Graver Technologies

Filtration in Bottled Water Processing

Despite controversy over the health benefits of bottled water versus that from municipal water supplies and home drinking water filtration systems, bottled water represents one of the fastest growing segments of the beverage industry with an annual growth rate of well over 10%. Much of the growth is fueled by consumers choosing bottled water over soda and public concerns over drinking water safety.

Bottled water is an excellent consumer beverage because of its consistent safety, quality, good taste and convenience. Bottled water is regulated by the U.S. Food and Drug Administration (FDA) and is also subject to additional regulations. There are several categories of bottled water, including:

Spring Water – Derived from an underground formation from which water flows naturally to the surface of the earth, spring water must be collected only at the spring or through a borehole tapping the underground formation feeding the spring.

Purified Water – Produced by distillation, deionization, reverse osmosis or other processes, purified water is sometimes labeled with its production method, such as distilled water or deionized water.

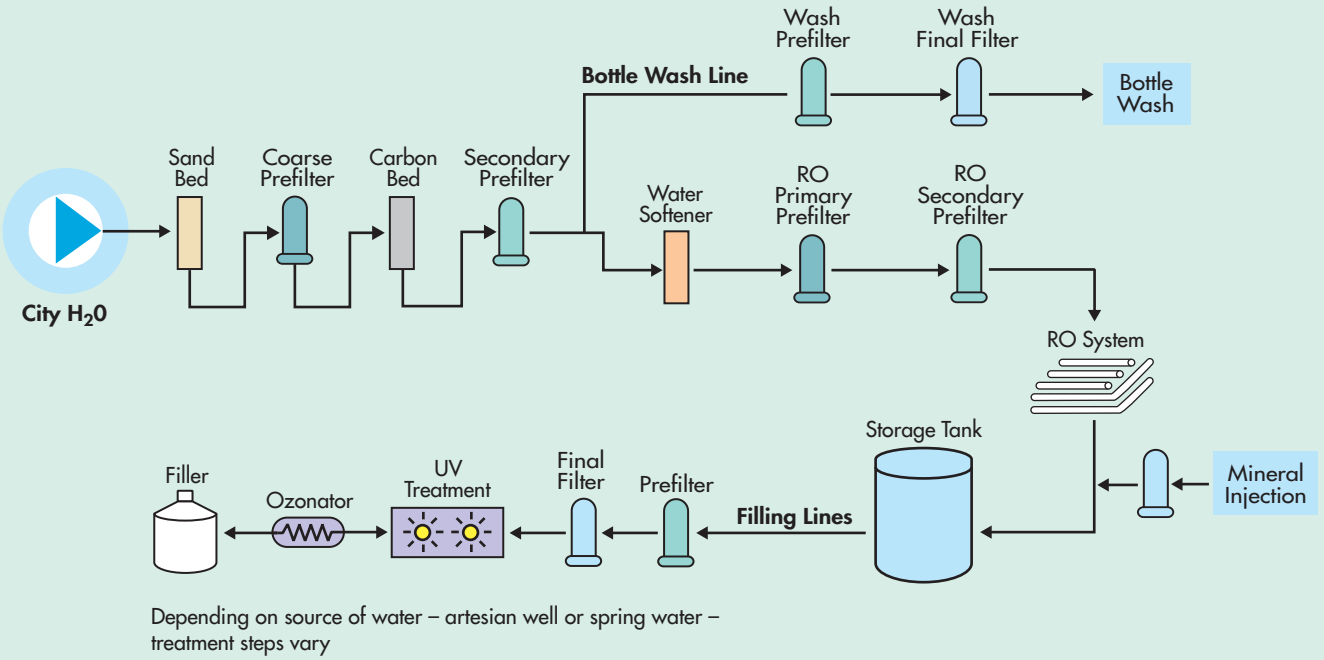
Mineral Water – Containing at least 250 parts per million total dissolved solids, mineral water is distinguished from other types of bottled water by its constant level and relative proportions of mineral and trace elements at the point of emergence from the source. No minerals can be added to this product.

Sparkling Bottled Water – With the same amount of carbon dioxide that it had when obtained from the source (following treatment and possible replacement of carbon dioxide), sparkling bottled waters may be labeled as "sparkling drinking water," "sparkling mineral water," "sparkling spring water," etc.

Artesian Water/Artesian Well Water – A well that taps a confined aquifer (a water-bearing underground layer of rock or sand) is the source for this water. The source water level stands at some height above the top of the aquifer.

Well Water – A water aquifer is simply tapped with a bored/tapper hole to obtain well water.

Bottled Water Process Schematic



Depending on source of water – artesian well or spring water – treatment steps vary

The Role of Filtration

Effective filtration systems remove 100% of undesirable contaminants and microbial content. With its broad line of polypropylene and microfiberglass prefilters, Graver offers cost effective filtration regardless of incoming water quality.

Cryptosporidium is an emerging health threat in water and Cryptosporidiosis is fatal in immune deficient persons. Cryptosporidium is difficult to remove from water because it is resistant to chlorination. Though Bottled Water is regulated in the United States by FDA, presently there are no standards for Cryptosporidium in Bottled Water and regulation is by voluntary conformance. For final filtration, the QCR™ Cyst Reduction filter is designed to exceed the ANSI/NSF Standard 53 for the removal of Crytosporidium oocyst and Giardia lamblia cysts.

Or if bacterial contaminants are of concern, the ZTEC-B polyethersulfone membrane cartridge has been validated for the removal of numerous ATCC species.

When it comes to producing bottled water, nothing builds success like consistently high quality. Graver Technologies filtration expertise provides bottled water manufacturers with consistency in taste and color, coupled with superior filtration system performance.

For more information

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