

COVID-19

RECOMMENDATIONS ON CHEMICAL SAFETY FOR CLEANING AND DISINFECTION SUPPLIES

- Most cleaning products are made from chemicals.
- The mix of different chemicals can place people at risk.
- Cleaning means removing the dirt. Disinfection means killing microorganisms. Soaps are made to remove dirt, but they can also kill microorganisms, as they break down and destroy the external membranes of the virus. Disinfectants are made to kill microorganisms.
- Soaps and bleach are made for different purposes and should not be combined. They should be used separately.
- The solutions made by mixing bleach with water need careful measurement.
- Bleach is dangerous if used without dilution.
- To disinfect surfaces (metals, plastic, cardboard), several products can be used. However, these products should not be mixed. When these products are mixed, the chemical reactions produced often result in toxic gases. Products should never be mixed indoors, especially where there is poor ventilation.
- All chemicals require adequate handling and should be manipulated according to the label indications.
- Gloves and other protective equipment should be used when handling chemicals.
- All chemicals must be kept out of sight and out of the reach of children.
- Do not prepare the disinfectant solutions in food product packages, as this increases the risk of accidental poisoning.
- Chemical should be kept in cool, dark places.
- Alcohol is flammable. Do not use alcohol sanitizers near open flames or stoves and never use them just before cooking.

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THE FOLLOWING PRODUCTS SHOULD NEVER BE MIXED

Products that should never be mixed	Produces	Toxic effects
Bleach + vinegar	Toxic chlorine gas	Chemical burn, especially of eyes and respiratory tract, from nose to lungs.
Ammonia + bleach	Toxic chloramine vapors	Inhaling the vapors could cause respiratory damage and throat burns
Rubbing alcohol + bleach	Chloroform	damage nervous system, eyes, lungs, skin, liver, and kidneys. Extremely high levels of chloroform exposure may result in death, while lower levels could result in dizziness and nausea.
Hydrogen peroxide + vinegar	Peracetic acid	potentially corrosive and irritating to the skin, eyes, nose, throat, and lungs with the potential for causing permanent scarring of the skin, cornea, and throat.
Baking soda + vinegar	An ineffective cleaning solution	Not toxic, not effective as cleaning solution. May cause skin irritation.
Bleach + potash (potassium carbonate)	Ingredient in some laundry soaps and laundry softeners	As an irritant, it can cause severe damage on skin, eyes, and mucous membranes. Inhalation can cause bronchial irritation, difficulty breathing and pulmonary edema. Ingestion can be lethal.

Climate Change and Environmental Determinants of Health Unit
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