

Green Product Highlights!

Green lab products come in all shapes and sizes to fill a huge variety of lab practices. Whether you are looking for an Energy Star ULT freezer, a safer alternative for ethidium bromide, or biodegradable gloves, there are many green options to choose from for your lab! One area that green products will likely make a large impact in the future is reducing the amount of waste generated by the biomedical field. Whether it's disposable slides, nitrile gloves, or plastic pipette tips, labs need many items to fulfill their research duties. In many cases, due to concerns over contamination or research integrity, single-use items are the go-to products for many labs. There are also many lab practices that traditionally use hazardous substances. Various green products have been developed in the past few years that could finally provide labs with environmentally friendly options for these items.

One of the recent trends is to collect lab waste from single-use items to convert into another useful product. For example, Kimberly-Clark has the [Right Cycle program](#) that collects used nitrile gloves and other eligible Kimberly-Clark Professional PPE, like lab coats and safety glasses, to convert them into products like park benches and artificial plants. This process has the benefit of reducing the amount of waste sent to landfills, while also providing new, useful products.

Another example of a reuse and recycling process comes from [Polycarbin](#), collecting used lab items to convert them back into new labware. Polycarbin is proposing to “close the loop” of plastic use. Instead of single-use plastic items having a lifecycle ending with incineration or the landfill, these items can be converted into resin and reformed into new products. Polycarbin offers collection bins to assist with collecting rigid plastics in sorted clear and non-clear streams. After returning a plastic shipment to Polycarbin, your lab will receive personalized data about your waste diversion and the ability to purchase recycled plastic products.

Green products have also been created to eliminate the need for slides, such as with the [CellDrop Automated Cell Counter from DeNovix](#). This instrument provides the ability to transfer your cell suspension directly onto the sapphire surface of the instrument, receive a cell count, then simply wipe away your sample. These instruments feature various analysis tools, provide quick and accurate measurements, and require very small sample volumes. It has a small benchtop footprint too! CellDrop instruments have already been successfully implemented at the NIH, such as in the Liver Diseases Branch (LDB) of NIDDK! Removing the need for slides is a handy way to eliminate another waste source in your lab!

NIH labs can eliminate hazardous silver compounds from their waste streams by utilizing digital imaging equipment and discontinuing the use of photo processing rooms (dark rooms). One example of a digital imaging instrument is the [Odyssey line from LI-COR](#). This instrument can provide digital images without the need for multiple exposures, worrying about processing artifacts, or many of the other aspects that can complicate traditional Western blots. The Odyssey instrument has been adopted by the lab of Minoo Shakoury-Elizeh (Genetics and Metabolism Section of LDB, NIDDK) to great effect. Minoo's lab has saved over \$11,000 by eliminating their need for x-ray films and dark room products, while also reducing their production of hazardous waste.

* Please note that the NIH does not endorse any of these products.

Many of the products mentioned in this article will be featured at the [2021 NIH Green Labs Fair](#)! Please consider attending this event from 12-2pm on September 22 to learn more about these products/services and many other green products!

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