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## AirDye's Ecological Dyeing Process Makes the Future of Textiles Bright

By [Alissa Walker](#)



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Most of the discussion in sustainable textiles has centered around the fibers--manufacturers making a switch to organic cotton, or creating fabrics from natural, easily-renewable materials like bamboo or hemp. But very little attention has been paid to the the dyeing process, which can be a potentially devastating industry when it comes to chemicals, waste, and water usage. [AirDye](#) [1], a new method created by [Colorep](#) [2] for dyeing textiles takes water almost out of the equation, using 90% less water, but also reducing the emissions and energy used by 85%, since extreme heat is needed to dry the textiles after they are soaked in dye (and most fabrics then require a post-rinse and yet another dry cycle).

AirDye's process begins with using all synthetic fibers for its material, which can be made from recycled PET bottles. Using dispersed dyes that are applied to a paper carrier, AirDye uses heat to transfer the dyes from the paper to the surface of the textiles, coloring it at the molecular level. All paper used is recycled, and dyes are inert, meaning that they can go back to their original state and be reused.



## GETTING THE WORD OUT

Early on, BOLTgroup [3] designer and principal Jamey Boiter--an early adopter of the Designers Accord--saw the potential of partnering with Colorep to help them to maximize impact. A prime focus they agreed on was to help reduce the over 2.4 trillion gallons of water are used to dye fabrics every year. "If you think about it, 1/3 of the world does not have access to clean water," he says. "And traditional dyeing and textile decorating is the third largest consumer of water in the world." A Good for Water blog [4] was launched to communicate all the ways AirDye placed water preservation first.

Now as a partner, BOLTgroup worked to spread the word in a brand-appropriate way, creating a viral, buzzworthy campaign that echoed the sustainability message. The perception of "natural" vs. "sustainable" was a big issue to overcome, since many people associate sustainable methods with neutral colors and chunky cotton fibers. When in fact, AirDye's process was able to improve on traditional dyes with incredible vibrant colors--since the synthetic material takes the proprietary dye better than a natural material with traditional methods, a more colorfast, resistant color is achieved--paired with a unique ability to print on two sides of fabrics. The team decided to embrace these features by communicating directly with creatives to showcase the incredible applications that could be embraced by their industry.

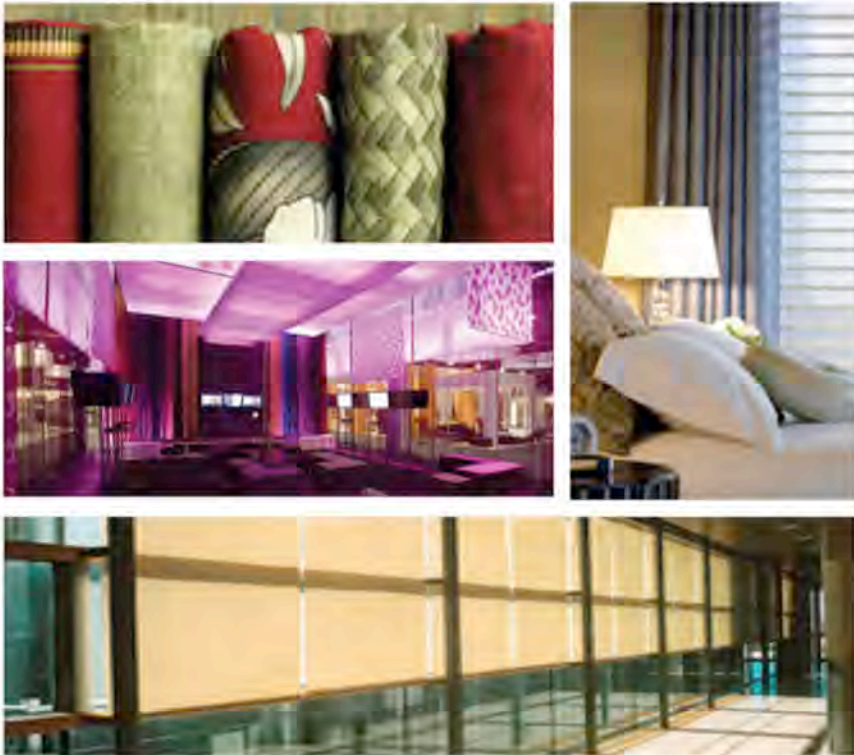
"Designers want bright colors and patterns," says Paul Raybin, Colorep's chief sustainability officer. "We said, let's address the coloration and decoration of these materials."



## RETAIL EXCHANGE

One of the most wasteful applications of textiles and other printed materials are the point-of-purchase displays found in retail environments. Durable signage--often made from super-toxic vinyl, which cannot be recycled--is erected in a store for a few days to a few weeks, then taken down once the sale is over. AirDye vowed to reinvent this portion of the industry with the ecobanner a replacement for retail displays on vinyl or foamboard with a closed production loop.

The banners themselves are made from 100% recycled PET bottles. But when the banner comes down, the store can send it back to AirDye for recycling. Taking the concept a step further, AirDye created a subscription-based program that retail stores can participate in, handling the graphics and printing for the banners, which are mailed directly to the store, and then accepting the used banners back for recycling.



## HEALTH & HOSPITALITY

Another major client for the textile industry are hotels and other hospitality industries that have to frequently clean and replace things like furniture, curtains and bedspreads. It's a hugely wasteful process but it's largely ignored by hotels, that are often busy revamping the sustainable features of their buildings and furniture, but don't have a good solution for their fabrics. "These large-scale hotel chains are housed in LEED-certified buildings but you can change the textiles inside a hotel room and that's about 47 yards of textiles," says Boiter. A specific program that targets interior designers and buyers showed the durability and fade-proof features of AirDye fabrics, making them prime candidates for this industry.

More inroads were made to the health care industry, which also is poised to see a radical transformation when it comes to textiles. "Now you're seeing beautiful, colorful patterns that can be washed at very high temperatures with microbial cleaners," says Boiter. This could signal a huge difference in the way our hospitals look--places usually relegated to washed-out pastels.



## FASHIONABLY GREEN

Perhaps the biggest score for AirDye came last week at New York's Fashion Week, where designer [Costello Tagliapietra](#) [5] debuted an entire line made with their methods. The vibrant colors and silky, clingy cuts buzzed through the [sustainable fashion blogosphere](#) [6] as not only a more responsible solution, but one that sacrificed nothing when it came to the look and feel of the fabrics.

But beyond giving high-end designers a high-performance, highly-sustainable option, AirDye is poised to shake up larger-volume fashion brands as well. The technology removes the risk factor for retailers who can now dye-on-demand, helping them manage their inventory. "With this late entry of color, you can do it later in the process and make a quick decision," says Raybin. "This enables the manufacturer to make what they sell rather than trying to sell what they make." Flexibility signals savings for retailers who don't have to stock hundreds of pieces in different colors, hoping that their hunch about which ones will sell is right on. It also eliminates waste in an industry where--believe it or not--clothing that's deemed no longer sellable is actually trucked to landfills.

This is another place where AirDye's combination of synthetics and water-free dye could really revolutionize the industry. Thanks to the way the dye is applied, clothing could actually be recycled. Take a moment to imagine the implications of that. You'd take a few expired looks into a recycling center at the end of the season, and pick up a stack of next season's trends. Yes, AirDye could make that possible. Until then, a girl can dream.

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