free of microbes, and must meet standards for sterilization.

Common ways of treating bottled water are:

- ✓ Distillation—Water is boiled and the steam is condensed, to remove salts, metals, minerals, asbestos and some organic particles;
- ✓ Micron filtration—Water is put through filters. Good filters can remove *most* chemical contaminants and microbes, but be careful to use an *absolute* micron filter, which can remove bacterial problems.
- ✓ Ozonation—Water is disinfected using ozone. Using proper dosages, microbes will be killed.
- ✓ Reverse Osmosis—Water is forced under pressure to pass through a membrane which removes most contaminants. This process removes all microbes, minerals, color, turbidity, organic and inorganic chemicals. (The City of Alamosa uses a reverse osmosis system to remove arsenic from the public water supply.)
- ✓ Ultraviolet light—Water passed through UV light in the appropriate dosage will have most microbes removed.