

As the Toilet Turns

The Microscopic World and Its'

Impact On Cleaning - Part 3

This is the third in a series of articles

By: Paul McTiernan of Coastwide Laboratories

Third segment: Cleaning and Disinfecting

"You can't kill it if you don't clean first."

In the past two segments we talked about the enemies we're fighting and how they travel. Let's start a strategy to battle these germs and viruses before they cause us problems. Our first important principle to remember is "You can't kill it if you don't clean it".

Our five-part battle plan consists of the following information and facts:

1. Viruses, bacteria, and all microbes hide inside the soil found on all surfaces.
2. Body fluids and waste can offer a protective barrier for germs to hide in.
3. Disinfectants are only good *if the surface is clean* and they can touch the germs.
4. Some, but not all disinfectants are also cleaners and can help remove these soils.
5. Heavier build-ups do require a detergent cleaner with agitation by brush or mop to get down to the dirt so as to reach the pathogens.

Noting those steps, let's take a look at disinfectants. All disinfectants need time to work. The protective barrier provided by food, human fluids or soil can increase the time required for the disinfectant to reach the viruses and germs. With that in mind, we can appreciate why disinfectants are necessary. Three steps are involved for the disinfectants to work properly.

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The first step: When we use our disinfectants and apply them to any surface, the dirt and germs are unaffected in the first few minutes of contact.

The second step: When we leave the disinfectant on the surface and use agitation, we break down the dirt barrier.

The third step: Finally, the germs are attacked by the disinfectant as the agitation occurs on the floor or surface being cleaned and the germs or viruses surroundings are revealed.

In the July issue, we will explore two different types of cleaning. Environmental and sanitizing.

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June 13

School Ends!!



The Knot Has Been Tied!

Congratulations to Kathy Wahlen, formerly Kathy Martin, on her wonderful wedding day! She and her new husband, Jeremy, were married on Saturday May 3, 2003. They spent their honeymoon in Hawaii while we all enjoyed weather a bit cooler than there. Kathy works at Lake Wilderness Elementary as a custodian and Jeremy works as a truck driver for Fed Ex Freight. The Custodial Department wishes them both a long-lasting and joy-filled marriage for many years to come.

Special Training!

The Training Committee is organizing a special training session to be held in the High School Gym. It will last from 8:00 a.m. to noon. Four different training courses will be in rotation throughout the morning. More details will be provided within the next few weeks. We know all will enjoy this special event and invite all to attend. You won't be disappointed!

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Hard Water, Soft Water and Cleaning



Have you ever considered water as being hard or soft? Did you know that it could be? During the month of April, in an e-mail to Roger McFadden of Coastwide Labs, this question was posed along with several other related questions. In the following paragraphs, you will find some interesting answers to these questions. You'll appreciate how these affect our cleaning.

Q1: What is the difference between soft water and hard water?

Water is considered soft if it has a low concentration of dissolved minerals, especially calcium and magnesium ions dissolved in it. Hard water has a high concentration of calcium (Ca) and magnesium (Mg). Water hardness is generally expressed as the amount of calcium carbonate (CaCO₃). Water hardness is measured in ppm (parts per million). Here is a table that will give you a comparative look at water hardness:

<i>Water Hardness</i>	<i>PPM</i>
Very Soft	0 to 50 ppm
Soft	50-135 ppm
Medium Hard	135-200 ppm
Hard	200-350 ppm
Very Hard	Above 350 ppm

Q2: How does water hardness affect cleaning?

Soap is a good cleaning agent. When soap is used in hard water its effectiveness is reduced. The mineral salts in hard water react with soap to form an insoluble precipitate known as a soap film or scum. Soap films caused by the hard water do not rinse away easily. They remain on the surface being cleaned and form an unsightly deposit on surfaces. This scum or film is what is commonly found on bathtubs, sinks and shower walls. In addition to the unwanted residues, the cleaning ability of the soap is minimized.

Q3: How can the problems of hard water be overcome?

Modern detergent chemistry has overcome the water hardness obstacles. Instead of formulating cleaning products with soaps, chemists have designed special detergent molecules that are not affected by the hard water. In addition to detergent molecules or surfactants that are compatible with hard water they also work effectively in soft water. Another way to control the hard water effect is to soften the water using water softeners and deionizers. **NOTE:** All general purpose cleaners, glass cleaners, degreasers, wax strippers, disinfectants and floor cleaners formulated by Coastwide Laboratories are designed to work effectively with water hardness up to 400 ppm. We combine the chemistry of surfactants that have hard water tolerance along with chelating agents to prevent minerals in the water from interfering with the detergency of the product.

Q4: How is water hardness measured?

There are several ways to determine the hardness of water. One of the simple ways is to use a total dissolved solids (TDS) tester. You simply draw water from your water source and test it quickly with the testing device which gives you a direct reading. It will only indicate total dissolved solids and does not break the solids into separate minerals.

Q5: What is the water hardness in our area? How can we have it tested?

The water hardness in your area is between 12 to 40 ppm from groundwater sources and from 80 to 120 ppm from well water sources. These are considered soft water.

We would be pleased to test your water in our Coastwide Laboratories and report our findings to you. Draw about 8 ounces of water from your water source, collect it into a clean container and give it to Paul McTiernan and he will forward to our laboratory for testing. We will report the results to you.

Thank you Roger McFadden, Paul McTiernan and Coastwide Labs. Our Custodial Department appreciates the enlightenment on this subject as well as the knowledge provided which helps us all to be more professional and to be able to do our jobs better.



Bob's Blurbs

Here are a few reminders from Bob Schuler.

1. Due to the increasing number of break-ins at our schools, it is imperative that all custodians make sure that the windows and doors are ALL locked each night before going
2. Any input on the types of training the custodians expect from the custodial/maintenance staff would be greatly appreciated. Please send all requests/ideas to Bob Schuler or Angie DeBiase for review.
3. Please keep custodial closets clean and organized. MSDS manuals must be kept up-to-date and chemical labels need to be facing out where they can be easily identified. Be aware of your work area and help eliminate injuries on the job. Keep safety in first place.

home. Make sure all areas are secure.

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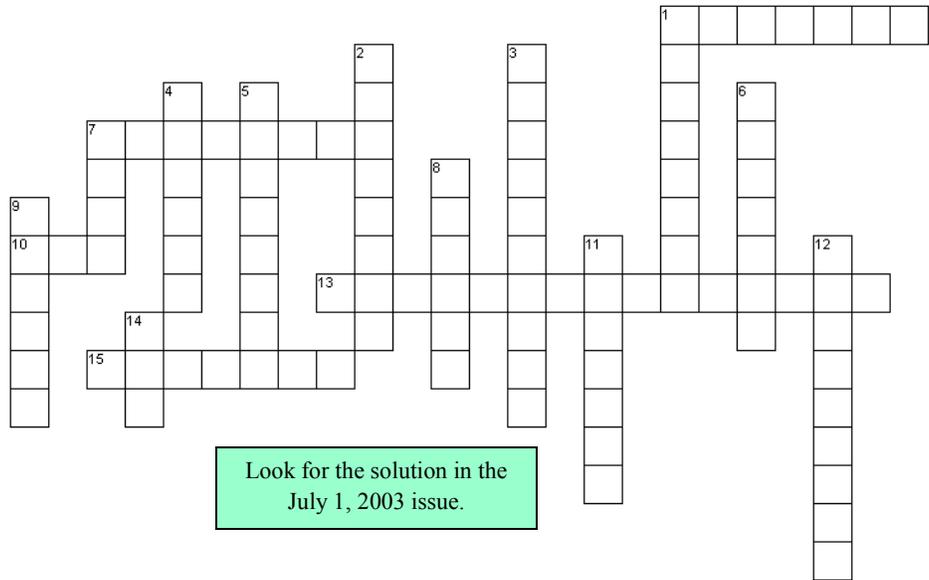
Custodial Basics Crossword Puzzle

Across

1. Used to energize some light-bulbs
7. The shape of carpet fibers
10. Measurement of electrical current
13. (Three words) pH
15. Blade for removing gum, wax, etc.

Down

1. (Two words) Pad used to strip floors
2. Reducing the concentration of
3. Used instead of a blackboard
4. Used to reduce dust in buildings
5. (Three words) Unfortunate custodian
6. Adjusted when replacing fan-belts
7. Done when cleaning a spot on a carpet
8. The German word for power
9. Machine used to remove soil from carpeting
11. Device to cool water for building cooling
12. (Two words) Floor wax can do this
14. Company who services our Heating/AC units (Abbreviation)



Look for the solution in the July 1, 2003 issue.

(Crossword Puzzle created courtesy of <http://puzzlemaker.school.discovery.com/code/BuildCrissCross.asp>)

Good-Bye Angie

As of May 23rd, Angie DeBiase will no longer be working with us. For personal reasons, she has resigned. We all appreciate the work she did for our department, and wish her the best in her future aspirations. Take care Angie!

Tip of the Month

When scraping labels, paint or other substances off of windows, use a razor blade scraper. First, wet the window down, and then, using the scraper at an angle, carefully remove the unwanted material. Be careful not to tip the scraper too much or you could scratch the glass or break the scraper blade. Once finished, re-wet the window and clean it off.



Dictionary Daze

Can You Use These Words Somewhere This Month??

1. Peripatetic
2. Fruition
3. Plethora
4. Translucent
5. Anthropomorphism

Next Month:

[The Year in Review, Part 1!!](#)

Enjoy some highlights from a year's worth of information provided in our monthly newsletters.