iBlot 2 and iBlot 3 Dry Blotting System

Introduction

Thermo Fisher Scientific is committed to designing products with the environment in mind. This fact sheet provides the rationale behind the environmental claim that the Invitrogen™ iBlot™ 2 Dry Blotting System and the Invitrogen iBlot 3 Western Blot Transfer System are responsibly packaged and generate less waste than their predecessor, the original iBlot™ system.

The Invitrogen™ iBlot™ 2 and iBlot 3 Transfer Stacks use less source material and packaging than the original iBlot Transfer Stacks, thereby generating less waste in the lab and emitting fewer greenhouse gases during transit.

Additionally, we describe the recycling program for the copper-coated grid electrodes and Invitrogen™ iBlot™ 2 Gel Transfer Device, and substantiate the claim that these products have a sustainable disposal program. We are providing a way for customers to recycle their used iBlot 2 and iBlot 3 Transfer Stacks copper electrodes, and iBlot 2 Gel Transfer Device responsibly.

Product description

The iBlot 2 and iBlot 3 Transfer Stacks are used with the Invitrogen™ iBlot 2™ Gel Transfer Device and the iBlot 3 Western Blot Transfer Device, respectively, to transfer proteins. The iBlot 2 and iBlot 3 Transfer Stacks are ready-to-use consumables with integrated polyvinylidene difluoride (PVDF) or nitrocellulose transfer membranes for dry blotting of proteins. Each iBlot 2 and iBlot 3 Transfer Stack contains a copper-coated electrode, and appropriate cathode and anode buffers in the gel matrix to allow fast, reliable transfer of proteins.

Green features

Less waste and fewer resources used

Minimizing plastic waste associated with our consumable products has been a long-standing goal. The iBlot 2 and iBlot 3 Transfer Stacks have been consolidated into one packaging unit, eliminating the need for a second plastic tray. Additionally, the mini-size stack now uses a smaller plastic tray than the regular-size stack. Collectively these changes have reduced the amount of plastics used in the regular-size iBlot 2 and midi-size iBlot 3 Transfer Stacks by 49% (15.1 g) and the mini-size iBlot 2 and iBlot 3 Transfer Stacks by 63% (17.7 g), compared to original iBlot Transfer Stacks (28.7 g for regular; 28.1 g for mini). The iBlot 2 and iBlot 3 plastic trays are also made of polyethylene terephthalate (PET) and are highly recyclable.*

Newly sourced felt absorbent pads in the iBlot 2 and iBlot 3 Transfer Stacks are packaged together in one plastic pack, replacing the thicker, individually packaged sponges used in the original iBlot Transfer Stacks. This has reduced the amount of plastic packaging used for the sponges and felt by 90% compared to the amount used for the original iBlot Transfer Stacks.

Responsibly packaged

Using less material in the iBlot 2 and iBlot 3 Transfer Stacks has enabled us to downsize the packaging as well. The regular-size stack packaging is now 59% smaller compared to that of the original iBlot Transfer Stacks, and the mini-size packaging is 70% smaller than its predecessor. Not only is this important in reducing the amount of raw material required to package the product, but this also significantly reduces the amount of space required for storage.

Consolidated products in combination with smaller packaging have significantly reduced the overall packaged product weight when compared to the original iBlot Transfer Stacks. By reducing the shipping weight of these products, the total greenhouse gas emissions associated with shipping has been reduced by up to 13% (0.146 kg CO_2 per box) for iBlot 2 and iBlot 3 Transfer Stacks of the regular or midi size and up to 29% (0.245 kg CO_2 per box) for the mini size.**

Extended life

To recover valuable copper metal from the iBlot 2 and iBlot 3 Transfer Stacks, we are partnering with reputable and certified recyclers in the United States and Europe to offer customers a way to recycle their used copper electrodes. This material can then reenter the manufacturing stream, which helps reduce additional mining of natural resources. Instructions on how to send used Transfer Stacks copper are provided at thermofisher.com/product-take-back.

We also offer a return program for recycling the iBlot 2 Gel Transfer Device. To participate in this program, contact your local sales representative to arrange for a pre-paid shipping label to send the device to a designated recycler.

By offering a recycling program, we support diverting waste from landfills by recovering and reusing our natural resources. The copper recycling program of the iBlot 2 and iBlot 3 Transfer Stacks and recycling program for the iBlot 2 Gel Transfer Device, are one small way we are reducing our environmental footprint.

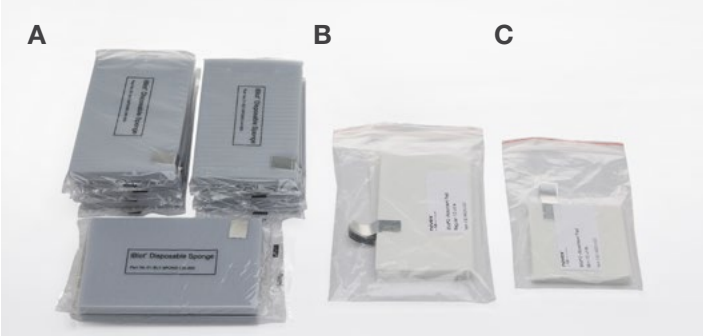

Figure 1. Reduction in packaging and waste. (A) 10 individually wrapped original iBlot Transfer Stack sponges, (B) single package of 10 iBlot 2 Transfer Stacks with regular-size absorbent pads, and (C) single package of 10 iBlot 2 Transfer Stacks with mini-size absorbent pads.

Figure 2. Reduction in package size. (A) original iBlot Transfer Stacks, (B) regular-size iBlot 2 Transfer Stacks, and (C) mini-size iBlot 2 Transfer Stacks.

Figure 3. Single plastic tray for packaging of the regular-size iBlot 2 Transfer Stacks (left) vs. two plastic trays for packaging of the original iBlot Transfer Stacks (right).

* Please consult with applicable federal, state, and/or local regulatory agency for waste disposal instructions.

** U.S. EPA, Climate Leaders, Greenhouse Gas Inventory Protocol Core Module Guidance: Optional Emissions from Commuting, Business Travel.

Find out more at **thermofisher.com/iblot2** and **thermofisher.com/iblot3**