

AUGUST 2020

Staying Safe with Green Products



Returning to the NIH campuses has been accompanied by a heightened awareness of our personal safety while at work. Many precautions are in place to ensure that those in the physical workspace are protected while performing their mission-critical tasks. We will undoubtedly use many more products than ever before to shield ourselves from COVID-19 and to sanitize our workspace. It may be worth considering green alternatives wherever possible to lessen our impact on the environment. A few examples of green alternatives are discussed below. These alternatives should only be considered in situations where they do not increase the risk of the user and only if they do not oppose [guidance from DOHS](#) or from your supervisor.

One of the simplest ways to choose a green product as an alternative is to use a cloth face mask. There are undoubtedly some jobs and situations where a cloth mask may not be a suitable option, such as clinical and laboratory environments. When allowed, wearing a cloth mask must be combined with other precautions, like social distancing and hand washing, to reduce the spread of COVID-19. In fact, the CDC recommends that everyone wear a cloth face covering when leaving their home.¹ Wearing a cloth mask will help protect those around you and their mask will do the same for you.² A cloth mask can serve as a replacement for multiple disposable masks every single day, though it is important to properly wash your cloth mask after each use.³ If you must take it off, ensure it is stored where it will not contaminate other personal items. It should also be noted that medical and surgical masks [offer better filtration and source control than cloth masks](#). These may be in short supply, so one should choose a face covering recommended in the NIH-DOHS safety guidance document for return to the physical workplace. By opting for a cloth mask whenever possible, you help ensure that surgical masks are available for the individuals that need them. For additional questions and guidance on face coverings, please consult your supervisor, or DOHS.

An additional green alternative to typical PPE is biodegradable gloves. Most of these gloves are of the nitrile variety, with extra additives to assist or promote the depolymerization process by microbials while in a landfill. Gloves used outside the lab for sterilization purposes are most likely to be disposed as general waste and end up in a landfill. A standard nitrile glove may take decades to degrade, whereas the biodegradable variety may take a couple years. This is a considerable improvement to the lifecycle of the nitrile glove and can greatly reduce the amount of time these products spend in a landfill. However, please note that the NIH does not recommend or endorse any specific brands of biodegradable gloves.

Another green alternative comes in the form of using hydrogen peroxide as the active ingredient in your cleaning solution. Please note that this discussion is for cleaners designed for use on surfaces, NOT for use on humans. Cleaning products that contain bleach or alcohol are commonly used in lab settings and have become more frequently used in office settings for disinfection.⁴ These chemicals have a long history of being effective disinfectants. However, there are occasions where a less hazardous option may be desired or product shortages could limit disinfectant availability. Hydrogen peroxide is a disinfectant that leaves no residue and degrades to oxygen and water. Hydrogen peroxide produces hydroxyl free radicals that attack and damage microbial membranes, DNA and other vital cell components.⁵ There have also been advancements towards improving the rate at which these hydroxyl radicals are produced, through accelerated hydrogen peroxide. This helps ensure the effectiveness of the cleaner before evaporation occurs. In fact, the CDC lists [multiple hydrogen peroxide cleaners as approved disinfectants for COVID-19](#) (it may be helpful to search the list using hydrogen peroxide as the active ingredient). Peroxide is also [recommended by the ORS Division of Occupational Health and Safety](#) as a disinfectant. These cleaners can be used in both lab and office settings.

Each of the product types listed above provide some form of benefit to the environment, while effectively protecting NIH staff in many situations. If you are able, please consider adopting one or more of these green products into your daily routine at the NIH.

TAKE ACTION



Green Product Categories

Green products are available in nearly all product categories and for many different settings. Read the full article to learn about a few green product categories for each of the laboratory, office and home settings.

[LEARN MORE](#)

STAFF SPOTLIGHT



The 2020 Green Labs Program

The Green Labs Program is an integral aspect of sustainability at the NIH. Please consider participating for your lab in the 2020 version of the program to gain your certification!

[LEARN MORE](#)

NEMS TRAINING

Did you know? Green products can save resources during any phase of their lifetime, from their production, shipping, operation/use or disposal. To learn more about green products at the NIH, please visit the [NEMS Training webpage](#) to view a short (20 minute) NIH environmental awareness training video.