

**APPENDIX J:
SELECTION AND USE OF A CLEANING, SANITIZING, OR DISINFECTING PRODUCT**

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Resources to Choose Sanitizing and Disinfecting Products

- [Cleaning and Disinfecting Best Practices During the COVID-19 Pandemic -EPA](#)
- [About List N: Disinfectants for Coronavirus \(COVID-19\) -EPA](#)
- [Infographic: Guidance for Cleaning & Disinfecting Public Spaces, Workplaces, Businesses, Schools and Home -EPA](#)
- [Safer Cleaning, Sanitizing and Disinfecting Strategies to Reduce and Prevent COVID-19 Transmission- OSHA - Washington](#)

Cleaning, sanitizing, and/or disinfecting surfaces are important steps in reducing the risk of spreading infectious diseases to children, staff and visitors in early care and education programs. In most situations, routine cleaning with soap and water is enough to remove dirt and some germs from surfaces. Sanitizing and/or disinfecting may be needed after cleaning to further reduce the risk of spreading illness. Sanitizers and disinfectants need to be applied to a clean surface to work effectively at killing germs. You can find specific information on the label on how to use the product.

Refer to [CFOC Appendix K: Routine Schedule on Cleaning, Sanitizing, and Disinfecting.](#)

Activity	Type of Product	Method	Comments
Clean	Soap/detergent and water, or all-purpose cleaners, to remove germs, dirt, oils, and sticky substances from surfaces or objects	Clean surfaces, preferably with a microfiber cloth/mop, rinse the surface thoroughly, and air dry. Or dry with a paper towel or microfiber cloth.	If using a cleaner other than soap and water, choose a product that has safer chemical ingredients and is certified by a third party (Safer Choice, Green Seal, or UL Ecologo).
Sanitize	Chemical product that reduces the number of most germs on non-porous surfaces or objects to a safe level	Sanitize surfaces that touch food (dishes, cutting boards, or mixed-use tables), or objects that a child might place in their mouth (toys).	Choose an Environmental Protection Agency (EPA) registered product with directions for food-contact surfaces on the label.
Disinfect	Chemical product to kill bacteria and viruses on surfaces or objects	Disinfect equipment and surfaces that are used in toileting or diapering and in cleaning body fluids (blood). Allow disinfectant to sit on the surface and be visibly wet for the number of minutes listed on the product label.	Choose a disinfectant product certified by the EPA's Design for the Environment program.

Detailed definitions of *Clean*, *Sanitize*, *Disinfect*, and *Germ[s]* (microbes) that can cause disease are in the [CFOC Online Glossary](#).

Products Registered with the Environmental Protection Agency (EPA)

Sanitizers are products that kill bacteria on surfaces, and disinfectants are products that kill bacteria and viruses on surfaces. Sanitizers and disinfectants are registered with the EPA as antimicrobial pesticides. A product with an EPA registration number on the label has been tested and is effective in reducing or killing germs.

Cleaners, sanitizers, and disinfectants are used for different purposes. It is important to choose the least hazardous and most effective chemical. Some products both sanitize and disinfect, with different concentrations and/or different amounts of time a product needs to sit on a surface to effectively kill germs.

Before choosing a cleaning or antimicrobial product, you will need to know whether the surface needs to be cleaned, sanitized or disinfected. When choosing a product, pay careful attention to words on the label like *Warning* or *Danger*, and labels that point out if there is a hazard in using the product. Follow the manufacturer's instructions for use and safe handling of products. This includes:

1. How to clean before a sanitize or cleaning product is used
2. How long the product needs to stay visibly wet on the surface or item (contact or dwell time)
3. Whether the product should be diluted or used as is
4. If rinsing is needed after the contact time or if it is allowed to air dry
5. How to apply the product to surfaces; carefully consider whether the early childhood program can follow all the precautions.

Note: Unless the product label specifically includes disinfection directions for fogging, fumigation, wide-area or electrostatic spraying, the EPA does not recommend using these methods to apply disinfectants. The EPA has not evaluated the product's safety and efficacy for methods that are not on the label.

Choosing Safer Products: Safety Data Sheet (SDS)

EPA-registered products have the SDS that gives instructions for safe use of the product, hazardous chemical ingredients, how to clean up spills, and first aid response to chemical exposure. The SDS also describes what type of personal protective equipment (PPE) is needed. PPE such as chemical-resistant gloves (nitrile and rubber are best), masks, and goggles may be needed while working with chemicals. It is safer to use products that need little or no PPE.

According to the Occupational Health and Safety Administration (OSHA) [Hazard Communication Standard](#), employers must keep the SDS on site for all hazardous cleaning products, and the SDS must be available to employees when they ask for it. When they're hired and also once every year, all employees must be trained on how to use chemicals safely in their workplace. This is the law.



Labeling Requirements

All containers of cleaning products and chemicals must be labeled and include their contents and hazards. Original labels must be kept on the containers of cleaning products.

When you take a cleaning product out of the original container and put it into another container, such as a spray bottle, this is a *secondary container*. The secondary container products must be labeled with:

- Name of the product and/or chemicals
- Warnings for health hazards (eye, ear, skin and respiratory)
- Physical hazards (flammable)
- Name and address of chemical manufacturer

You can buy preprinted labels, which makes this task easier.

Indoor Air Quality and Ventilation

Cleaning, sanitizing, and disinfecting products can increase indoor air pollution. Mists, vapors, and other gases from cleaning chemicals can irritate the eyes, nose, throat, and lungs. It is important to make sure that the ventilation system is working properly to reduce the concentration of chemicals in indoor air. Ventilation also occurs naturally by opening windows or doors. Good ventilation also reduces the spread of airborne germs.

Protecting Staff and Children’s Health




Children are more sensitive to chemicals than adults because their bodies and organs are still developing. Developmentally, children are at a higher risk for exposure to chemicals because they play on the floor, put toys in their mouths, and put their hands in their mouths. Other people may also be sensitive to chemicals, such as pregnant people and individuals with asthma or other respiratory issues. Exposure to some cleaning and disinfecting products has been shown to trigger asthma and can contribute to respiratory illnesses. Using products with safer ingredients helps reduce exposure and related health concerns such as damaged skin, cancer, and reproductive health harm. Safer products also protect the environment since toxic chemicals are often disposed in our waterways and soil.

Safer Products Options


The use of products that have safer (less toxic) chemicals help reduce health and environmental concerns. Manufacturers may claim that their products are “green,” “natural,” or “earth friendly,” but these claims are often misleading and might not be related to a chemical’s safety.

Organizations now certify and label products that meet certain health and environmental standards.

For cleaning products, the main [Third Party Certifications](#) logos include:

Cleaning Product	Logo	Website Link
Safer Choice is an EPA Pollution Prevention (P2) program that recognizes more than 2,700 products, including cleaners, hand soaps, laundry detergents, and floor care products.		Safer Choice US EPA
Green Seal certifies thousands of products (cleaners, hand soaps, paper products, and floor care products) that contain no harmful chemicals, are sustainably packaged, and are sold in concentrated form.		Standards Green Seal
UL ECOLOGO ® certifies cleaners, floor care products, laundry detergents, hand soaps, paper products, and industrial wipes.		ECOLOGO® Certification Program UL

For sanitizing and disinfecting products, the only certification logo is:

EPA’s Design for the Environment (DfE) Disinfectants program identifies antimicrobial products that are better for health and the environment. Sanitizers and disinfectants that meet EPA standards have ingredients such as hydrogen peroxide, lactic acid, citric acid, isopropanol, and ethanol.		DfE-Certified Disinfectant Pesticide Labels US EPA
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Bleach Products

Early childhood programs often use bleach to sanitize and disinfect. EPA-registered bleach products are described as sanitizers and disinfectants. Make sure your bleach product's label has an EPA registration number. Bleach typically is sold in concentrations that have 5.25% to 8.25% sodium hypochlorite. Read the label to find the concentration of sodium hypochlorite in the product and follow instructions to prepare the bleach solution.

Care is needed to prepare and use bleach products safely. Bleach is toxic when swallowed and can lead to serious injury and even death. Bleach that is released into the air can both aggravate and trigger asthma and irritate the skin and eyes. Children are especially at risk of having their lungs irritated when bleach is in the air they breathe, because their lungs are still developing.

To safely prepare bleach solutions:

- Store bleach at room temperature of 70°F or cooler and keep out of direct sunlight.
- Properly stored bleach has a shelf life of no more than 1 year from the manufacturing date.
- Never mix or store bleach with ANY other chemicals.
- Make sure the room is well ventilated.
- Choose a bottle made of opaque material.
- Choose pump sprays that have a stream option. Avoid aerosols and foggers; both can spread tiny particles that stay in the air long after being used and get deep into the lungs.
- Wear gloves and eye protection when preparing the bleach solution.
- Use a funnel to pour bleach.
- Add bleach to the water (rather than water to the bleach) to reduce fumes.
- Dilute bleach with cool water, and only use the recommended amount of bleach.
- Make a fresh bleach dilution daily; label the bottle with the contents and the date mixed. Bleach strength rapidly gets weaker in the presence of light and when mixed with water.

To safely use bleach solutions:

- Use when children are not in the area.
- Clean the surface or items with soap and water; rinse and dry the surface before applying the bleach solution.
- Allow solution to stay wet on the surface for the contact time listed on the label.
- Ventilate area by allowing fresh air to circulate and allow surfaces to completely air dry (or wipe dry) after the required contact time before allowing children back into the area.
- Safely store chemicals and be sure they will not tip or spill and are out of reach of children.

Using diluted bleach in a spray bottle creates droplets that can be inhaled. Using microfiber or cloths soaked in the bleach solution creates the least amount of bleach released into the air. People with asthma should avoid using bleach and areas where bleach is being used.

Tools and Tips for Cleaning, Sanitizing, and Disinfecting

Tools and Tips	Overview:
<p><u>Microfiber cloths and mops</u> CFOC 5.6.0.4</p>	<ul style="list-style-type: none"> - Ultra-fine, high-quality microfiber cleaning cloths and mops work well for removing dirt and germs from surfaces. - Wash microfiber cloths and mops by hand or machine. - Laundering microfiber cloths helps prevent the spread of germs from one surface to another. - Resource: What’s So Great About Microfiber?
<p><u>Washing and sanitizing dishes and toys</u> CFOC 3.3.0.2; 4.9.0.11; 4.9.0.13</p>	<p><u>Dishwasher</u></p> <ul style="list-style-type: none"> - Make sure dishwasher has a “sanitizing cycle” or is set to heat dry. - Follow manufacturer’s instructions for use. <p><u>3-sink method</u></p> <ul style="list-style-type: none"> - Wash, rinse, and sanitize dishes and toys.
<p><u>Washing machine and laundry</u> CFOC 5.4.4.2</p>	<ul style="list-style-type: none"> - Wash laundry at the warmest temperature setting, and dry completely.
<p><u>Use of floor mats</u></p>	<ul style="list-style-type: none"> - Place floor mats at entryways and teach children to wipe their feet. - Recommend that people remove their shoes when they come indoors. - Vacuum mats daily.
<p><u>Vacuums with HEPA filters (High-Efficiency Particulate Air)</u> CFOC 5.3.1.4</p>	<ul style="list-style-type: none"> - Vacuums with HEPA filters remove more dirt and germs than traditional vacuums. - Choose a vacuum with a “clean” light signal. - Vacuuming collects more dust and germs from floors than sweeping. - Vacuum each day after the children/staff leave.
<p><u>Proper ventilation</u> CFOC 5.2.1.1</p>	<ul style="list-style-type: none"> - Be sure the ventilation system is working properly to reduce the concentration of chemicals in indoor air. - Ventilation occurs naturally by opening windows or doors. - Good ventilation reduces the spread of airborne germs. - Resource: Tips for Working with a Ventilation Consultant
<p><u>Carpeting tips</u> CFOC 5.3.1.4; 5.3.1.6</p>	<ul style="list-style-type: none"> - Carpets collect dust, dirt, pesticides, and germs. - Vacuum carpets every day. - Carpet steam cleaning is recommended every 3–6 months. - Smaller area rugs that can be removed for cleaning are a safer choice. - Remove shag carpets, since they hold dust and pesticides over time.
<p><u>Chemical-free cleaning systems</u></p>	<ul style="list-style-type: none"> - Steam cleaners are used to sanitize and remove grease, dirt, and residues without chemicals. - Resource: Devices for Disinfecting Surfaces and Air

MORE RESOURCES FOR APPENDIX J: SELECTION AND USE OF A CLEANING, SANITIZING OR DISINFECTING PRODUCT

Green Cleaning

- [Identifying Greener Cleaning Products - EPA](#)
- [Green Cleaning, Sanitizing and Disinfecting: A Toolkit for Early Care and Education - Western States Pediatric Environmental Health Specialty Unit \(PEHSU\)](#), University of California, San Francisco. A set of resources developed in 2021 in collaboration with the EPA.
 - [Green Cleaning, Sanitizing, and Disinfecting: A Checklist for Early Care and Education](#)
Policy guidelines to promote safe cleaning, sanitizing, and disinfecting methods; and strategies to protect children and staff.
 - [Tips for Green Cleaning, Sanitizing, and Disinfecting in Early Care and Education](#)
 - [Ten Reasons to have a Green Cleaning, Sanitizing, and Disinfecting Program in your ECE Facility](#)
- [Informed Green Solutions – Safer Indoor Environments Through Purchasing Decisions](#)
- [Third Party Certifications | Healthy Green Schools & Colleges](#)

Use of Bleach Products

- [Safe and Effective Cleaning, Sanitizing, and Disinfecting: Safer Ways to Dilute Bleach and Safer Use of Bleach Solutions - UCSF California Child Care Health Program](#)
- [Asthma and Chemicals: A Focus on Cleaning, Disinfection, and Sterilization – TURI UMASS LOWELL](#)
- [What’s the Problem with Bleach – PEHSU](#)

Health and Safety

- [Cleaning and Disinfecting Your Facility – CDC](#)
- [Protecting Workers Who Use Cleaning Chemicals - OSHA-NIOSH](#)
- [Cleaning When You Have Asthma: The Dirty Truth - Asthma and Allergy Foundation of America](#)
- [Hazard Communication in ECE Workplaces - PEHSU](#)
- [How to Label a Secondary Container - PEHSU](#)
- [What Is Indoor Air Quality and How Is It Affected by Cleaning, Sanitizing, and Disinfecting? - PEHSU](#)
- [How Does Building Ventilation Affect Infection Control? - PEHSU](#)
- [Holm SM, Leonard V, Durrani T, Miller MD. Do we know how best to disinfect child care sites in the United States? A review of available disinfectant efficacy data and health risks of the major disinfectant classes. *Am J Infect Control.* 2019 Jan;47\(1\):82-91. doi: 10.1016/j.ajic.2018.06.013. Epub 2018 Aug 30. PMID: 30172610.](#)

EPA Resources

- [What are Antimicrobial Pesticides?](#)
- [Selected EPA-Registered Disinfectants](#)

Training Videos

- [Informed Green Solutions - Cleaning for Safer Environments](#)

UCSF California Child Care Health Program Posters (free, and available in English, Spanish and Chinese)

- [Safer Cleaning, Sanitizing and Disinfecting: Choose Safer Products](#)
- [Safer Cleaning, Sanitizing and Disinfecting: Use the Right Tool for the Job](#)
- [Step by Step Cleaning for Child Care Programs](#)
- [Step by Step Sanitizing for Child Care Programs](#)
- [Step by Step Disinfecting for Child Care Programs](#)