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

Log in to **Client Connect** to check your results from any where, any time!

Call Susan or Ruth to get set up with an account.

Water Environmental Association of Texas event is on **April 16th 2015**, in Corpus Christi. Our Nacogdoches Laboratory Director, **Paul Hughes**, is getting a **Laboratory Excellence Award!**



What is pH? pH is a term used to indicate the alkalinity or acidity of a substance as ranked on a scale from 1.0 to 14.0. Acidity increases as the pH gets lower. The midpoint of the scale is 7. Water with a pH of 7 is neutral. If the water has a pH less than 7, the water is acidic and if the pH is greater than 7 it is alkaline.

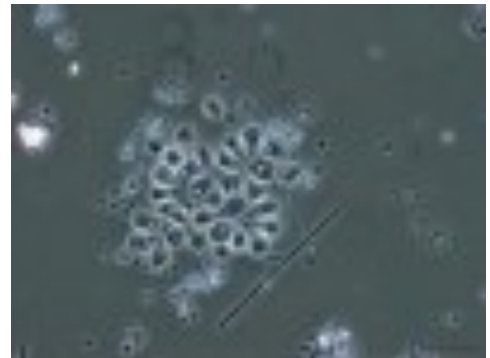
Why is controlling pH an important procedure in treating wastewater? As a chemical component of the wastewater, pH has direct influence on wastewater treatability — regardless of whether treatment is physical/chemical or biological. Because it is such a critical component of the makeup of the wastewater, it is therefore critically important to treatment. All wastewater permits have min/max pH limits as well. Exceedance may show an operation issue and will trigger a violation with TCEQ compliance.

What steps are needed to control pH? First of all, you have to identify the parameters — the pollutants or impurities — that are actually in the wastewater. Once the pollutants are identified, you should determine the starting and the ending pH values, along with a specific treatment procedure; then you have to select the appropriate chemicals best suited for treatment.

How do starting and ending pH values impact the treatment procedure? It takes residence or contact time during wastewater treatment for the pH to adjust appropriately. A very narrow pH range (i.e., 7.0 to 8.0) requires less contact or residence time as compared to a wider pH range (i.e., 7.0 to 10.0), so the procedure is affected by the required pH adjustment range.

Why is chemical selection an important consideration in controlling pH? Different chemicals have varying reaction times, which in turn

Mystery Bug Of The Month



Can you guess what this is? Hint: Their presence in a wastewater treatment system indicates high soluble biochemical demand levels, low dissolved oxygen and high organic load. First higher life form to come back after a chemical upset in the wastewater system. indicate when the wastewater system is getting healthier .

Starting April 2016, Coliform will be replaced as the bacteria indicator for public health with ecoli. If a system receives a present coliform result it will need to perform some process checks to ensure the system is in good operation, but it will only receive violations for ecoli present results.

have a major effect on pH adjustment and control. Therefore, the equipment residence or contact time is very relevant in relation to the chemical used for treatment.

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Can pH be controlled manually, or is automated instrumentation required? Rigorous precision of pH control is often required for treatment, and it seldom occurs by attempting to control pH manually. There are multiple interferences when attempting to control pH manually, so automation is recommended.

A series of simple procedural and maintenance steps can help ensure reliable and consistent pH readings in water and wastewater applications.

Troubleshooting a pH measurement problem means looking at various aspects of the procedure to identify the cause.

- ◆ Make sure the calibration buffers have not expired and replace them if they have.
- ◆ It is best to calibrate with buffers poured fresh daily or at least weekly; buffers that are reused for extended periods, especially if kept uncovered, can become contaminated and adversely affect calibration.
- ◆ Rinse the electrode thoroughly with deionized or distilled water and blot it dry between buffers used for calibration. This will prevent small drops of one buffer from contaminating the next buffer.
- ◆ Make sure you are using the right electrode and its not damaged.

Fun Facts

Temperature will have a measurable yet very slight effect on the pH of water. In fact, pure water has a pH of exactly 7 only at 25 degrees Celsius, or 77 degrees Fahrenheit. As the water temperature goes up, pH goes down. The converse is also true: colder water has a higher pH value. At 60 degrees Celsius or 140 degrees Fahrenheit, pure water registers a pH value of 6.96. In other words, the change is very slight and cannot be registered with crude measurement techniques such as pH test strips.

Do you have a Client Connect login?

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Susan or Ruth to get set up.

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Smooth operation of a waste treatment plant is critical. Environmental compliance is a must. Operational costs are skyrocketing with new environmental regulations. A complete audit

of your plant can help identify opportunity areas for improvement. Troubleshooting minor problems and implementing process changes can help avoid major problems.

For more information call Mark at 936 653 3249 or visit our website at eastexlabs.com

DMR-QA Study 35 Reminder This year's study officially begins today, March 20, 2015 and ends on July 10, 2015. If you have received notice of your participation in DMR QA 35 here are some deadline dates.

Mail the address notification form to the EPA by March 20th 2015.

Purchase your DMR QA chlorine sample from a provider from page 6 of the instructions packet within the next few weeks. We use ERA but refer to page 6 for a complete list of providers.

Analyze your sample and submit the data to the provider before the deadline in the shipping material and not later than July 10th 2015. If you need assistance on preparing the sample or DI water let us know and we will assist you. Eastex will also report all necessary data for your permit specification by July 10th 2015.

The provider will report the results to you and a final report package has to be sent to the state coordinator by August 28th 2015. If you need assistance in selecting these reports please let us know.

If you have additional questions or need assistance call Lori at 936 653 3249.

Answer to
Bug Of The Month:
Flagellates
(colonial flagellates)