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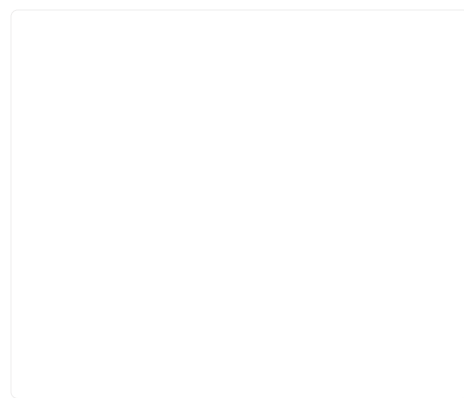
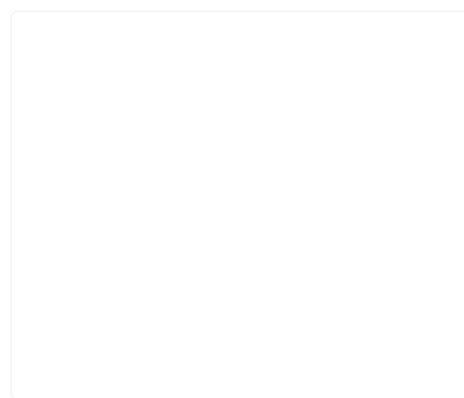
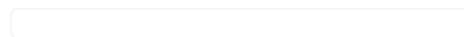
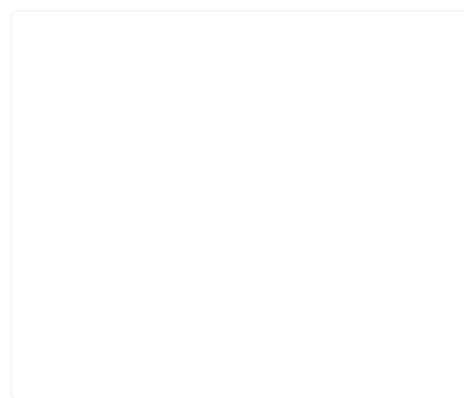
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Getting a Greener Dry Clean



By [Gemma Alexander](#)

NOV 23, 2021 [dry-cleaning](#)



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The most important thing you can do for a more [sustainable wardrobe](#) is to buy less and wear it more. That means taking good care of your clothes. You probably already mend instead of tossing when you can. You've probably already upped your laundry game, using efficient [appliances](#), skipping dryer sheets or replacing them with [dryer balls](#), and using nontoxic [laundry detergent](#). But what do you do when

labels command, “Dry clean only”? Even if you don’t have to wear suits at work, nearly everyone has a few items of clothing that shouldn’t go in the washing machine, and these are usually the ones you can least afford to accidentally ruin. How bad is dry cleaning and is green dry cleaning really green?

Dry Cleaning Isn’t Dry

When you wash clothes at home, your detergent acts as a surfactant that breaks up water molecules, allowing them to dissolve the dirt on your clothes. But as we’ve all discovered the hard way, water damages some fabrics. The “dry” in dry cleaning refers to the fact that no water is used. But dry cleaning is not actually dry. When clothes are dry cleaned, they are still soaked in a liquid that breaks up dirt and oils. But that liquid is a chemical solvent. That chemical is usually PERC, or perchloroethylene. Perhaps dry cleaning just sounds better than chemical cleaning.

Dry Cleaning Isn’t Clean

The Environmental Protection Agency has banned PERC dry cleaning machines from residential buildings and is evaluating PERC under the [Frank R. Lautenberg Chemical Safety for the 21st Century Act](#). But people have known since the 1970s that PERC is a pretty [nasty chemical](#): it’s a known reproductive and neurotoxicant, a potential human carcinogen, and a persistent [environmental pollutant](#) that volatilizes [in the air](#) and seeps into [groundwater](#).

Traditional PERC dry cleaning processes are also [very wasteful](#). Replacing old transfer equipment with closed-loop systems can reduce a dry cleaner’s use of PERC by up to 70%. And on-site distillation can recover as much as 90% of solvents. But because PERC is so harmful, a better choice is to switch solvents.

Greener Chemicals

Unfortunately, most other solvents that are available and effective are not without [their own problems](#). Only one of them can work in existing machines, and that one is a neurotoxin. All of the others require an investment of tens of

Bedding

thousands of dollars in new equipment – something that most dry cleaners, which are historically family businesses [owned by immigrants](#), simply cannot afford. Most alternative solvents are petroleum-based and many are [highly flammable](#), requiring the additional purchase of specialized fire safety equipment. Some solvents are as toxic as PERC, others are just as polluting. Not all of the alternatives have been sufficiently studied to determine if they are actually safer than PERC. One of the safest alternative solvents is liquid carbon dioxide combined with detergent. However, carbon dioxide is a powerful [greenhouse gas](#), liquid CO2 can be expensive, and some professionals feel it is not as effective as other solvents.

The [GreenEarth](#) cleaning method uses a proprietary silicone solvent called siloxane or D-5. Also found in personal care products, siloxane breaks down into sand, water, and carbon dioxide. GreenEarth licensees recycle their solvent so there is minimal waste. However, manufacture of siloxane does require the use of chlorine, which generates toxic dioxin. There have also been studies suggesting a [cancer risk](#) from siloxane, although those studies are old and are not conclusive.

The Water Is Fine

The only truly safe solvent is water. In recent years, attention has turned to developing better surfactants and smarter washing machines. This allows cleaners to wet-wash fabrics that used to require dry cleaning. The equipment cost represents a significant hurdle. But new smart washers have made wet cleaning a viable alternative that is safe for both humans and fabrics. These new machines can even be used with newer, safer surfactants, like [fungal enzymes](#).

Customers are rarely aware of it, but even dry cleaners that have not made the switch to safer solvents or wet cleaning already wash many garments in regular laundromat-style washing machines. When cleaners receive an item, they evaluate the fabric, and if it doesn't need to be dry cleaned, they [wash it normally](#). In [many cases](#), silk, wool and cashmere, velvet, and linen can be hand-washed or even washed in the machine at home.

But if you don't want to risk a treasured clothing item or simply don't have the time, look for a professional wet

cleaner. If you cannot find one near you or feel that dry cleaning is necessary, GreenEarth dry cleaners are the best choice.

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By [Gemma Alexander](#)

Gemma Alexander has an M.S. in urban horticulture and a backyard filled with native plants. After working in a genetics laboratory and at a landfill, she now writes about the environment, the arts and family. See more of her writing [here](#).

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