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SANITATION TRAINING PROGRAM



Where products meet service in  
one complete program.

The information in this presentation has been compiled using expert knowledge, industry expertise, the sanitation law, as well as extensive research and development from the following organizations:



**Disclosure:**

The following information is not legal advice. It is for educational and informational purposes only. If you need legal advice, consult the United States Department of Agriculture directly, or a licensed attorney.

# Benefits of sanitation

## Presentation Sections

1. Why Should You Care?
2. The Basics of a Sanitation Program
3. Science Behind Cleaning
4. Science Behind Sanitation
5. Maintaining a Clean / Sanitary Workplace
6. Developing a Program
7. Procedures, Chemicals and Equipment

# Basic of sanitation

- Proper sanitation contributes to the control of bacteria.
- Safety and quality of a program must be driven by upper management.
- Consumer protection and product safety must be priorities.

# Basic of sanitation

- Within your sanitation program, there will always be microorganisms. They can be in the form of **Bacteria**, **Fungi**, and **Viruses** among others.
- Their growth is typically affected by **Nutrients** (food), **Temperature**, **Moisture**, **Atmosphere**, **pH**, **Inhibitors** (chemicals).
- The groups of microorganisms we are most concerned with are **Pathogens** (disease-causing organisms), and **spoilage bacteria** (caused from food spoilage).

# Basic of sanitation

Controls will be critical to your program. If you do not carefully **design, control,** and **monitor** your program, it will never achieve your expectations or the expectations of your consumers.

When establishing your plan, consider the following:

- Written procedures
- Effectiveness
- Safety oriented
- Practical
- Training
- Visual aids to support the program
- Ongoing feedback
- Continuous improvement and innovation
- Updated regularly

# Basic of sanitation

## Why do We Clean?

### **IT'S THE LAW**

The Food and Drug Administration Good Manufacturing Practices (GMP's) require you to produce foods that are safe and wholesome which have been produced, processed, stored, and distributed under sanitary conditions. Sanitation will ultimately lead to prosperous and respected companies or ones that falter and eventually go out of business.

The Center for Disease Control estimates that between ten to twenty billion dollars per year are spent on foodborne illness. Upwards to 9,000 individuals may ultimately die from consuming unsanitary foods and beverages, many of whom are children or the elderly.

Food safety is market driven, not regulation dependent. Consumer confidence is critical. It pays to do it right always, and it requires a dedicated team.



## **Section 3**

# Science Behind Cleaning

## Principles of the Cleaning Process?

Cleaning is defined as removing or treating unwanted material on a surface. Each step along the way in the process contributes to the success of the program. Please keep in mind the following with cleaning:

- Preparation (pre-rinse)
- Wash
- Rinse and repeat
- Sanitize

Let's go into each of these more in-depth...

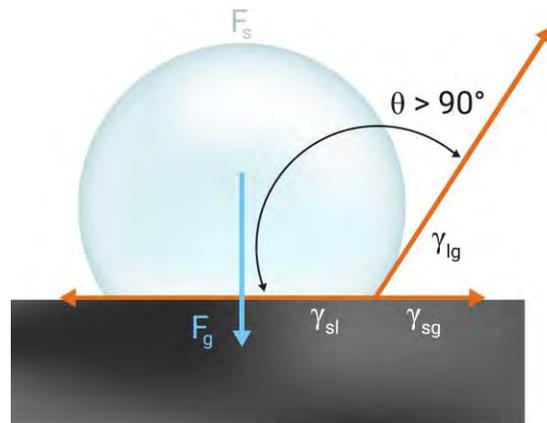
# Science Behind Cleaning

- Preparation - This includes removing all food product, gross soils, etc. and packaging materials from the area. Also included will be disassembling of equipment for cleaning, covering equipment not to be cleaned or contaminated, sweeping, shoveling, or squeegeeing gross soils for appropriate disposal. In other words, rinsing down the soiled surface.
- Washing - Applying appropriate detergents and/or cleaners to the individual equipment, whether it be manual, foaming, COP (clean out of place), or in CIP (clean in place) systems.
- Rinsing - As in thoroughly rinsing the surface as well as inspecting to verify cleanliness in your critical control point areas.
- Sanitizing - In other words, reducing the levels of bacterial to safe and acceptable levels to provide a safe and quality product.

# Science Behind Cleaning

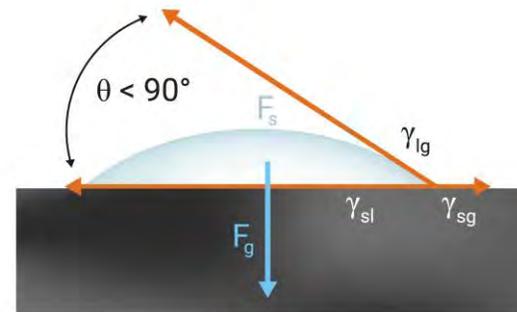
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## HYDROPHILIC



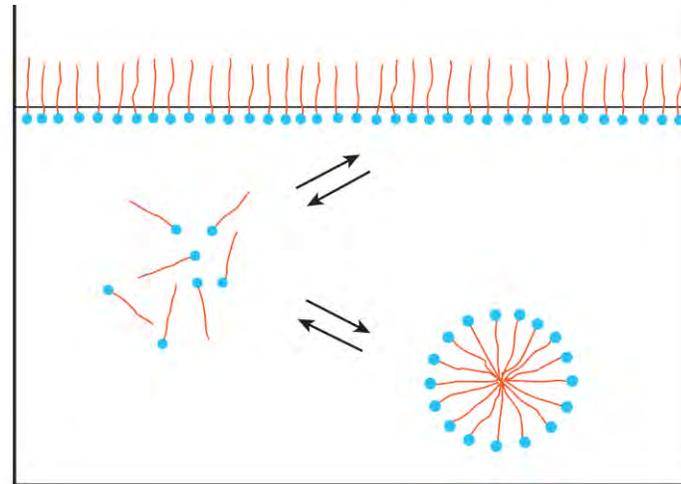
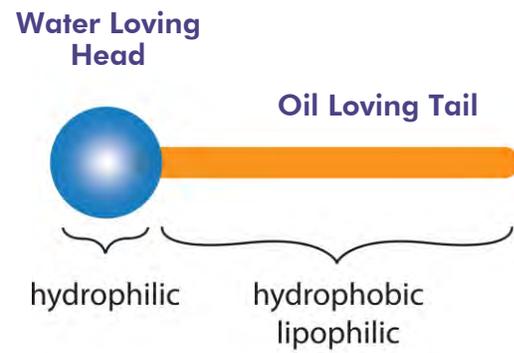
Hydrophobe

## HYDROPHOBIC



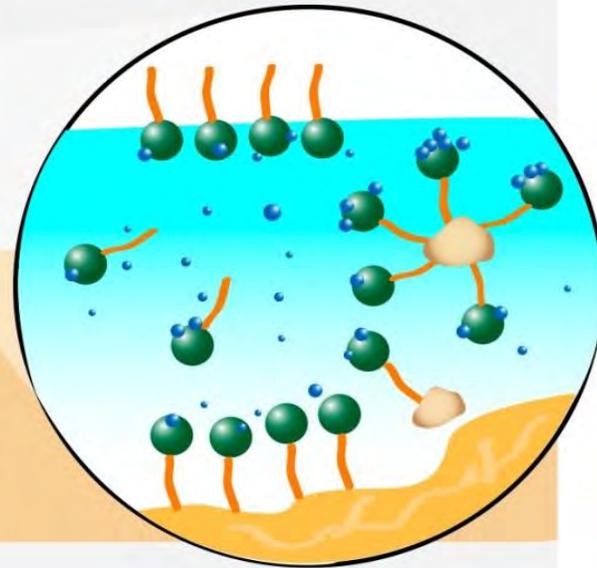
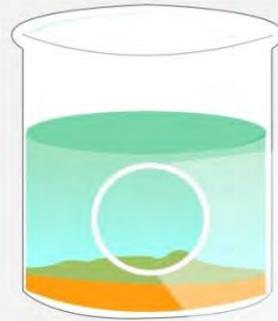
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# Surfactants

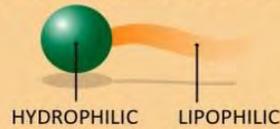


# Surfactants

## How Surfactants Work



Surfactant Molecule





## **Section 4**

# Science Behind Sanitation

## Components of Cleaning Compounds

### Water

Water is the primary component of all liquid sanitation products and their in-use solutions.

### Acids

Used primarily for the removal of hard water minerals such as calcium, magnesium, and iron.

### Alkaline

Aid in the removal of organic soils, such as oil, grease, protein, carbohydrates, and fats.

### Chlorine

Used as an additive to improve product performance on difficult soils. Can also be used as a disinfectant and sanitizer.

### Chelating Agents

Used as an aid in alkaline cleaning products enabling the product components to function more effectively in hard water.

### Wetting Agents

Allows product to promote greater penetration of the surface soil contributing to improved results.

## Controllable Factors in Cleaning

### **Dilution Ratio**

Label directions for product dilutions have been established to achieve the best cost and performance. Keep in mind, disinfectants and sanitizers dilutions are based on actual bacterial kill data derived from standard testing guidelines.

### **Temperature**

Temperature can affect activity level of cleaning solutions. Viscosity of fatty soils will decrease with increases in temperature. Thus the warmer the system, the more efficiencies gained with the cleaning operation.

### **Time**

Effective soil removal includes added contact time for the cleaning solution on specific soil. A minimum of five minutes up to fifteen minutes provides positive results.

### **Agitation**

Mechanical agitation (i.e. high pressure, circulation, hand scrubbing with brush or pad) will assist breakdown of soil and the surface being cleaner.

## Soil Identification

### **Lipids (fat and oil)**

Relatively easy to remove by rinsing with hot water (125°F or warmer). The melting point of animal fat is 120°F. When lipids are “cooked” on a surface, a heavy duty alkaline is required to break down the soil for its removal.

- Appearance: Off white/white yellow film

### **Proteins (blood, muscle, and cartilage)**

Easy to remove with high pressure. Luke warm water at best, used to rinse with medium duty alkaline cleaner with good wetting properties is effective. Addition of chlorine greatly increases the cleaning effectiveness.

- Appearance: Bluish white film

### **Carbohydrates (sugars and starch)**

Cold rinse with high pressure water will remove starch build ups. Medium duty alkaline cleaner will remove these soils.

- Appearance: Bluish white film

### **Hard Water Scale (mineral deposits, and calcium)**

Difficult to remove as build up occurs over time. Acid cleaners work best to dissolve these deposits.



# Maintaining a Clean and Sanitary Workplace

## Personal Hygiene

- How can food safety be promoted through personal hygiene and work attire?
- Know Why Personal Hygiene and Work Attire So Important.

### ***A foodservice employee can contaminate food by hands***

- After touching anything that could contaminate hands.
- By being sick with a stomach or intestinal “bug” that includes vomiting and/or diarrhea, etc.
- After caring for a person with a stomach or intestinal “bug.”
- By having an infected burn, wound, or other injury, and not covering it properly.
- When taking prescribed or over-the-counter medications (the medicine can get on the food)

*A person who feels completely healthy may be the host of a harmful microorganism and not know it. Some foodborne illnesses do not cause symptoms until the most infectious stage has passed (Hepatitis A), and some harmful organisms remain in a person’s body after the symptoms have disappeared (Salmonella bacteria).*

Select from Two Methods of Sanitizing

Chemical Sanitizing  
Heat Sanitizing

## Select from Two Methods of Sanitizing

Chemical Sanitizing can be accomplished by immersing an object in, or wiping it down with, a sanitizing solution and allowing the solution to remain in contact with the surface for a specified amount of time.

*The three most common chemical sanitizers are the following:*

**Chlorine** – This sanitizer is the most commonly used and is the cheapest. It is effective in hard water but is inactivated by hot water above 120 °F. Chlorine bleach solutions must be tested regularly and changed as necessary to ensure that the solution is working to sanitize. Using too much chlorine in a solution can pit stainless steel and aluminum surfaces, while using too little will not sanitize the surface.

**Iodine** – Iodine is more expensive and less effective than chlorine. However, an iodine sanitizing solution is not as quickly inactivated by food particles as a chlorine solution.

**Quaternary ammonium compounds (Quats)** – The sanitizer is not as quickly inactivated by food particles as a chlorine solution, is noncorrosive to metal surfaces, and nonirritating to skin. It leaves a film on surfaces and does not kill certain types of microorganisms.

## Select from Two Methods of Sanitizing

### Heat Sanitizing

Heat Sanitation involves exposing equipment to high heat for an adequate length of time. This may be done manually by immersing equipment into water maintained at a temperature of 171° F to 195° F for at least 30 seconds.

In a dishwashing machine, a good rule of thumb is to wash at 150° F and rinse at 180° F. But remember, temperature may vary depending on the type of machine used and requirements of the State and local public health department.

Thermometers and heat-sensitive tapes and labels are available for determining whether adequate sanitation temperatures have been achieved.

### Manually Sanitize Smallware in a Three-Compartment Sink



To properly clean and sanitize smallware, the kitchen must have a sink with at least three separate compartments for manually cleaning, rinsing, and sanitizing, or a mechanical dishwasher that functions properly.

There should be a separate area for scraping and rinsing food and debris into a garbage container or disposal before washing and a separate drain board for clean and soiled items.

## Manually Sanitize Smallware in a Three-Compartment Sink

### Step One

Clean and sanitize sinks that will be used for washing and sanitizing smallware.

### Step Two

Scrape and rinse food into garbage container or disposal. Pre-soak items, such as flatware, as necessary. Then...

**In the first sink**, immerse and wash the smallware in Spectrum #1 (a dish detergent solution) at 110° F or the temperature specified on the cleaning agent manufacturer's label instructions. Use a brush or a cloth to loosen and remove any remaining visible food particles.

**In the second sink**, Rinse using clear, clean hot water (110° F) to remove all traces of food, debris, and Spectrum #1.

### Manually Sanitize Smallware in a Three-Compartment Sink

In the third sink, Sanitize, using one of the following options:

**CHEMICAL:** Immerse the clean items in a Spectrum #2 (a chemical sanitizing solution) at the appropriate temperature for the correct amount of time. Be sure all surfaces of the clean items are covered with hot water or Spectrum #2 solution. Check the concentration of Spectrum #2 (the chemical sanitizer) at regular intervals using a test kit.

Be aware that hot water inactivates some chemical sanitizers, so read and correctly follow the manufacturer's directions for using the chemical.

**OR HEAT:** Immerse or spray rinse clean items in hot water at 171° F to 195° F for at least 30 seconds. Some State public health department codes require the temperature to be at 180° F.

## Manually Sanitize Smallware in a Three-Compartment Sink

### Step Three

Air dry all items on a drain board. Wiping can re-contaminate equipment and can remove the sanitizing solution from the surfaces before it has finished working.

### Step Four

Store. Make certain all smallware is dry in order to avoid retaining moisture that fosters bacterial growth.

# Maintaining a Clean and Sanitary Workplace

## How Should Large Equipment be Cleaned and Sanitized?

### Sample Steps for Meat Grinder



Unplug grinder



Disconnect foot pedal.  
Place cap over plug.



Remove connector ring.



Unclip and remove  
extension tube.



Remove bowl ring.



Remove plate.

## How Should Large Equipment be Cleaned and Sanitized?

### Sample Steps for Meat Grinder



Remove knife.



Remove auger assembly.  
Remove and discard  
residue.



Remove bowl.



Replace washers and nuts.



Remove paddle lock.



Remove paddle.

## How Should Large Equipment be Cleaned and Sanitized?

### Sample Steps for Meat Grinder



Remove extension cover.



Hand wash, rinse and sanitize removed items in sink.



Place parts onto grinder storage and cleaning rack. Place rack in cooler.



Rinse equipment with hot water.



Pay special attention to the Foam with Spectrum #3 paddle's rubber gasket.



## How Should Large Equipment be Cleaned and Sanitized?

### Sample Steps for Meat Grinder



Power wash grinder.



Sanitize with Spectrum #2 Air dry bowl and bowl ring.



Air dry throat of machine.



Leave unassembled overnight.



In the morning, inspect equipment. If not acceptable; clean, re-inspect and sanitize. Indicate deficiencies on Sanitation log.



Apply light coat of mineral oil. Wipe off excess.

## Who's Responsible?

### *Employee's Responsibilities*

- Follow standard procedures for cleaning and sanitizing specific areas of the foodservice facility.
- Ask the manager for help as needed to know how to clean and sanitize the specifically assigned areas.
- Take pride in operating a clean and sanitary foodservice.

# Who is Responsible Under the Law?



# Developing a Program

## Components in Developing a Sanitation Program

The operation of a sanitation program requires a planned program which includes the following components:

- Training
- Cleaning procedures
- Sanitizing procedures
- Evaluation
- Supervision



# Procedures, Chemicals and Equipment

# Procedures, Chemicals and Equipment



Customized Training, Audit, and Inspection Step-by-Step Procedures

The image displays several overlapping cleaning procedure forms for different departments in a supermarket. The forms include:

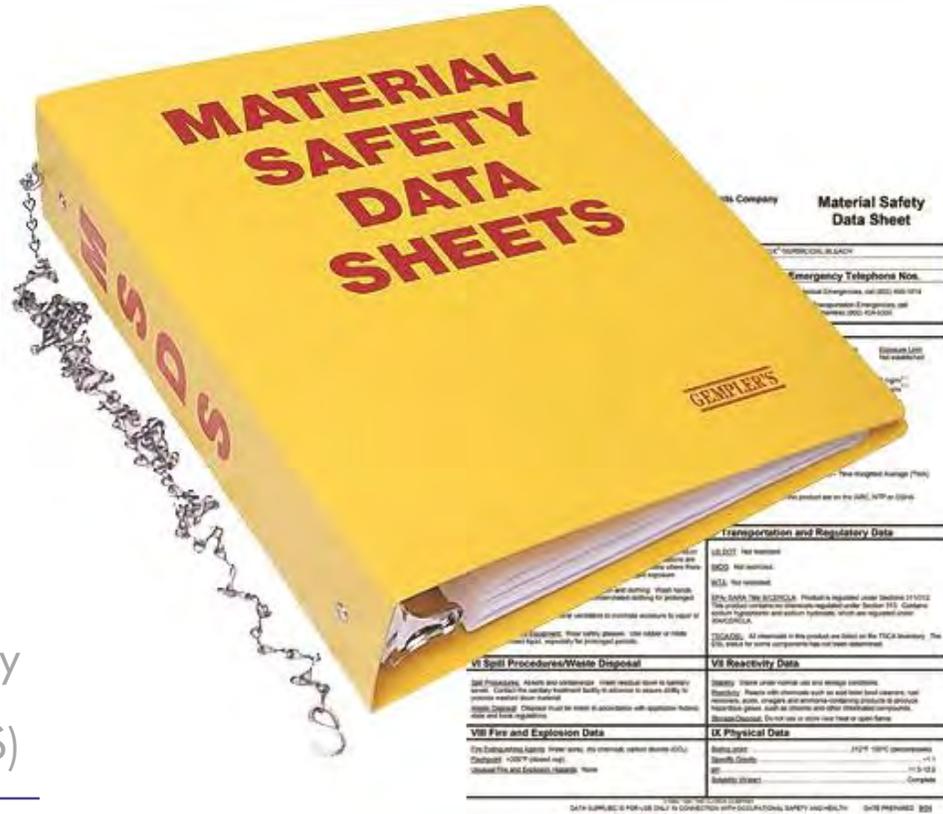
- (MEAT DEPARTMENT) CLEANING PROCEDURE #3**: Details cleaning for (RINDERS) and (DRAINS). Includes chemical usage (Spectrum #3), rinse temperature (120-140°F), and application equipment like wall-mounted foamers and scrubbing brushes.
- (DELI DEPARTMENT) CLEANING PROCEDURE #2**: Details cleaning for (DRAINS) and (FLOORS). Includes chemical usage (Spectrum #3), rinse temperature (120-140°F), and application equipment like wall-mounted foamers and scrubbing brushes.
- (CAFETERIA DEPARTMENT) CLEANING PROCEDURE #4**: Details cleaning for (FLOORS). Includes instructions for picking up debris, removing mats, and applying Spectrum #3 Disinfectant at a rate of 2 oz. per gallon.

Each form includes sections for:

- EQUIPMENT TO BE CLEANED**: Lists items like drains, rinders, and floors.
- USED CHEMICAL**: Specifies chemical type and quantity.
- RINSE TEMPERATURE**: Provides the required temperature range.
- APPLICATION EQUIPMENT**: Lists tools like foamers, brushes, and hoses.
- RINSING EQUIPMENT**: Lists equipment like high-pressure hoses.
- FREQUENCY**: Indicates how often cleaning should occur (e.g., Daily).
- REQUIRED SAFETY EQUIPMENT**: Lists items like boots, gloves, and goggles.
- PERSONS ASSIGNED**: A section for listing staff members.
- ACTIVITY**: A table for tracking cleaning activities by day of the week.
- SIGNATURE**: A line for the person performing the cleaning.

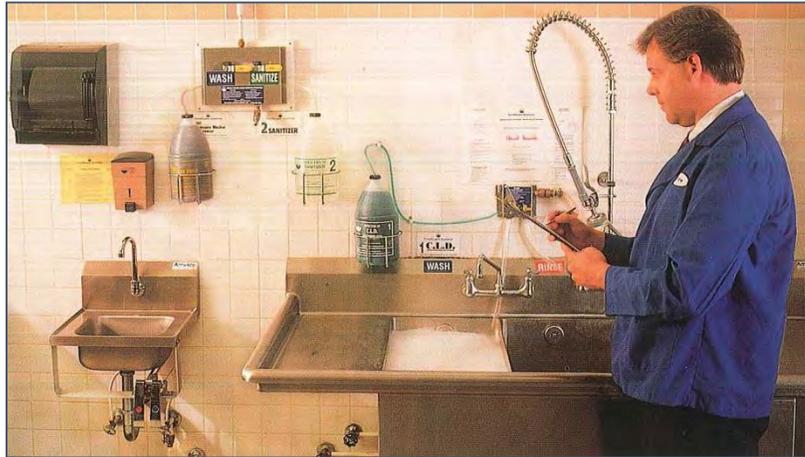
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## Material Safety Data Sheets (MSDS)



# Products and Equipment

## Three Compartment Sink



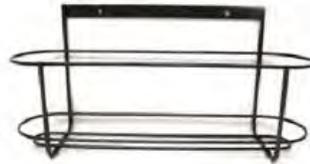
## Benefits

The three (3) Compartment Sink is a chemical management system that provides low cost, consistent dilutions, and outstanding performance; plus is easy to use by employees. The system features an E-gap actuator with  $\frac{1}{4}$  ounces per gallon preset dilutions that provide superior cleaning results. It will fill the sink quickly and to desired levels.

## Products - Three Compartment Sink



Detergent Sanitizer



Four Station 32 Ounce  
Spray Bottle Rack



Sanitizer Test Kit Station



SPECTRUM # 1  
*Dish Detergent*



Spectrum #2  
*Sanitizer*

# High Flow Cleaning System

## High Flow Cleaning System



## Benefits

Cleaning up is easy with HydroChem. It will clean, rinse, and sanitize at the touch of the lever mark "Detergent", "Rinses" or "Sanitizer", and the switching from one function to the next is just the twist of a handle. HydroChem not only simplifies cleaning and sanitation, it also delivers more effective cleaning. The automatically diluted solution is mixed more accurately and consistently than manually mixed solutions. Labor productivity increases as well.

## Products – High Flow Cleaning System



SprayClean Dispenser



Hose



Spray Gun w/Quick Connect Nozzle



Foam Wand



Brass Quick Coupler Set



Mobile Sprayer



SPECTRUM # 2  
Sanitizer



Spectrum #3  
High Foam Degreaser

# Clean on the Go<sup>®</sup> Dispenser

## Clean on the Go Dispenser



## Benefits

Clean-on-the-Go Steel Dispenser will be installed at the back of the store for dispensing the General Cleaning Products. It has a capacity of four different products available by simple dial and select the product or the bucket fill application. Easy, one handed filling or trigger spray bottles.

## Products – Clean on the Go Dispenser



- HdqC 2 is a neutral pH, quaternary disinfectant cleaner formulated to kill a broad spectrum of microorganisms on high gloss floors, walls and other hard, nonporous surfaces.



### Glass Cleaner

- BioRenewables Glass Cleaner incorporates a state-of-the-art surfactant system offering excellent surfactant/wetting agents with emulsification abilities through the use of more readily biodegradable alternative surfactant chemistries.
- Clean on the Go BioRenewables Glass Cleaner may be used to clean and polish any hard surface not harmed by water.



### Floor Cleaner

- Damp Mop is a No rinse floor cleaner concentrate reduces time and labor cost of daily maintenance of high gloss, metal-interlock floor finishes.
- Quickly and effortlessly removes dirt and other surface soils in heavily trafficked areas.
- Quick drying. Leaves no residue or haze to dull floor finish.
- Pleasant lemon fragrance. Biodegradable. Phosphate free.



### Restroom Cleaner

- NABC Concentrate is a broad range germicidal cleaner-disinfectant concentrate specifically designed to clean and disinfect toilet bowls, urinals and other hard, nonporous restroom surfaces. Nonacid. Non alkaline.
- NABC Concentrate is non-caustic and non-abrasive. Use on nearly any hard, nonporous surface without fear of etching or pitting.

# Drain Maintenance

## Products – Drain Maintenance



Pail Stick



PROANDRE LIP

# Towel & Tissue Dispensers

## Products – Towel & Tissue Dispensers



### Tissue Dispenser

- The Dubl-Serv® side-by-side tissue dispenser accommodates two rolls of patented OptiCore® tissue.
- Designed for controlled-use dispensing and optimum savings in maintenance time and costs, the Dubl-Serv® side-by-side tissue is targeted to service any market's needs.
- The enclosed, front-facing tissue is kept clean and hygienic, but easily accessible. A locking cover helps to prevent product pilferage.



### Towel Dispenser

- Unique and elegant, the OptiServ Hybrid® is ideal for office buildings, colleges and universities, and high-traffic washrooms.
- It offers the benefit of electronic touch-free dispensing as well as the convenience of mechanical dispensing when desired.
- In either mode the OptiServ Hybrid® delivers a single pre-measured towel that discourages users to take only what is needed to reduce waste.

# Prevent Cross Contamination by Color Coding

## Products – Prevent Cross Contamination by Color Coding

### Color Coded Supermarket Brush Kits



Bakery Kit



Meat Kit



Deli Kit



Seafood Kit



Produce Kit

## Products – Prevent Cross Contamination by Color Coding



Color Coded Cutting Boards



Color Coded Mop Buckets

## Products – Prevent Cross Contamination by Color Coding

### Color Coded Waste Containers & Lids



# Soaps & Deodorizers

## Products – Soaps / Deodorizers / and Sanitation Equipment



**Restroom Auto  
Sanitizer**



**Purell Soap Dispenser**



**Gojo Soap Dispenser**

# Safety Equipment

## Products – Safety Equipment



**Chemical Resistant  
Gloves**



**Safety Goggles**



**Aprons**



**Hairnets**



**Beard Cover**

**Where products meet service in  
one complete program.**



**ALL FLORIDA PAPER**

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complete program.

Thank You