

# SCALE BLASTER™

THE WATER SOFTENER ALTERNATIVE

## APPLICATIONS

Beverage Bottling and Canning





# Beverage Bottling and Canning Applications

## Processed mixes and formulas for canned and bottled beverages delivered to market

*The process of mixing ingredients with water to produce a finished product.* It is assumed that ingredients are simply mixed and receive little or no onsite processing. Once mixed, the drink is usually carbonated and then canned. The canning procedure is typically fully-automated and comprises the following: Preformed and printed cans that have no lid are put onto a conveyor; the product is poured into the can, and the lid is put on and fixed in place.

## Water use and product contamination

Canning operations use large amounts of water. Water treatment like activated carbon filtration is used, but extra care must be exercised to make sure the treatment process does not introduce contaminants such as cleaning agents into the water. With **ScaleBlaster**, chemical cleaning agents for storage surfaces, delivery tubes and piping and process equipment is cut down substantially.

## Wastewater discharge

Cans are often required to be washed before the product is packaged. Other equipment in the plant requires washing too. **ScaleBlaster** keeps parts and can washing equipment working efficiently with little or no lime scale buildup and allows the detergent formula to use less detergent to do the same job. This detergent will also be more easily removed from the process and end-product.

Wastewater from the food process may be high in sugar content and may also be impacted by food coloring formulas. Fruit juices in untreated wastewater increase the Chemical Oxygen Demand, solids and acidity and could also contain pesticide residue. Cleaning agents such as sodium hydroxide and detergents are typically used in Clean-in-Place process or in batches. Cleaning agents discharged with wastewater are typically alkaline and contain surfactants. Due to the large volume of water treated, some systems may require the discharge of concentrated blow down. High salt content is in this wastewater stream – not safe for our environment.

Hazardous wastes may include sludge from either the cleaning of the CIP facilities or the wastewater treatment plants; waste oil and solvents and waste chemicals from the quality control laboratory. These substances must be properly controlled during the discharge treatment process, as well as being removed from the processing step. **ScaleBlaster** will greatly reduce or eliminate the lime scale and Biofilm that build up from the water used in these processes, and reducing the opportunities for particulates from other fluids involved in the processes to further build up on. Regulators limit the quantity and quality of wastewater discharged from the facility. The quality of wastewater can be improved by minimizing process spills and overfills and minimizing the amount of conveyor lubricant and cleaning chemicals that are being used. **ScaleBlaster** will keep fill nozzles from clogging - lessening the occurrence of inconsistent fill, reducing spills, overfills and the need for cleaning them up as well as reducing process downtime to clear the fill nozzles.

## Energy use

Cleaning water may be heated in a boiler prior to use. Air emissions may result from the operation of the boiler. Regulators may place limits on air emissions from boilers, this boiler operations must be optimized and efficient. **ScaleBlaster** will allow the boiler to heat water more quickly And efficiently, using less energy, requiring less time to reach proper operating conditions while using less chemicals. Energy is also used by the refrigeration units and the canning lines. **ScaleBlaster** will help here, too.

The main energy consumption on canning lines is friction caused by moving parts. **ScaleBlaster** will lower energy using by improving their operating efficiency.



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