



Educational Facility Disinfection

Training Library
Workbook



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Glossary of Terms

Section 1.

Introduction to Educational Facility Disinfection



Proper disinfection in an educational facility is extremely important to limit and control the growth of harmful microorganisms and the spread of infection and disease. Thorough cleaning and disinfection helps decrease absenteeism of students and teachers and ensures a healthier environment.

You play an important role in the health and safety of your facility. By learning and practicing the proper disinfecting procedures and knowing how these procedures affect cleanliness, you become a vital part in the well-being of the people around you.

This training module, which is one in the Betco Resource & Process Management™ (RPM) series, focuses on proper disinfection procedures and recommendations within educational facilities, including universities, schools and daycare settings.

The purpose of this overview is to provide a basic knowledge on what types of surfaces should be disinfected and how often. It is important to remember that this module addresses disinfecting common surfaces and locations. It does not cover complete cleaning applications or techniques for the entire room or surface.



This module will cover:

Types of Disinfectants

Safety Precautions

Preparation

Disinfecting recommendations for the following locations:

- Classroom
- Nurse's Office/Infirmary
- Locker Rooms and Showers
- Cafeteria
- Gymnasium
- Stairways/Hallways
- Drinking Fountains

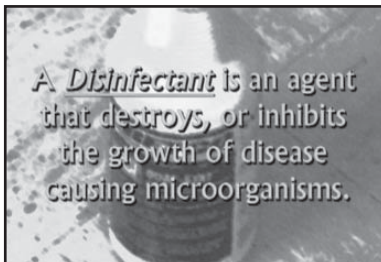
Summary

Betco has over 300 specialty cleaning products and a full line of equipment and accessories. We recommend using:

- Quat-Stat™ - *broad spectrum disinfectant excellent for meeting the requirements of the OSHA Bloodborne Pathogen Standard.*
- Glybet™ – *disinfectant spray*
- Clario® UltraBlue™ *Antibacterial Foaming Skin Cleanser*

Section 2.

Types of Disinfectants



A disinfectant is an agent that destroys, or inhibits the growth of disease causing microorganisms. It is important to understand the different types of disinfectants that are available.

The most popular types of surface disinfectants are:

- Synthetic phenols
- Quaternary ammonium products, commonly referred to as quats
- Chlorine, also called bleach
- Iodine
- Alcohol

See the “Glossary” for further definitions.

Disinfecting reduces the risk of cross-contamination. Most germs must hitchhike to get around and since we touch so many surfaces throughout the day, the likelihood that we will pick up germs is virtually guaranteed. Be aware that a microorganism can hitchhike in various ways. Skin to skin, on materials such as laundry or sponges, droplets from coughing and sneezing, airborne dust particles, food, water and insects and animals are all ways infectious microorganisms can be transmitted.

Section 3. Safety Precautions



Before beginning with any cleaning task be sure that you fully understand how to use the chemicals and equipment required for the job. It is regulated by OSHA that every employee has a right to know about chemical hazards within their workplace. A material safety data sheet, commonly called a MSDS will provide information regarding the chemicals within your building. Read and understand the MSDS, as well as the product label for every product that you use. Your supervisor will show you where to find your MSDS information and will also help you to read and understand each sheet.

Be careful not to use cleaning chemicals on any surface for which they are not intended. Be especially cautious when using acid cleaners. Never mix chemicals, it could cause serious or even fatal injury.

Practice universal precautions when cleaning any blood or body fluid spills, or soiled materials that could contain these or other potentially infectious substances.

Refer to OSHA's Bloodborne Pathogen standards for more information. Betco provides a Bloodborne Pathogen training module within the RPM Training Library series.

Accidents will be limited when the proper caution signs are posted prior to cleaning, such as "Wet Floor" signs.

Always wear the proper Personal Protective Equipment or PPE to protect yourself from exposure to cleaning chemicals. Gloves and goggles will prevent chemical splashes from coming into contact with your skin and eyes.

One of the best ways to reduce cross-contamination, besides proper disinfection, is frequent hand washing. The physical action of hand washing will greatly reduce the number of bacteria on the skin, and reduce the chances of cross-contamination. The less contamination, the healthier the environment. Be sure to thoroughly wash your hands after every cleaning task.

Section 4.

Preparation



Gather the proper equipment for the cleaning tasks planned for that day. Load the cart with all cleaners that will be needed.

Be sure that the correct dilution rates are used according to manufacturer's recommendations. Betco Chemical Management Systems ensure that dilution rates are correct and make your job faster and easier.

Always prepare disinfectant solutions fresh daily or sooner if visibly soiled in order to ensure their effectiveness.

Remember these tips before beginning your cleaning:

- Clean from top to bottom. Bringing soil to the lowest level as you go about your routine.
- When wiping, clean in a consistent pattern such as up and down then back and forth to ensure that you cover an entire surface. Be sure to overlap your strokes.
- When cleaning a room begin at the door and work clockwise around the room. This will make certain that you don't overlook an area.
- For proper disinfection, disinfectants require a specified contact time. Always follow the manufacturer's label instructions and be sure to allow the required contact time for all disinfectant cleaning throughout this module.
- Before disinfecting remove any gross filth, such as soap and scum, rust or graffiti with an appropriate cleaning product for the job.

Section 5.

Location



Classroom

Following Betco's RPM recommendations, these areas in a classroom or office should be cleaned with a disinfectant using a damp wipe procedure, at least once a week:

- Door knobs, push plates and hand rails.
- All nonporous desk tops, table tops and chairs.
- Sinks and fixtures.
- Phones, be sure not to spray directly on the unit, wipe with a damp cloth.
- The inside and outside of trash receptacles.

For items such as toys, cots, mats or similar items that may come into contact with children's hands or mouths, please refer to the manufacturer's instructions on cleaning or laundering for that item.

Nurse's Office/Infirmary

Referring to Betco's Resource & Process Management™ or RPM recommendations, clean the entire infirmary with a disinfectant solution. Please consult the OSHA Bloodborne Pathogen module prior to disinfecting an infirmary.

Spray disinfectant on a clean cloth or sponge and wipe all hard nonporous surfaces. Spot clean walls, lights and doors, as needed. Wipe the inside and outside of the trash receptacle with disinfectant after removing the waste. Cleaning cloths or sponges should be changed frequently to avoid cross-contamination.

As an additional precaution, use a disinfectant spray such as Glybet™ on areas that people touch such as doorknobs, push plates and handrails.

Post "Wet Floor" caution sign and wet mop the floor with disinfectant solution. Begin from farthest corner and work toward the door.

Be sure to wash your hands when through.



Locker Rooms and Showers

According to Betco's RPM recommendations, the following areas in locker rooms and showers should be cleaned with a disinfectant on a daily basis by using a spray wipe procedure:

- Shower stalls and fixtures
- Sinks and fixtures
- Towel dispensers
- Toilets and urinals
- Doorknobs and handles
- Benches

It is recommended that all hard floor surfaces are disinfected on a daily basis using a mop or autoscrub method.

Other periodic disinfecting procedures include:

- Walls
- Lockers
- Grout Scrubbing

For more information on complete restroom cleaning procedures refer to Betco's Resource & Process Management™ Restroom Sanitation Training Module.



Cafeteria

Based on Betco's RPM recommendations, the following areas in a cafeteria setting should be cleaned with a disinfectant on a daily basis, using a damp wipe procedure.

- Nonporous tabletops and horizontal surfaces (Tabletops must be rinsed prior to use)
- Chairs and benches
- Doorknobs and handles
- Trash receptacles
- Vending machines

On a periodic basis clean the walls with a disinfectant. Be sure not to use disinfectant on any areas that come directly in contact with food. A sanitizer such as Sanibet™ should be used to sanitize food prep areas.



Gymnasium

It is suggested by Betco's RPM recommendations, that the following areas be cleaned with a disinfectant on a daily or weekly basis:

- Workout and exercise equipment
- Door knobs and handrails

When cleaning exercise mats, follow the exercise mat manufacturer's recommendations.



Stairways and Hallways

Betco's RPM recommends that the following areas be cleaned with a disinfectant on a daily basis:

- Doorknobs and handrails.
- All nonporous hard surfaces that are constantly touched by people.

By wiping and cleaning commonly touched surfaces on a daily basis, the spread of germs is greatly reduced, which allows for a healthier environment.



Drinking Fountains

Using Betco's RPM recommendations, all drinking fountains should be disinfected on a daily basis by wiping all parts of the fountain including the exterior.

Operate the fountain briefly to flush any of the disinfectant solution out of the fountainhead.

Section 6. Summary



- Proper disinfection is extremely important to limit and control the growth of germs that spread infection and disease.
- Understand product labels and MSDS Sheets.
- Prepare disinfectant solutions fresh daily or when solution is visibly diluted or soiled to ensure their effectiveness.
- Practice Universal Precautions when cleaning blood or body fluid spills.
- Always wear the proper Personal Protective Equipment.
- Thoroughly wash your hands after cleaning. Clean from top to bottom.
- Clean in a consistent pattern.
- Begin at the door and clean clockwise when cleaning rooms.
- Allow the appropriate contact time when disinfecting.
- Continually change cloths and sponges to avoid cross-contamination.
- Know your daily and weekly cleaning disinfecting procedures.

The service you provide is very important to the well-being of students, staff, visitors and yourself. Be proud of the skills you are developing and know that you truly make a difference in creating a clean and healthy environment.

Section 7.

Supply Checklist

Educational Facility Disinfection

Betco Products:

- Spray disinfectant - Glybet™*
- Clario® UltraBlue™ Antibacterial Foaming Skin Cleanser*
- Disinfectant - Quat-Stat™*

Items

- Trashcan liners
- Cleaning cloths/sponges
- Dust mop
- High duster
- Wet mop
- Mop bucket and wringer
- "Wet Floor" signs
- Dust pan and broom
- Paper products

PPE

- Gloves
- Goggles

Section 8. Certification Exam

The following exam will certify you as an official Betco Educational Facility Disinfection Specialist. Please take the time to complete the exam. Fax or mail completed exam to:

Betco Corporation
P.O. Box 3127
Toledo, OH 43607
Fax # 419-321-1954
Attn: Marketing

Exams that are returned to Betco with a grade of 80% or better will receive a certificate of completion. Exams can also be taken online at www.betco.com.

To earn .20 Continuing Education Units (CEU), please mark the box on the information form. Exams will then be forwarded to IEHA for accreditation. IEHA will send certificates directly to the contact.

Please fill out the following information and return it with your completed exams:

Your Name: _____

Company Name: _____

Address: _____

City _____ State _____ Zip Code _____

Phone: _____

E-mail address: _____

Signature: _____

Please forward my exam scores to IEHA for Continuing Education Units.

IEHA Course #10607x .20 CEU's



Section 8. Certification Exam

EDUCATIONAL FACILITY DISINFECTION IEHA Course Number: 10607x Credit Hours: .20 CEU's

1. Proper disinfection is extremely important because:
 - It creates a good smelling environment
 - It limits and controls the growth of microorganisms and the spread of infection
 - It helps make cleaning easier
2. A disinfectant is an agent that destroys or inhibits the growth of:
 - Disease causing microorganisms
 - Quaternary ammonium products
 - Airborne dust particles
3. When cleaning any blood or body fluid spills it is important to:
 - Clean the area very well
 - Practice Universal Precautions
 - Let the area soak in cleaning solution overnight
 - Ask your supervisor to handle it
4. Disinfectant solutions should be prepared on a weekly basis.
 - True
 - False
 - It depends
5. The proper way to clean an exercise mat is to:
 - Scrub it with bleach
 - Run an automatic scrubber over it
 - Follow the manufacturer's recommendations
6. Which is not one of the three cleaning rules you should follow when disinfecting?
 - Clean from top to bottom
 - Perform dry procedures before wet procedures
 - When wiping, clean in a consistent pattern
 - Spray disinfectant on all surfaces
7. Which is not a type of disinfectant?
 - Synthetic phenols
 - Quaternary ammonium
 - Antiseptic
 - Iodine
8. When using cleaning cloths or sponges to disinfect, it is important to:
 - Change them frequently to avoid cross contamination
 - Rinse them out with warm water between tasks
 - Soak them in a mop bucket for ten minutes
9. Which is not an area that you should apply a disinfectant?
 - Food contact surfaces
 - Sinks and fixtures
 - Handrails and door knobs
 - None of the above
10. Which Betco product is most appropriate for disinfecting?
 - Deep Blue
 - Quat-Stat™
 - Cide-Bet
 - Stix™
11. Before wet mopping an area, what should you do first?
 - Post "Wet Floor" caution sign
 - Spray the floor with disinfectant
 - Remove all furniture

EDUCATIONAL FACILITY DISINFECTION IEHA Course Number: 10607x Credit Hours: .20 CEU's

12. Trash cans should never be wiped with a disinfectant.
- True
 - False
 - It depends
13. Which safety practice is most appropriate when disinfecting?
- Wear gloves and goggles
 - Read the MSDS and label before using
 - Never mix chemicals
 - All of the above
14. Which location would you most likely not use a disinfectant cleaner, according to this training?
- Locker room
 - Classroom
 - Gymnasium
 - None of the above
15. A disinfectant is the only cleaning chemical needed for a clean and healthy environment.
- True
 - False
 - Sometimes
16. According to this training, it is recommended to use a "damp wipe" method for disinfecting which surface?
- Toilets
 - Shower Walls
 - Phones
17. According to this training, it is recommended to perform which disinfecting task daily?
- Wipe handrails in stairways
 - Wet mop hard floor surfaces in locker room
 - Spot clean walls and doors
18. If you are unsure of how to use a cleaning chemical you should:
- Call the school superintendent
 - Read the label and MSDS
 - Use a different cleaner
19. What can you do to reduce your risk of being cross contaminated from microorganisms?
- Take a hot shower after work
 - Read more training material
 - Wash hands frequently
20. After learning about disinfecting you should be:
- More knowledgeable
 - Proud
 - Helpful in creating a safe and healthy work environment
 - All of the above

Appendix

Glossary of Common Terms Associated with Disinfection

“Bloodborne Pathogens” – pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV-1).

“Contaminated” – the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

“Contaminated Sharps” – any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes and exposed ends of dental wires.

“Cross-contamination” – the process of passing bacteria or viruses indirectly from one patient to another through the use of improper sterilization procedures, unclean instruments or recycling of products.

“Daily Cleaning” – procedures performed on a daily basis such as emptying trash and dust mopping.

“Decontamination” – the use of physical or chemical means to remove, inactivate or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal.

“Detail Clean” – cleaning procedures performed 4 to 12 times per year such as vent cleaning, grout scrubbing and wall washing.

“Disinfectant” – an agent such as heat, radiation or chemical that destroys, neutralizes or inhibits the growth of disease carrying microorganisms.

“Disinfection” – the process of cleansing as to destroy or prevent the growth of disease carrying microorganisms.

“Efficacy” – the measure of a disinfectant to produce its desired effect.

“Infectious Materials” – (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

“Project Cleaning” – extensive cleaning procedures performed 1 to 4 times per year such as stripping and refinishing the floors and carpet extraction.

“Personal Protective Equipment” (PPE) – specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Appendix

Glossary of Common Terms Associated with Disinfection

“Universal Precautions” – prudent standard preventive measures to be taken by professional and other health personnel in contact with persons afflicted with a communicable disease, to avoid contracting the disease or infection. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV and other bloodborne pathogens.

“Synthetic phenols” – kill a wide range of organisms and are widely used in operating rooms. They are excellent products for destroying the tuberculosis organism and do not lose their effectiveness in a soiled environment. They are corrosive and should never be used around newborns.

“Quats” – the most widely used disinfectant used in the market today due to their versatility and cost effectiveness. They kill a wide range of microorganisms including staph, salmonella, and pseudomonas. Quats are less corrosive, and are used in schools, institutions, supermarkets and hospital settings.

“Hypochlorite/Bleach” – corrosive and should be restricted in use. It should not be used in general building operations because of the potential of interacting with other chemicals, which can result in a toxic gas. Although it can be used as a disinfectant or sanitizer, it is not an effective cleaner. Never mix bleach with another chemical.

“Iodine” – a powerful disinfectant that, when used in the form of iodophors, will kill a wider range of pathogens than quats and phenolics. As a primary use disinfectant it is not desirable due to its staining properties. Because of iodine’s acidic qualities, its use is restricted to specialized areas, such as surgical settings.

“Alcohol” – provides an efficient means of killing pathogens. Typically, ethyl or isopropyl, alcohol is used for smaller area surface disinfection. These products are usually packaged in sealed aerosols or smaller-use containers, since alcohol can pose a fire hazard.