

Health Hazards in Cleaning Products

We sent seven cleaning products to an independent laboratory for “time of flight” (TOF) analysis, which detects the presence of multiple chemicals in a single test by precisely measuring molecular mass. Each detected molecular mass is then matched to a library of chemical formulae and masses to identify a specific chemical’s identity. We found 100-400 chemicals per product. Many intentionally-added ingredients may be comprised of multiple chemicals, so this does not mean there were 100’s of intentionally-added ingredients.

We found 63 chemicals with adverse health effects or chronic aquatic toxicity.ⁱ

Fifty-four chemicals were linked to adverse health effects: 5 known or possible carcinogens; 26 that potentially disrupt endocrine function; 6 developmental/reproductive toxicants; 5 neurotoxicants; 3 suspected asthmagens; and 16 skin irritants/allergens. Fifty chemicals were linked to chronic aquatic toxicity, demonstrating environmental concerns. Many chemicals were associated with more than one adverse effect.

Key examples of chemical hazards found in cleaning products:

Chemical	Hazard	# of Products
1,4-dioxane	Possible carcinogen linked to mammary gland tumors	2 products
2-butoxyethanol ⁱⁱ	Developmental toxicant (NTP) and possible endocrine disrupting chemical	1 product
3-carene	Potential asthmagen (AOEC)	2 products
Benzene	Known carcinogen, possible endocrine disrupting chemical, developmental toxicant (Prop 65)	1 product
Benzyl chloride	Carcinogen (possible, according to the EPA and the EU); possible endocrine disrupting chemical	3 products
Beta-myrcene	Carcinogen (Prop 65)	3 products
Diethyl phthalate (DEP)	Endocrine disrupting chemical (EU) and possible asthmagen (AOEC)	5 products
Lilial	Possible endocrine disrupting chemical	1 product
Limonene	Skin irritant (EU)	1 product
Toluene	Developmental toxicant (Prop 65, NTP, EU) also linked to chronic aquatic toxicity	4 products

Policy Implications

While this was a small sample size, it clearly demonstrates the presence of chemicals with serious long-term health and environmental consequences and underscores the need for clear ingredient labeling on cleaning products so consumers and workers can make informed purchasing decisions.

ⁱ Based upon analyses by authoritative bodies such as California Prop 65, the U.S. National Toxicology Program, the EU Globally Harmonised System and the International Agency for Research on Cancer. A full list of sources is available upon request.

ⁱⁱ blue signifies ingredients used in fragrance according to the International Fragrance Association (IFRA): <http://www.ifraorg.org/en-us/ingredients>