Vol. XI No. 9, September 1999

BOD REDUCTION

Calorie Counting For Wastewater

You thought that dieting started and stopped at the salad bar? Not so. Whether you are aware or not, your effluent has been on a diet for quite some time now. Environmental doctors have been monitoring things like trace metals, hydrogen ions and organic matter. However, they don't scold when things get out of balance, they fine!

ChemStation can help you understand and minimize these issues with our products.

BOD is the amount of oxygen used when microorganisms metabolize ...

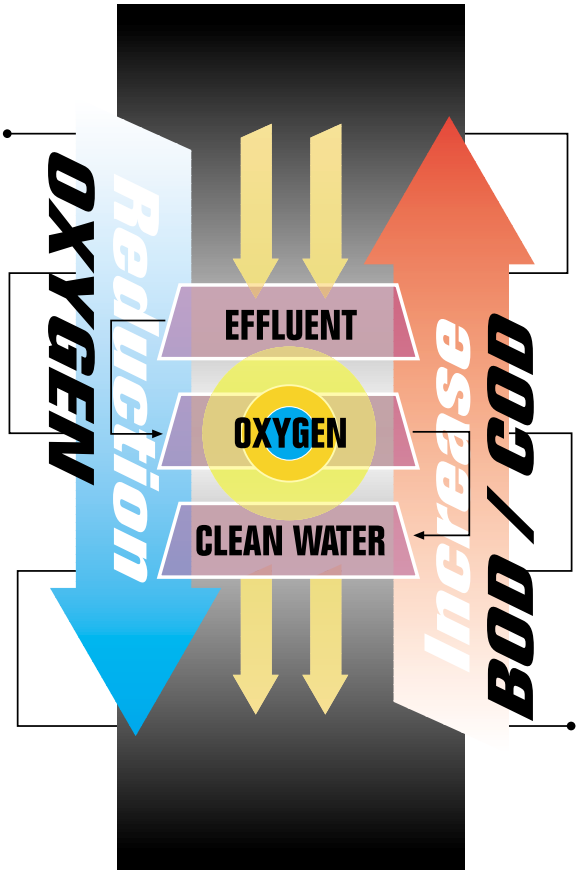
BOD is the amount of oxygen used when microorganisms metabolize or eat organic matter. Since it is measured by oxygen depletion, it is reported as parts per million (ppm) dissolved oxygen. Chemical Oxygen Demand (COD) is basically the same thing, except that the organic matter is nuked with aggressive hot chemicals. The COD takes only a couple of hours to perform and is a more complete digestion than the BOD. Bacteria are very effective, but cannot be rushed. The BOD test procedure takes five days to perform, and may not be 100% complete. If both COD and BOD are performed on a given sample, the COD should run 50% to 80% higher than the BOD. This ratio could be an indication of biodegradability, but there are specific methods for biodegradation testing.

BOD is of interest to environmental folks such as your local water/sewer department because it represents the waste loading that their plant will have to treat. The waste treatment plant has been built with a given capacity and it would be difficult to operate smoothly if loads exceed expectations.

So, where does this organic matter come from? By definition, organic matter is any material containing carbon. Greases and oils in the metal industry are organic. Food industry products are organic containing carbohydrates, vegetables, meat and fats. ChemStation's products such as surfactants, solvents and water conditioners are organic as well. When any of these materials go down the drain, they can be measured as BOD in the discharge.

Typically, the wastewater BOD is not heavily impacted by cleaning chemicals relative to other process sources. However, we can minimize this by careful choice of products. Do you need to know the amount of BOD that our product can contribute to the effluent? The COD level of ChemStation products can be calculated fairly accurately since the degradation is brought to completion. The BOD however, can only be estimated since the degradation is not completed in the test. To evaluate the impact on the effluent, it is necessary to estimate the amount of product dilution that occurs between the point of product usage and the point of discharge.

Be sure to call your local ChemStation sales rep if your wastewater has gone off its diet! ■



THE COMPANIES WE CLEAN

Bet you didn't know the wide variety of industries that rely on ChemStation for all of their general and specialty cleaning needs:

- Poultry, Seafood and Meat Processing Plants
- Oil Refineries
- Pulp and Paper Mills
- Stamping Plants
- Landfills
- Wastewater Treatment Plants
- Steel and Glass Manufacturers
- Automotive Maintenance Shops
- Printing Companies
- Food and Beverage Distributors
- School and Government Facilities

These companies present ChemStation with a diverse set of cleaning challenges. The result? We are in a constant state of research, development and implementation to meet industry needs with effective and efficient solutions. Often, we find that products developed for one industry can translate into products for other industries. Who wins? Our customers! ■

CHEMSTATION®

ChemStation - Your Local and National Cleaning Connection

You may think of us as your local solution for cleaning needs, but our ChemStation network extends to 40 cities across the United States … from Florida to Michigan, from Connecticut to Washington state. All of these ChemStations operate as independent companies, yet all provide the exact same service you are receiving in your city. If your location is part of a regional or national company, then you'll be pleased to know that ChemStation offers:

- Consistency of product, price, distribution and use
- Ability to specify products as needed at each location, yet operate as a cohesive cleaning chemical system
- Quick reaction to changes, regardless of location
- Product quality ensured through computer-controlled manufacturing on a local level
- Central billing for concise expense control and easy audit path
- Assurance of company-wide environmental compliance

Give your local ChemStation rep a call today to learn more about how our system can serve your company on a national level. ■

The Soap Box

Ida Fuller of Brattleboro, VT received the very first Social Security check on January 31, 1940 - for $22.54 *Country Journal*

Saudi Arabia is largely 830,000 square miles of desert with temperatures routinely over 118° F. Only 2 percent of the country is suitable for growing so much as a date palm. *An Incomplete Education*

In 1997 the Coast Guard spent nearly $400 million on rescues. *The Washington Post Magazine*

In 1998 in the U.S. alone, more than 3.4 trillion e-mails sped across the Internet compared with 107 billion pieces of first-class U.S. mail. *EMarketer Inc.*

Half of Hawaii's 140 native bird species are now extinct. Hawaii has been steadily losing its birds since the arrival of humans 1,200 years ago. *Audubon*

In Holland, annual per capita consumption of black licorice is about 4.5 pounds. *Saveur*

Our System Is The Solution

That's our mission at ChemStation - to develop and deliver products that meet our customer's needs. Here's how our system provides customer solutions every day, all over the country:

1. We provide custom-formulated industrial detergents blended by a patented manufacturing system.
2. We deliver your products with our own ChemStation trucks.
3. Through our metered delivery pump, we fill the refillable tanks at your facility.
4. Your usage is monitored through our proprietary software.
5. Just-in-time refills are managed by our computerized inventory system. ■

Send your comments to:

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ChemStation