

WHAT'S **IN** WHAT'S **OUT**

A RATING OF DRY CLEANING METHODS CURRENTLY IN USE IN THE U.S.

THE DANGERS OF DRY CLEANING

Most of the nearly 40,000 dry cleaners nationwide are still using the toxic and environmentally dangerous solvent perchloroethylene* (also known as perc) to clean clothes. However, safer proven alternatives are now available at as many as 3,000 cleaners across the country. It's time for cleaners to eliminate perc, which it has depended upon for 40 years, and switch to safer methods of cleaning clothes.



Perc's hazards are understood more than ever before – it pollutes groundwater that millions of Americans drink each day, it causes cancer in dry cleaning workers, it exposes customers to a probable human carcinogen and it creates dioxin when its

wastes are burned. Now, the dry cleaning industry is searching for another miracle cleanser. New processes, featuring exotic solvents, are again being offered. Greenpeace believes that safer, and environmentally sustainable alternatives such as wet cleaning and carbon dioxide methods are more promising than synthetic chemicals. Here's our rating of what is currently available in dry cleaning shops. Urge your dry cleaner to offer non-toxic alternatives if it doesn't already!

* Perchloroethylene is a probable human carcinogen according to the International Agency for Research on Cancer. It is known by many names including Dowper, Nema, antisol 1, Ankilostin and tetralex.




WHAT'S IN

The most promising technologies for cleaning clothes:

CLEANING METHOD	RATING	MANUFACTURERS/ SELECTED USERS	STORE LOCATIONS
Wet cleaning		Multiple companies	www.tpwn.net/page4.html
Carbon dioxide (CO ₂)		MiCell Nu-Life Cleaners	www.hangersdrycleaners.com www.nu-lifecleaners.com

WHAT'S OUT

Synthetic chemicals with environmental and health concerns:

CLEANING METHOD	RATING	MANUFACTURERS/ SELECTED USERS
Perchloroethylene		PPG, Dow, Vulcan
Siloxanes		General Electric (marketed under GreenEarth)
Hydrocarbon Solvents (DF 2000)		Exxon

Hangers key: 5=A, 4=B, 3=C, 2=D, 1=F.

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www.greenpeaceusa.org 702 H Street NW, Suite 300, Washington, DC 20001

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WET CLEANING

Despite popular misconception, over 99% of clothes labeled "Dry Clean Only" can be cleaned by wet cleaning. Wet cleaning is the

non-toxic water and detergent clothes washing process that most of us use in our homes.

CARBON DIOXIDE

Carbon dioxide (CO₂) is naturally abundant in our environment, and it can be collected as a by-product of industrial processes such as alcohol production. Under pressure, CO₂ becomes a liquid that when mixed with detergent is an effective cleaning agent. CO₂

requires no special disposal, and it remains contained during the cleaning process. If leaks in the process should occur, however, adverse effects on the environment and human health would be minimal.

PERCHLOROETHYLENE

A National Institute for Occupational Safety and Health study found that dry cleaning workers exposed to perc suffered an elevated death rate from several forms of cancer. Serious, negative health effects are also suffered by people who live above dry cleaners, and others still are directly exposed to perc from their dry cleaned clothes. With respect to the environment, 70% of all of perc used

ends up in the environment where it extensively contaminates both ground- and drinking water. At least 1.2 million Americans are exposed to perc in drinking water at levels that exceed safety limits. In addition, the incineration of perc waste leads to the formation of dioxin, a potent carcinogen in humans.

SILOXANES

Because heat and chlorine are required to produce siloxanes, manufacture of these chemicals could lead to the formation of dioxin, a potent cancer-causing substance in humans. In addition, the General Electric

siloxane marketed for dry cleaning use causes lesions of the lung and liver in animal studies. It has also been detected in the fat of humans, and it is known to persist in the fat of animals for at least one year.

HYDROCARBON SOLVENTS

DF 2000 is the primary hydrocarbon solvent used in dry cleaning. It comes with concerns

about explosion, toxicity and the potential for groundwater contamination.

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