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August 2009

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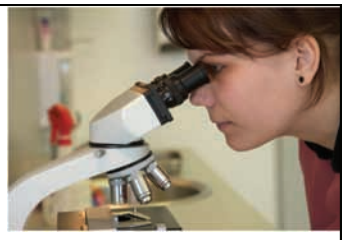

Coliforms: What Are They?
By Lyn Pope

Coliforms are bacteria. Specifically they are a group of bacteria, many of which are found living in the intestinal track of animals, including humans, and may be found in their waste. They can also be found in plant and soil material. Organisms which fall into this category include: *Escherichia, Klebsiella, Citrobacter, Enterobacter,* and *Proteus.* Horror stories about several of these organisms (*E. coli* O157:H7 for example) make the news every year, but most will not cause disease. Instead, exposure to coliforms and *E. coli* generally lead to symptoms such as diarrhea and vomiting. The body reacts to them as it would to food poisoning.

Since coliforms don't generally cause disease, why test for them? Simply, they serve as great indicator organisms. This means that they grow easily in a laboratory environment, they are safe for laboratory personnel to handle, and they reflect the bacterial ecology in a sample. Coliform testing has been used in the food and water quality industry for years. The idea is that coliform contamination originates from the same place as contamination caused by other more harmful or pathogenic bacteria. Thus, if coliforms are present and in high concentration, the exposure risk to disease causing bacteria (e.g. *Salmonella* or *Shigella*), protozoans (e.g. *Giardia*), and viruses (e.g. hepatitis) is heightened.

Coliforms, as well as many other microorganisms, are generally introduced into water through ground run off from agricultural areas, wildlife, woodlands, septic tanks, and sewage plants. As common contaminant of well water, the EPA recommends that water be tested for coliforms annually. Coliform testing may also be warranted if black water (or sewage-related) property damage is suspected.

Assured Biotechnology Corporation tests for coliforms and *E. coli* in a variety of manners. Samples may be submitted as a bulk (such as suspect water itself), surface samples, or air samples. Validated laboratory test methods are used to give results in one of two forms, a simple presence/absence or a total colony forming unit count.

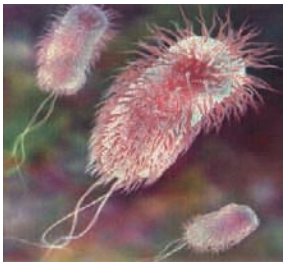

Fig. 1
Artistic Rendering of *E. coli*

Fig. 2
Actively Growing *Proteus sp.*

Fig. 3
Microscopic Image of *Giardia sp.*

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The Mold in the Basement
By E.A. Sobek, Ph.D.

"How could he have missed him, even in the basement light's feeble glow? ... And the smell of mildew and wet, rotting paper was changing to something else ..." Are lines right out of the psychotic thriller *The Shining* by the master of horror himself, Stephen King. His words illustrate the eternal dark and eerie connection between mold and basements. Thoughts of the supernatural, disease and death are often linked to dank moldy basements, providing a great medium for horror writers. Just do a search on amazon.com and you'll find almost 3,000 horror titles with basement in it. So, is there more fact or fiction behind mold and basements?

Let's look at the facts. Molds flourish in damp, humid environments and unfortunately basements often meet those environmental requirements. Basements are usually surrounded by soil on all sides. A once of soil contains millions of mold propagules. When rain water percolates down through the soil it leaches into the

concrete walls that enclose most basements. Mold spores move with the water, get inside and find a nice happy home to reproduce in.

We all know that cold air sinks and hot air rises. The same is true for homes. When its 90° F outside with 90% humidity, and your HVAC is cranking along, much of that cold air drops into the basement. Moisture from the concrete walls evaporates into the cold basement air, humidifying it. Mold spores on dusty basement surfaces are just waiting to grow. Anyone who has ever stored books in the basement or even leather boots knows the terror of explosive mold growth. It's more real than any horror novel and perhaps just as dangerous.

Fortunately, we are not helpless against the ravenous mold terrorizing our basements. There are some things we can do. For one, monitor the humidity. Go to your local Home Depot or Lowes and purchase an inexpensive temperature/humidity monitor. Set it up in your basement and check it often. If the humidity is consistently hitting 60% or greater, consider investing in a good dehumidifier. I prefer a dehumidifier that can be piped to a drain via standard tubing. If it doesn't drain, the dehumidifier reservoir needs to be emptied regularly, because it will shut off when it fills with water. You wouldn't believe how many people forget to empty their dehumidifiers. An inactive dehumidifier isn't helping and can contribute to mold contamination, because the water in the reservoir is a perfect location for moldy biofilms.

It's a good idea to have an inspector check out the basement for water intrusion if you suspect a problem. Excessive humidity in a basement may be the result of water infiltration through cracked walls. Moreover, a good inspector will walk around the house and look for drainage related issues. For example, sprinklers against the foundation are a big no-no; watering the side of the house leads to water in the basement. Also, clogged gutters that overflow can direct water into the basement. Keeping the soil well drained around the house is a must to keep a basement dry.

Consider this next time you dare to venture into the basement. If you feel a bit clammy or the hairs on the back of your neck stand up, there could be a raving lunatic lurking in the corner, or perhaps it's just excessive humidity and the moldy books and boots that you need to fear.

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Collecting Money
By Brad Russell

We all like getting paid for the work we do, but it's not always as simple as waiting for the money to come in. Effectively planning for collections ahead of time makes it much easier to collect money and take appropriate action if you cannot collect. There are four important aspects to collecting money in a timely manner: a credit policy, collection practice outlines, third-party collection, and discipline. We'll take a look at each.

A sound credit policy is the beginning and end to receiving money for your work and has a few key components. Invoice due dates establish when a bill is past due, which is required to hold people accountable. Typical time periods range from 15 to 30 days. If cash flow is an issue, consider an early payment discount of 1% or 2%. The most important part of the credit policy is penalties for past due invoices. These typically includes finance charges of 1.5-2% per month, turning the account over to debt collections after 90 days past due, and additional fees associated with debt collection if the account is turned over. Be sure to check local applicable laws.

Developing a procedure for past-due invoices is important. If you change your credit policy you need to notify customers in writing of the change. Once you have accounts that aren't paying, letters should be sent when an invoice is past due, 30 days past due, and 60 days past due. The early letters should be cordial and become more stringent as they get later. Several free templates are available on the internet. It is important to mail these letters in a timely manner so clients have a chance to respond.

Nothing makes clients with past-due accounts respond like the mention of debt collectors. Mentioning in a nice way that an account must be made whole or it will be turned over often yields immediate results. To back up that statement you must have a third-party debt collector. It is important to use someone experienced as it is a difficult field and many laws apply to debt collection methods. In many states you can charge collection fees to cover your cost of collection, so you can collect the amount owed to you in full and pay the collector. A good debt collector is a great tool and time saver.

The most important part of collecting owed money is discipline. You have to set rules and enforce them, otherwise people will take advantage. While charging a customer finance charges for 20 or 30 days doesn't seem like it will do much beyond upset the customer, it greatly increases the odds of the next invoice being paid on time and most clients are receptive to the practice. Make sure you send all letters at the appropriate date and are consistent with clients. Debt collection is a dirty subject for many people, but being proactive, thorough, and fair make it easier for everyone.

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