



International Association for
Food Protection®

WEBINAR

**CLEANING, SANITIZING AND THE
SEVEN STEPS OF SANITATION**

December 7, 2017 3:00 p.m. EST



WEBINAR HOUSEKEEPING

For best viewing of the presentation material, please click on 'maximize' in the upper right corner of the 'Slide' window, then 'restore' to return to normal view.

Audio is being transmitted over the computer so please have your speakers 'on' and volume turned up in order to hear. A telephone connection is not available.

Questions should be submitted to the presenters during the presentation via the **Q & A section** at the right of the screen.

It is important to note that all opinions and statements are those of the individual making the presentation and not necessarily the opinion or view of IAFP.

This webinar is being recorded and will be available for access by IAFP members at www.foodprotection.org within one week.



An IAFP Food Hygiene & Sanitation PDG Webinar

Cleaning, Sanitizing, & the Seven Steps of Sanitation

Today's Agenda



- Sanitation – definition and goals
- The difference between cleaning and sanitizing
- The seven steps of wet sanitation

About your presenter

Dr. Scott Burnett



As the Director of Food Safety and Quality in Ecolab's Global Food and Beverage Division, Scott bridges Ecolab Innovation and Service Excellence with today's needs and future Food Safety trends.

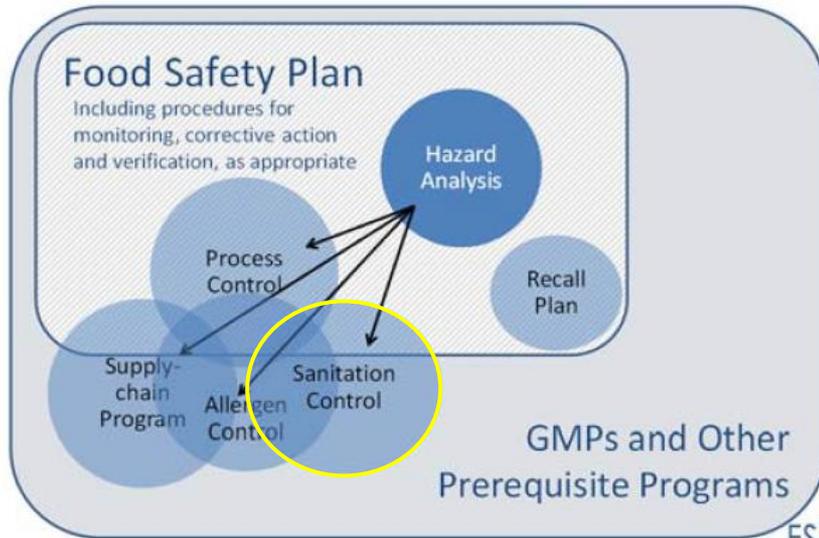
Previously, Scott was the Director of R&D for Ecolab's Latin America Food and Beverage team. Before joining Ecolab, he was the Corporate Sanitation Manager at Land O' Lakes and Corporate Manager of Quality and Food Safety at MOM Brands (now Post Consumer Brands), both in Minnesota, USA.

Scott earned his Ph.D. at the Center for Food Safety, University of Georgia and holds Bachelor degrees in Microbiology and Spanish from Montana State University.

Sanitation

Key in Controlling Food Safety Hazards

Preventive Food Safety Systems



- Beginning, not the end, of food processing
- Sanitation Control is a required component of the Preventive Controls for Human Food under FSMA
- All preventive controls begin with Hazard Analysis

Food Safety Preventive Controls Alliance

You are a critical part of the Food Safety System!



Cleaning vs. Sanitizing

What Kinds of Soils can be found in a Food Plant?

- ❑ Food product residue
- ❑ Water
- ❑ Airborne contamination
- ❑ Transient soil from workers
- ❑ Detergent ingredients
- ❑ Viable Microorganisms

Soil is any unwanted matter on surfaces to be removed before start-up



Fundamentals for Success

- Know your plant conditions and tailor sanitation to them.
 - ▣ Soils, Water Quality, Equipment, Facility, Zoning
- Train your teams
- Plant Hygienic Zoning procedures apply here too
- Work safely – PPE
- Order is important:



Cleaning vs Sanitizing

What's my target soil?

Soil:

Solution:

Visible



Cleaning

Invisible
(Microorganisms)



Sanitizing

Cleaning vs Sanitizing

Cleaning

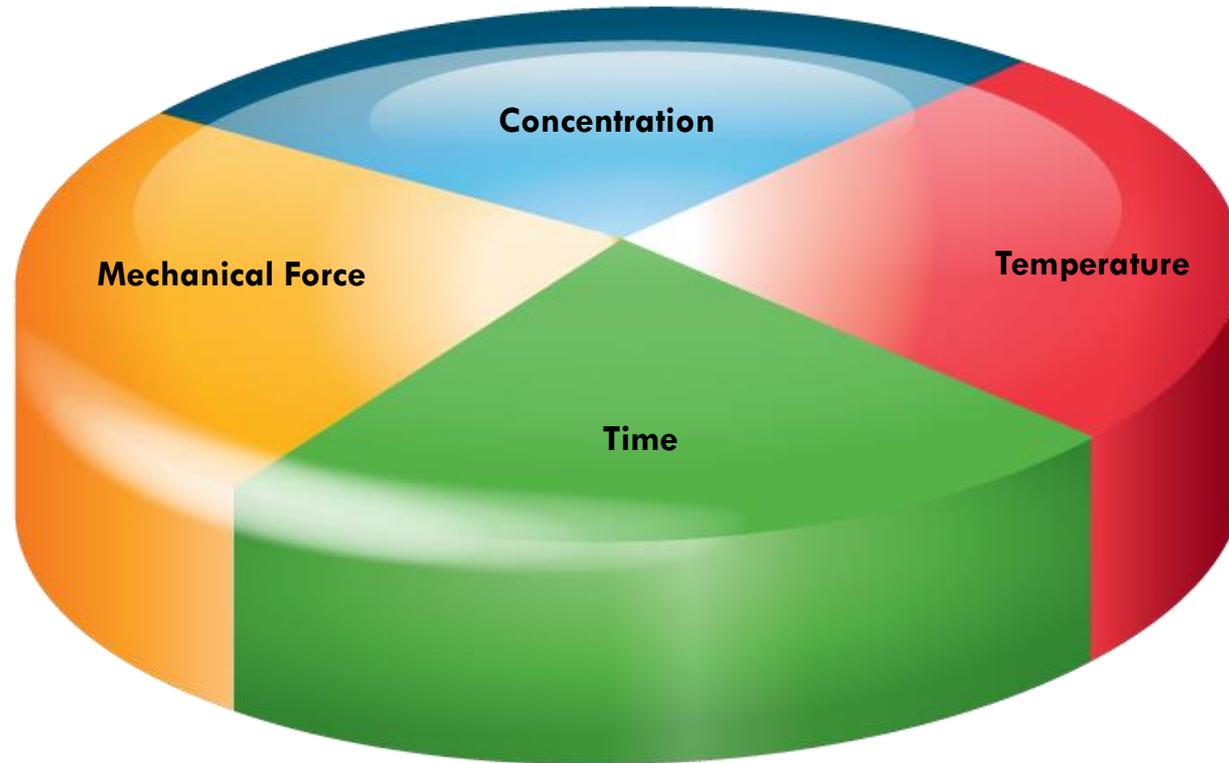
- The complete removal of food soil using appropriate detergent chemicals under recommended conditions.

Sanitizing

- To adequately treat cleaned surfaces by a process effective in destroying vegetative cells of pathogens, and in substantially reducing numbers of other undesirable microorganisms.

Four factors of cleaning

All are required for success



Four factors of cleaning

Ratios vary depending on the cleaning method



Manual Cleaning



COP Cleaning



CIP Cleaning

Concentration

Time

Temperature

Mechanical Force



Seven Steps of Wet Sanitation

Wet Sanitation Process

1. Sanitation Prep

2. Pre-Rinse

3. Clean

1. Concentration

2. Temperature

3. Time

4. Mechanical Force

4. Rinse & Inspect

5. Remove & Assemble

6. Pre-Op Inspection & Verification

7. Sanitize



Remember! Do not take breaks during sanitation

Sanitation prep

- Remove production supplies from the room
 - ▣ All ingredients, food products, packaging materials, etc.
- Empty & remove garbage and scrap containers
- Purge process lines
- Empty drain baskets by dedicated personnel
- Remove all equipment that cannot get wet
- Lock-out tag-out equipment to be cleaned
 - ▣ Follow plant procedures for LOTO
- Disassemble equipment
- Dry clean & sanitize, then cover all electric eyes, electronic control equipment, adjacent production lines
- Remove loose soil & debris from equipment and floor (top to bottom)



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Pre-Rinse

- Rinse to remove visible soils
- Consider the water temperature & pressure
- Rinse from top to bottom
- Target removal of **95% of visible soil**
- Rinse parts and place on dedicated sanitation carts or into COP tank or bucket for cleaning

Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Cleaning

Different approaches:

- Foam cleaning
- Manual cleaning
- COP
- CIP



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Foam
Manual
COP
CIP

Foam Cleaning

- ❑ Wetter foam generally better than dry foam
- ❑ Define a start point and an end point
- ❑ No advantage to using hot water for foam
- ❑ Do not allow foam to dry
- ❑ Foam undersides of equipment
- ❑ Scrub as necessary to remove film, fats, and proteins
- ❑ Clean drains with **dedicated** tools & PPE



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Foam

Manual
COP
CIP

Manual Cleaning

- Manually scrubbing may be required to remove heavy soils
- Use color-coded, single-use pads and brushes as required
- Do not place parts on the floor
- Use a cart, table or mat for parts placement



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Foam
Manual
COP
CIP

Clean Out of Place (COP) Tanks

- ❑ Automatic equipment parts washing
- ❑ Thorough pre-rinse required
- ❑ Be sure all parts are adequately covered
- ❑ Test kit verification of concentration
- ❑ Control cleaning solution temperature to melt fats
- ❑ Separate rinse and sanitize steps



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Drain & Assemble

Pre-Op Inspection & Verification

Sanitize

Foam
Manual
COP
CIP

Floor Drains

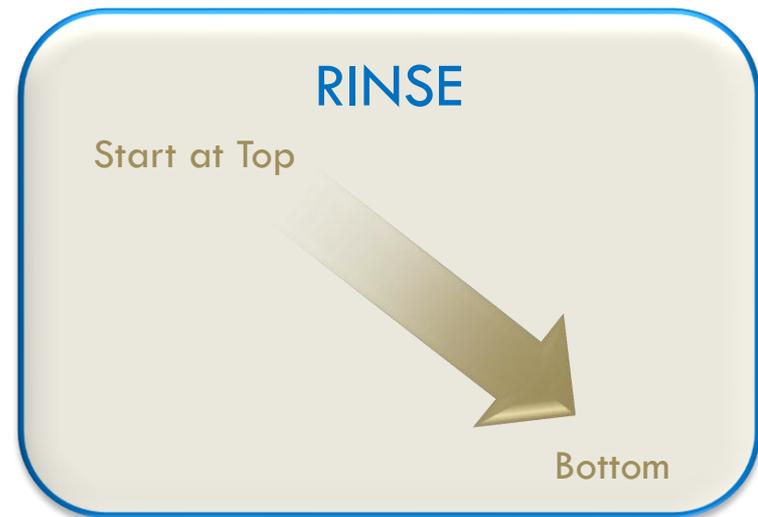
Special precautions to control cross-contamination

- Use dedicated personnel, equipment, & tools
- Label and color coded appropriately
 - ▣ Make it obvious!
- Clean & sanitize drains **after** equipment cleaning and **before** equipment sanitizing.
- Take care of your tools
 - ▣ Clean and dry buckets & brushes after each use
- Use sanitizer per label instructions



Rinse to Remove Chemicals & Soil

- ❑ Rinse in the order that soap was applied – walls, floor and then equipment
- ❑ Rinse equipment from top to bottom
- ❑ Avoid spraying floor once post rinse of equipment begins



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Inspect to Verify Clean - Sensory

- Verify by sight, feel and smell
- Use flashlights and other lights
- Equipment should be free of visible soil, haze or water beads



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Remove & Assemble

- ❑ Put on clean outerwear
- ❑ Sanitize hands
- ❑ Verify all chemical is removed (sight, pH paper)
- ❑ Remove all standing water and overhead condensation
- ❑ Inspect parts that will not be accessible after assembling
- ❑ Sanitize inaccessible parts prior to assembling
- ❑ Assemble: follow lock-out/tag-out (LOTO) procedures
- ❑ Re-lubricate where needed

Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Pre-Op Inspection

- ❑ Inspect that equipment is free of chemicals, tools and cleaning supplies
- ❑ Inspect that guards are in place before starting equipment
- ❑ Run equipment prior to inspecting
- ❑ Complete formal pre-op inspection according to plant SSOP
- ❑ Correct any deficiencies and provide feedback to sanitation operator



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Cleaning Verification

- Use Adenosine Triphosphate (ATP) swab analysis to verify that surface has been effectively cleaned of soils



kankaeteetankwash.com



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize

Sanitize

- ▲ Verify no standing water
- ▲ Measure concentration using test kit
- ▲ Flood sanitize entire processing area
 - Walls, floors and equipment
 - Ensure equipment is running
- ▲ Apply from top to bottom
- ▲ Follow label directions for EPA-registered sanitizer application



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove & Assemble

Pre-Op Inspection & Verification

Sanitize



critical

- ❑ Ensure that current Good Manufacturing Practices (cGMP) are **in place** after flood sanitizing so that sanitized equipment does not become re-contaminated
- ❑ Once sanitized, **leave the equipment and room alone**
- ❑ **APC micro swabs** by QC and analyze trends to verify control
- ❑ **STOP** any & all activity in room until production begins



Wet Sanitation Process

Sanitation Prep

Pre-Rinse

Clean

Rinse & Inspect

Remove Water & Assemble

Pre-Op Inspection & Verification

Sanitize

Wet Sanitation Process

1. Sanitation Prep

2. Pre-Rinse

3. Clean

1. Concentration

2. Temperature

3. Time

4. Mechanical Force

4. Rinse & Inspect

5. Remove & Assemble

6. Pre-Op Inspection & Verification

7. Sanitize



Remember!

- ❑ Sanitation is the **beginning**, not the end, of the production cycle and a key component of **Food Safety Preventive Controls!**
- ❑ **Commitment** and a **Focus on Fundamentals** are the keys to success!



Q&A