

The cover image features a vibrant sunset or sunrise over a body of water. The sky is filled with fiery orange and red clouds, with a bright light source near the horizon. The water below is dark, reflecting the colors of the sky. The text 'Tri-Lake Group' is in the top left, and 'Tech - Briefs' is in large white letters across the middle.

Tri-Lake Group

Tech - Briefs

**Technical Briefings, Notes
and Discussion on the Food
and Beverage Industries**

**An “International”
Perspective**

Issue 1 - 05 October

Sugar Treatment:

- *Future issues of “Tech-Briefs” will address sugar treatment as practiced with good success in “International” beverage plants. Good success refers to quality (from an organoleptic, microbial and analytic POV) and cost savings. Treatments range from “tight” filtration, use of powdered activated carbon and DE, hot and cold filtration (often with pH adjustment), and ion exchange.*

CO₂ Manufacture and Treatment

- *Our November “Tech-Briefs” will cover carbon dioxide manufacture and treatment as practiced at a number of operations world-wide. This will detail manufacturing CO₂ at the beverage plant, including extracting and treating carbon dioxide recovered from flue gases produced by existing boilers. A sustainability “positive” with the potential to be cost effective (or cost savings) depending on size plant and their needs for heat exchange.*

Wastewater Treatment (or Reducing Surcharges)

- *F & B plants are encountering significant problems and costs in disposing of their wastewater. Whether it is simple pH adjustment, increasing surcharges ... or being pointed toward a complete WWT system ... the implications are 1) significant capital expense, 2) an added operational cost burden or, 3) high (and they will always increase) surcharges. See “wastewater” page on website. Often a cheaper system will give operating advantages. The December issue will offer a practical position and will detail both options and guidelines.*

Perchlorate Removal

- *The recent (September, 05) issue of the AWWA Journal contains an article on the use of a fixed bed reactor (GAC as the media) for biologic reduction of perchlorates. Carbon’s ability to support microbial and biologic growth that can offer*

biodegradation of organics ... has broad potential for both water and wastewater systems. Mainly for municipalities and private systems at present ... but give it time. Jess C. Brown, et al, the authors, have provided good research, good writing and good science. If you haven't read it ... worth searching out. Carbon continues to be an increasingly valuable media in numerous water and wastewater applications.

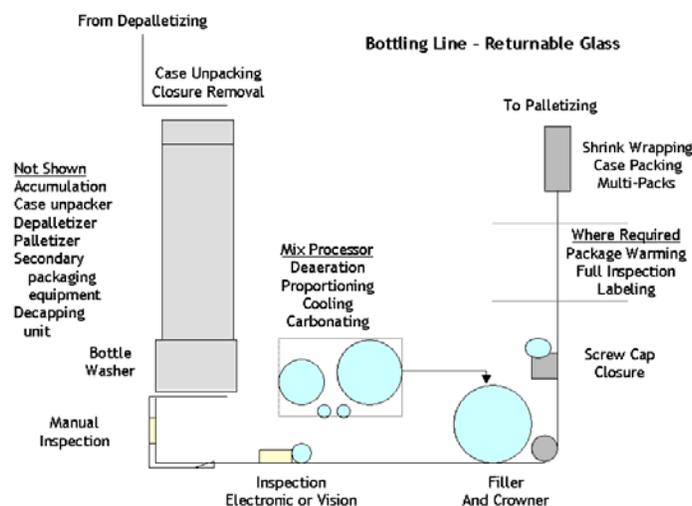
“Purified” Bottled Water

- The primary approach to producing “Purified” bottle water centers around reverse osmosis membranes to remove the great majority of organics and minerals. The most common approach is to use single pass, or double pass, R.O. membranes, with pre-treatment chain to remove debris, particulate matter and any characteristic that could damage or impair performance of the membrane. Post-treatment includes ozone addition and control.

An interesting alternative is the use of a single pass RO followed by continuous electrodeionization (CDI or CEDI). Extremely efficient at holding to “USP 23rd. revision” purified water parameters and at cost parity with two pass. One “Bottler” in New England combines this option with a brine RO to reduce water consumption by 80% (USFilter System).

Questions of the Month ...

1. In a water treatment system can GAC degrade THM's if you do not sanitize the carbon?
2. When chloramine is removed by activated carbon ... what happens to the ammonia?



Your suggestions on topics to be covered appreciated.

Tri-Lake has considerable experience on operating conditions and processing needs in most international markets.

We are available for consulting, training, seminars, trouble-shooting, special projects, research, and audits/surveys:

Phone 845-373-7310 or 8863
 e-mail: trilakegroup@att.net
www.trilakegroup.com