

October 2013

Eastex Environmental Laboratory



Newsletter

Providing superior service and quality analysis for engineering firms, municipalities, school districts, government agencies, industrial facilities and individuals in the Greater Houston Area since 1986.

If you would like EEL to complete your DMR'S online, please contact Pam Hickman at 1-800-525-0508

Check your results from anywhere, anytime with



Call Susan today to set up your account or email eastexlab@eastex.net



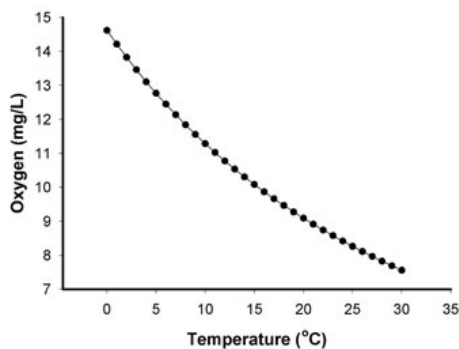
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Dissolved Oxygen and Temperature

Dissolved Oxygen (D.O.) has permitted levels on most municipal TPDES permits at the outfall. Typical dissolved oxygen limits are set at 4.0 to 6.0 mg/L. Time of day can make an impact on your dissolved oxygen measurements since temperature directly affects oxy-

gen capacity concentrations. To prevent operational and permit issues try to be consistent when you check the D.O. You can optimize your D.O. measurement by checking throughout the day and looking for differences. Also note the temperature when measuring in case there are any questions surrounding the measurement. This may help explain low D.O. values or defend high D.O. measurements. Other operational activities can affect the D.O. as well such as algae and over dechlorination.

Solubility of oxygen with temperature



gen capacity concentrations. Dissolved Oxygen values are inversely related to temperature measurements. This means that when the temperature increases the oxygen levels decrease and vice versa. This is especially important in the summer when we get record high temperatures. Temperatures for municipal discharges range from 15°C in the winter to 30°C in the heat of summer. This range in temperature can cause the D.O. capacity to drop from 10.2 mg/L down to 7.6 mg/L. Keep in mind that reflects the maximum that the D.O. can be! With this higher temperature in the water the water capacity for oxygen drops and facilities that operate with discharge D.O. values close to the permit may find themselves in

Holiday Scheduling

The year is almost over and Thanksgiving and Christmas holidays are approaching. We will be sending schedule reminders for Thanksgiving, Christmas and New Year.

Permits

Please send us a copy of your permit. We can better serve your analytical needs if we know what testing and frequency the state requires of your plant.

Please take a moment to fax it to 936-653-3172 or email to eastexlab@eastex.net



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Fecal Coliform

We have changed our fecal coliform method to the Idexx method to improve our services to our customer. The old plate method was outdated and the new method gives a broader detection range while reducing impact from interferences. This method is of higher quality and higher cost. We have been carrying this cost for several months while determining if this was the best change for our customer, and we feel that it is. We will be passing on the increased cost beginning September testing for Fecal Coliform. The new price will be \$35.

Wastewater Analytics Acronyms

ORGANICS:

BOD - Biochemical Oxygen Demand
COD - Chemical Oxygen Demand
TOC - Total Organic Carbon
O&G - Oil and Grease

SOLIDS:

TS - Total Solids
TSS - Total Suspended Solids
TDS - Total Dissolved Solids
TVS - Total Volatile Solids
TFS - Total Fixed Solids

NUTRIENTS:

NH3N - Ammonia
TKN - Total Kjeldahl-Nitrogen
NO3N - Nitrite/Nitrate
TP - Total Phosphorus

Tech Tip - It takes time to kill bacteria.

With all state waste water permits requiring some frequency of bacteria monitoring a lot of operators are facing new challenges to meet their ecoli or enterococcus permit requirements. One key factor in reducing bacteria values is adequate "contact time" to allow the chlorine to kill the bacteria. Most plants are designed with a 30 minute contact time. If the flow or hydraulic load is high, the retention time will be reduced and may cause bacteria to not be fully disinfected resulting in high values.

Clean Rivers

Eastex performs analysis in conjunction with Regional and area managers to evaluate streams and lakes for impairment. The data is available for the public to review the water quality at their location. This data covers most of the Houston-Galveston metro area and can be accessed at

<http://arccgis02.h-gac.com/wrim/>.

Field Supervisor

Chris Wirzberg 936-653-3249

Field Techs Contact

Brian Sewell 936-827-3377

Wendy Willson 936-828-7209

Dale Landrum 936-828-7205

Christopher Guinn 936-827-3378

Shawn Arnold 936-828-7208

Mark Bourgeois 936-828-7206

Lulia Galusha 936-828-7203

Cassie Tarron 936-788-4991

Laughter is the best medicine..

What did one bacteria say to the other bacteria?
Your gene pool could use some chlorine.

