

# **Cleaning and Sanitation of Containers and Harvesting Equipment**

**Dr. Lynette Johnston, Ph.D.**  
[lynette\\_johnston@ncsu.edu](mailto:lynette_johnston@ncsu.edu)

**Dr. Chip Simmons, Ph.D.**  
[odsimmon@ncsu.edu](mailto:odsimmon@ncsu.edu)



# Cleaning and Sanitizing Containers

- **One-time use versus reusable containers**
  - What are the containers made of?
  - Can they be cleaned? Sanitized?
  - Containers meant for one-time use should not be reused
- **All food containers should be stored in a protected, clean, and covered area**
  - Off the ground
  - Pest-control program





**If I am selling direct market, how should I store the containers/boxes I will use?**  
**Can I re-use containers?**



**Maintain cleanliness  
during transport**



**If I am a PYO grower, what do I need to know about containers I give to customers to pick in?  
What if customers bring their own containers?**





**If I am selling wholesale or direct market and I have workers who pick into buckets or boxes, and then the grapes are transferred, what do I need to know about those?**



**Containers can become contaminated when in direct contact with the ground**



**Recommendations on how to clean harvesters/bins for winemaking?**

**NC STATE EXTENSION**

[extension.ncsu.edu](https://extension.ncsu.edu)

## Cleaning and Sanitation Workshops

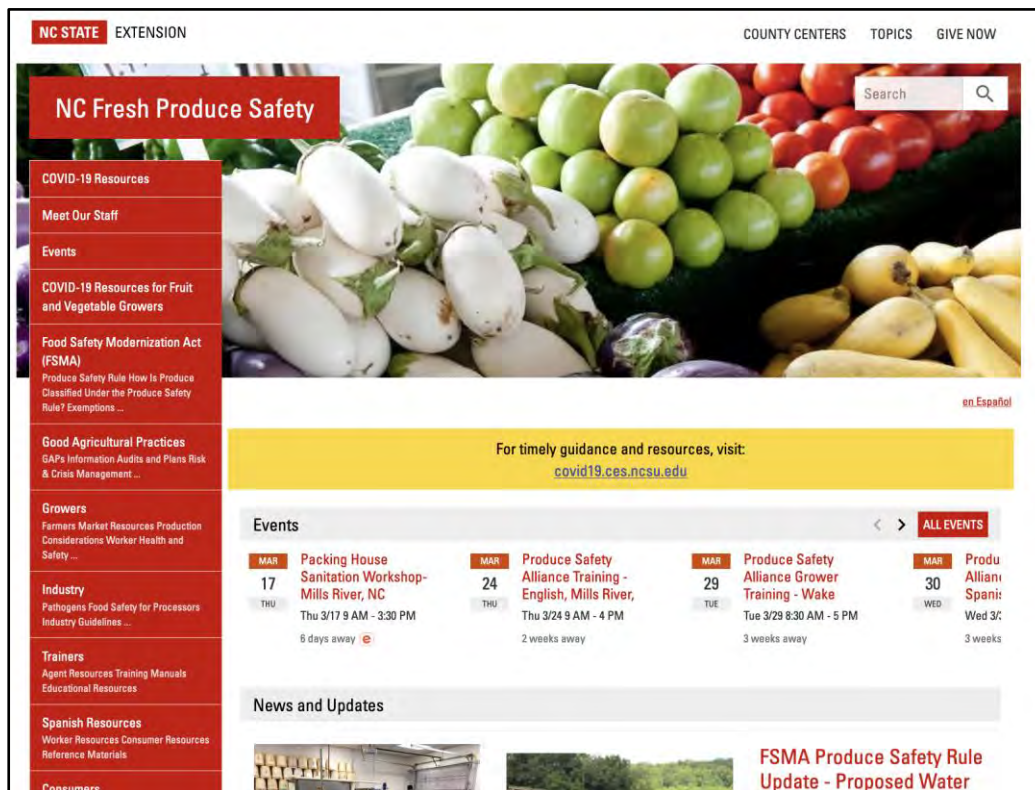
- March 17 – Mills River, NC
- March 31 – Clinton, NC

## Produce Safety Alliance Workshops

- March 24 – Mills River, NC
- March 29 – Raleigh, NC
- May 5 – Winston-Salem, NC

## Produce Safety Alliance Workshops (Spanish)

- March 30 – Clinton, NC
- April 21 – Mills River, NC



The screenshot shows the NC Fresh Produce Safety website. The header includes 'NC STATE EXTENSION', 'COUNTY CENTERS', 'TOPICS', and 'GIVE NOW'. A search bar is located in the top right. The main banner features a large image of fresh produce (green tomatoes, white radishes, yellow bananas, and red tomatoes) with the title 'NC Fresh Produce Safety' and a search icon. Below the banner is a sidebar with a red background containing several menu items: 'COVID-19 Resources', 'Meet Our Staff', 'Events', 'COVID-19 Resources for Fruit and Vegetable Growers', 'Food Safety Modernization Act (FSMA)', 'Produce Safety Rule How Is Produce Classified Under the Produce Safety Rule? Exemptions ...', 'Good Agricultural Practices', 'GAPs Information Audits and Plans Risk & Crisis Management ...', 'Growers', 'Farmers Market Resources Production Considerations Worker Health and Safety ...', 'Industry', 'Pathogens Food Safety for Processors Industry Guidelines ...', 'Trainers', 'Agent Resources Training Manuals Educational Resources', 'Spanish Resources', 'Worker Resources Consumer Resources Reference Materials', and 'Consumers'. The main content area has a yellow banner with the text 'For timely guidance and resources, visit: [covid19.ces.ncsu.edu](https://covid19.ces.ncsu.edu)'. Below this is an 'Events' section with a calendar view showing four events: 'Packing House Sanitation Workshop- Mills River, NC' on March 17, 'Produce Safety Alliance Training - English, Mills River,' on March 24, 'Produce Safety Alliance Grower Training - Wake' on March 29, and 'Produce Safety Alliance Training - Spanish, Clinton, NC' on March 30. Each event includes the date, day of the week, time, and duration. At the bottom, there is a 'News and Updates' section with two images and the text 'FSMA Produce Safety Rule Update - Proposed Water'.

<https://ncfreshproducesafety.ces.ncsu.edu/events/>





## What are the differences?

### Clean

Physical removal of soil and food residue from surfaces which can include the use of clean water and detergent.

**All surfaces**

### Sanitize

Treatment of a cleaned surface to reduce the number of microorganisms of public health significance to a safe level within 1 minute.

**Food contact surfaces  
(99.999% reduction)**  
**Non-food contact  
surfaces  
(99.9% reduction)**

### Disinfect

Treatment of a cleaned surface to destroy or inactivate all infectious organisms on hard surfaces within 10 minutes.

**Non-food contact  
surfaces, high touch  
surfaces, incident  
with infected person**

# EPA Registration of Sanitizers

- Sanitizers are considered antimicrobial pesticides and must be registered with the EPA.
- Follow the directions on the label for intended use
  - The label is the law!
  - Directions are validated methods and safe use
- When choosing EPA-labeled sanitizers, look for:
  - Intended use, such as nonporous food contact surfaces or non-food contact surfaces instructions
  - If labeled to control public health organisms, it should list specific target microorganisms
    - SARS-CoV-2 will not be included on the label
    - Refer to EPA's List N



# Produce Safety Alliance: Labeled Sanitizers for Produce Excel tool

Last revised: 8/13/2019

This work product was supported under cooperative agreement number 12-23-A-5357 between USDA-AMS and Cornell University. The information and viewpoints in this product do not necessarily reflect the viewpoints and policies of the supporting organization, cooperating organizations, or Cornell University.

To suggest edits, updates, or additional products, please contact Donna Clements (dnc274@cornell.edu, 909-552-4355).

**Produce Safety ALLIANCE**

**LABEL INFORMATION**

**Single Product Sheet**

**Back to MAIN PAGE**

Product Name	Alternative Brand Names	<a href="#">Active Ingredients</a>	EPA Registration Details							Organic Materials Review Institute (OMRI) Listing
			EPA Registration Number	Link to EPA Label	EPA Accepted Date	Labeled For Use on Non-Porous Food Contact Surfaces?	Labeled For Use in Fruit and Vegetable Wash Water?	Labeled For Use in Irrigation Water?	Contains Efficacy Statement to Control Public Health Organisms?	
	Top Job Bleach Hi-Lex Bleach Regular Scent									
Re-Ox	Re-Ox Deposit Control Disinfectant Clearitas 350 Clearitas 450		87437-1	<a href="#">Label PDF</a>	8/6/14	Yes See Page 4	Yes See Page 4	No	For Food Contact Surfaces	Not listed
SaniDate 12.0	N/A		70299-18	<a href="#">Label PDF</a>	11/22/17	No	Yes See Page 5	Yes See Page 10	No	Allowed with restrictions
SaniDate 15.0	N/A		70299-26	<a href="#">Label PDF</a>	5/7/18	Yes See Page 6	Yes See Page 4	No	For Both Food Contact Surfaces and Fruits and Vegetables	Allowed with restrictions
SaniDate 5.0	N/A		70299-19	<a href="#">Label PDF</a>	3/28/19	Yes See Page 12	Yes See Page 22	Yes See Page 25	For Food Contact Surfaces	Allowed with restrictions
SaniDate Ready to Use	N/A		70299-9	<a href="#">Label PDF</a>	2/5/16	Yes See Page 4	Yes See Page 4	No	For Food Contact Surfaces	Not listed
Selectocide 2L500	Selective Micro Clean-Alpha Selectocide Pouch 200 MG Abridged Clo2bber 100 Abridged		74986-4	<a href="#">Label PDF</a>	6/19/17	Yes See Page 18	Yes See Page 56	Yes See Page 18	For Food Contact Surfaces	Allowed with restrictions
Selectocide 5G	Selectocide 12G Selectocide 750MG Selectocide 1G Selectofresh 12G Food Processing		74986-5	<a href="#">Label PDF</a>	7/24/17	Yes See Page 17	Yes See Page 75	Yes See Page 66	For Food Contact Surfaces	Allowed with restrictions
Sno-Glo Bleach	N/A		6785-20002	<a href="#">Label PDF</a>	3/15/12	Yes See	Yes See	No	No	Not listed

Source: <https://producesafetyalliance.cornell.edu/resources/general-resource-listing/>

**DIRECTIONS FOR USE:** It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Always refer to manufacturer's care instructions before using on equipment or devices.

**To Refill:** Remove cap from empty bottle. Pour. Unscrew cap on refill and pour contents directly into empty bottle. Use. Replace cap and use as you normally would.

**To Clean, Disinfect and Deodorize Hard, Nonporous Surfaces:** Spray 6"-8" from surface until surface is thoroughly wet. Allow this product to remain wet for 1 minute. To kill *Clostridium difficile* spores, let stand for 3 minutes. Then wipe with a clean, damp cloth. For heavily soiled areas, a pre-cleaning is required. **Rinse with potable water for food-contact surfaces.** To Clean: Follow directions above or apply with a clean cloth, mop, or sponge saturated with Clorox Healthcare® Bleach Germicidal Cleaner until surface is completely wet. (When applying with a saturated cloth or sponge, gloves should be worn.) No standing time is required. If streaking is observed, wipe with a clean, damp cloth or paper towel. **Special Instructions for Cleaning Prior to Disinfection against *Clostridium difficile* spores.**

**Personal Protection:** Wear appropriate barrier protection such as gloves, gowns, masks, and eye covering. **Cleaning Procedure:** Fecal matter/waste must be thoroughly cleaned from surfaces/objects before disinfection by application with a clean cloth, mop, and/or sponge saturated with this product. Cleaning is to include vigorous wiping and/or scrubbing, until all visible soil is removed. Special attention is needed for high-touch surfaces. Surfaces in patient rooms are to be cleaned in an appropriate manner, such as from right to left or left to right, on horizontal surfaces, and top to bottom, on vertical surfaces, to minimize spreading of the spores. Restrooms are to be cleaned last. Do not reuse soiled cloths. **Infectious Materials Disposal:** Materials used in the cleaning process that may contain feces/wastes are to be disposed of immediately in accordance with local regulations for infectious materials disposal. **Disinfection Procedure:** Spray 6"-8" from surface until surface is completely wet. Let stand for 3 minutes. Wipe with a clean, damp cloth or paper towel or allow to air dry. **KILLS HIV, HBV, AND HCV ON PRE-CLEANED, NONPOROUS SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS** in healthcare settings or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with blood/body fluids, and in which the surfaces/objects likely to be soiled with blood/body fluids can be associated with the potential for transmission of Human Immunodeficiency Virus Type 1 (HIV-1) (associated with AIDS), Hepatitis B Virus (HBV), and Hepatitis C Virus (HCV). **Special Instructions for Cleaning and Decontamination Against HIV-1 (AIDS Virus), HBV and HCV on Surfaces/Objects Soiled with Blood/Body Fluids.** **Personal Protection:** When handling items soiled with blood or body fluids, use disposable gloves, gowns, masks, and eye coverings. **Cleaning Procedure:** Blood and other body fluids must be thoroughly cleaned from surfaces and objects before applying this product. **Contact Time:** Let stand for 1 minute. For all other organisms, see directions for contact times. **Disposal of Infectious Materials:** Use disposable impervious gloves, gowns, masks and eye coverings. Blood and other body fluids must be autoclaved and disposed of according to local regulations for infectious waste disposal.

This product is not to be used as a terminal sterilant/high-level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. This product may be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or high-level disinfection.

Multipurpose, broad spectrum cleaner/disinfectant for use in healthcare and other areas where control of cross-contamination on surfaces is required. Meets OSHA Bloodborne Pathogens Standard.

**Compatible with a wide variety of surfaces. Check [cloroxhealthcare.com/compatible](http://cloroxhealthcare.com/compatible).**

**SURFACES:** May be used on hard, nonporous surfaces such as chrome, enamel, fiberglass (sealed) surfaces, Formica®, glass, glazed ceramic tile, laminated surfaces, plastic\*, stainless steel, vinyl. **Avoid contact with:** aluminum, brass, copper, Corian®, fabric, galvanized steel, rubber, sealed granite, sealed marble, silver, wood. **Medical hard, nonporous surfaces:** autoclaves\*, bed pans, bed railings, blood glucose monitors\*, exam tables, high touch surfaces, mattress covers, medical equipment surfaces\*. **Dental hard, nonporous surfaces:** counters, operator hand surfaces. **General hard, nonporous surfaces:** bathroom fixtures, countertops, door knobs, exterior toilet surfaces, garbage cans, showers, sinks, tables. **USE SITES:** Medical – dialysis clinics, emergency rooms, home healthcare, hospitals, intensive care units, isolation areas, nursing homes, outpatient clinics, operating rooms, patient restrooms, patient rooms. **Dental – dental clinics, labs.**

†† For any use site that includes electronics, refer to manufacturers' instructions before use.

‡‡ For unfamiliar surfaces, test in a small, inconspicuous area first. Consult medical equipment warranty information and equipment care and cleaning guides prior to selecting and using any surface disinfectant on plastic surfaces.

**QUESTIONS OR COMMENTS?** Call (800) 234-7700.

For SDS information, please go to [www.cloroxhealthcare.com](http://www.cloroxhealthcare.com). A list of this product's ingredients is available at [www.ingredientinside.com](http://www.ingredientinside.com).

Mfd. for Clorox Professional Products Company, 1221 Broadway, Oakland, CA 94612.

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EPA Reg. No. 56392-7 EPA Est. No. 8251-0H-1 (DE); 5813-GA-1 (AZ); GA-2 (W);

beginning of each year indicates est. No.



HEALTHCARE®

## Bleach Germicidal Cleaner

Limpiador Germicida con Blanqueador

- Bactericidal, Virucidal\*, Fungicidal, Sporicidal\*
- Ready-to-Use 1:10 Dilution of Bleach and Detergent

- Meets OSHA Bloodborne Pathogens Standard
- Aids in Reducing Cross-Contamination Between Treated Surfaces

KEEP OUT OF REACH OF CHILDREN

**CAUTION:** READ COMPLETE DIRECTIONS AND PRECAUTIONS ON REAR PANELS.

MANTÉNGASE FUERA DEL ALCANCE DE LOS NIÑOS

**PRECAUCIÓN:** LEA LAS INSTRUCCIONES Y PRECAUCIONES COMPLETAS EN LOS PANELES DE ATRÁS.

Las instrucciones y la información de precaución se pueden encontrar en español en el panel posterior.

Kills *C. difficile*<sup>s</sup> spores in 3 minutes

Efficacy tests have demonstrated that this product is an effective bactericide, virucide\* and fungicide in the presence of organic soil (5% blood serum).

### ORGANISMS:

#### Bacteria: 1 minute contact time

- *Achromobacter baumannii*
- *Bordetella pertussis*
- *Campylobacter jejuni*
- Carbapenem-resistant *Klebsiella pneumoniae* (CRKP)
- *Enterobacter aerogenes*
- *Enterobacter cloacae* – New Delhi Metallo-Beta Lactamase-1 (NDM-1)
- *Enterococcus faecium*
- *Enterococcus hirae*
- ESKL (Extended Spectrum Beta Lactamase) producing *Escherichia coli*
- ESKL (Extended Spectrum Beta Lactamase) producing *Klebsiella pneumoniae*

- *Escherichia coli* – New Delhi Metallo-Beta Lactamase-1 (NDM-1)
- *Klebsiella pneumoniae*
- *Klebsiella pneumoniae* – New Delhi Metallo-Beta Lactamase-1 (NDM-1)
- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Multi-drug-resistant *Staphylococcus aureus* (MRSA)
- *Proteus mirabilis*
- *Pseudomonas aeruginosa*
- *Salmonella enterica*
- *Serratia marcescens*

- *Staphylococcus aureus*
- *Staphylococcus epidermidis*
- *Streptococcus pyogenes*
- *Streptococcus pneumoniae*
- Vancomycin-intermediate-resistant *Staphylococcus aureus* (ISA)
- Vancomycin-resistant *Staphylococcus aureus* (VRSA)
- Vancomycin-resistant *Enterococcus faecalis* (VRE)
- Vancomycin-resistant *Enterococcus faecium* (VRE)

#### Bacteria: 3 minute contact time

- *Clostridium difficile* spores

#### Viruses\*: 1 minute contact time

- Adenovirus Type 2
- Avian Influenza A (H3N2) Virus
- Canine Parvovirus
- Enterovirus Type D68
- Feline Panleukopenia Virus
- Hepatitis A Virus (HAV)
- Hepatitis B Virus (HBV) (Duck Hep B Virus [DHBV] as surrogate)
- Hepatitis C Virus (HCV) (Bovine Viral Diarrhea Virus [BVDV] as surrogate)

- Herpes Simplex Virus Type 2 (HSV-2)
- Human Immunodeficiency Virus Type 1 (HIV-1) (AIDS Virus)
- Influenza A H1N1 Virus
- Influenza A Virus
- Influenza B Virus
- Measles Virus
- MERS – Coronavirus
- Norovirus (Feline Calicivirus as surrogate)

- Poliovirus
- Rhinovirus Type 37
- Rotavirus
- SARS-Associated Coronavirus

#### Fungi: 1 minute contact time

- *Candida albicans*
- *Trichophyton mentagrophytes* (Athlete's Foot Fungus)

Kills *Clostridium difficile*<sup>s</sup> spores in 3 MINUTES in the presence of three-part soil load.

§ Follow special instructions for cleaning prior to disinfection. † Bloodborne pathogens.

**PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS.**

**CAUTION:** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. **FIRST AID:** If In Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. If present, remove contact lenses after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **PHYSICAL OR CHEMICAL HAZARDS:** Do not use this product with ammonia or acids such as vinegar, rust removers, or toilet bowl cleaners. This product not intended for use on fabrics.

### STORAGE AND DISPOSAL:

Store this product in a cool, dry area, away from direct sunlight and heat. Refillable container. Refill empty Clorox Healthcare® Bleach Germicidal Cleaner spray container only from Clorox Healthcare® Bleach Germicidal Cleaner refill bottle. Cleaning before refilling is the responsibility of the refiller. Take care to update expiration date on refillable bottle and replace bottle if it becomes worn or damaged. Do not reuse this container for any other purpose. Rinse container with water prior to disposal. Cleaning the container before final disposal is the responsibility of the person disposing of the container. When discarding container, place in trash collection or take to recycling center. Do not contaminate water, food or feed by storage and disposal.

M-33003



1 QT (32 FL OZ) 946 mL