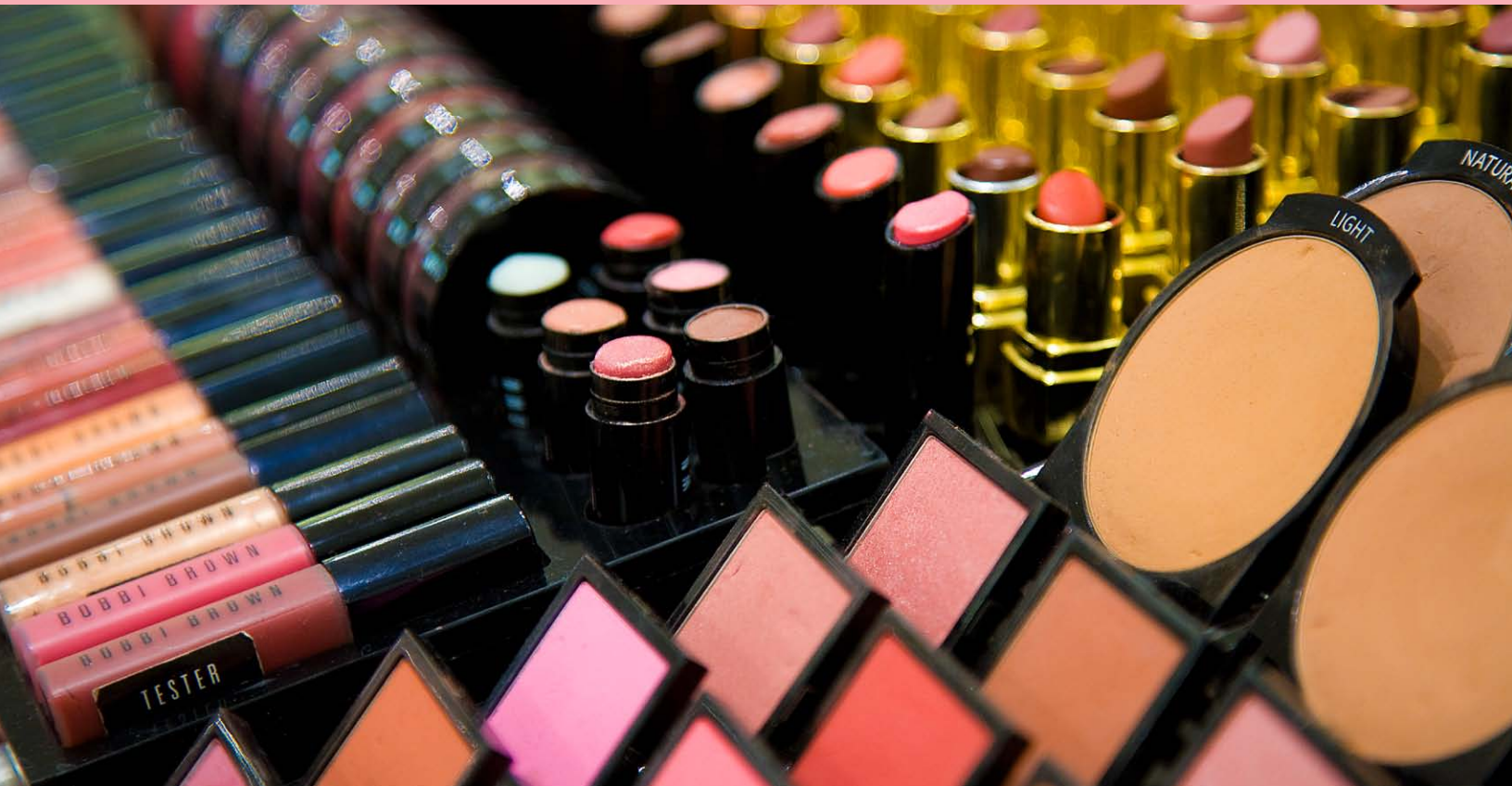


What's  
inside?

That counts.



A SURVEY OF TOXIC INGREDIENTS IN OUR COSMETICS



David  
Suzuki  
Foundation

SOLUTIONS ARE IN OUR NATURE

## WHAT'S INSIDE? THAT COUNTS

A Survey of Toxic Ingredients in our Cosmetics

October 2010

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“ I started looking into less toxic skincare products for the sake of my 11 month old baby, but after learning just a little about this topic, I am shocked and extremely concerned about what I’m putting on my own skin as well. ”

— Dora, Vancouver, survey participant

“ I wasn’t surprised to find toxic ingredients in my personal care products, but disappointed, again. ”

— Gisèle, Sherbrooke, survey participant





# Executive Summary

**WHAT COMES TO MIND WHEN YOU THINK OF POLLUTION?** Probably not your shampoo, soap or hand lotion. But some of the chemicals found in personal care products aren't that pretty. U.S. researchers identified 10,500 industrial chemicals used as cosmetic ingredients, including carcinogens, pesticides, reproductive toxics, endocrine disruptors, plasticizers, degreasers and surfactants.

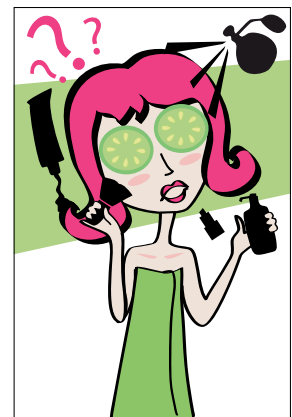
In the spring of 2010, the David Suzuki Foundation invited Canadians to pull back the shower curtain and participate in an online survey about toxic ingredients in cosmetics. We asked participants to check ingredient lists for 12 sets of chemicals – a Dirty Dozen ingredients linked to health and environmental concerns, including cancer, reproductive disorders, asthma and severe allergies.

This report summarizes key findings from the survey, highlights weaknesses in Canada's legal framework governing toxic chemicals in cosmetics, and outlines recommendations for strengthening laws and regulations to better protect human health and the environment.

More than 6,200 individuals participated in our survey, providing information for more than 12,500 personal care products. The results are disturbing:

- Almost 80 per cent of products reportedly contained at least one of the Dirty Dozen ingredients;
- More than half of all products reportedly contained multiple Dirty Dozen ingredients;
- Participants were unable to locate ingredient lists on more than 1,000 products.

Equally disturbing, loopholes in Canada's cosmetic ingredient labelling requirements result in incomplete ingredient lists on many products. Notably, manufacturers are not required to disclose specific fragrance ingredients on the product label. Instead, the generic term *parfum* is listed, representing a mysterious mixture of potentially dozens of chemicals.



This report highlights weaknesses in Canada's legal framework governing toxic chemicals in cosmetics and outlines recommendations to better protect human health and the environment.

Also, personal care products regulated as “drugs” on the basis of therapeutic claims (e.g., tartar-fighting toothpaste, bacteria-killing cleansers, face cream with sun protection) are not subject to the cosmetic ingredient labelling requirements.

Notwithstanding these loopholes, cosmetics are the only type of product, other than food, for which Canadian consumers are afforded the right to know about chemical ingredients. As a result, consumers can seek to avoid at least some toxic chemicals in their toiletries – and many do. Three out of five participants indicated that they check the ingredient list before buying personal care products. But survey results signal how difficult it can be, even for the conscientious shopper, to avoid chemicals of concern. “Buyer beware” is inadequate when it comes to protecting human health and the environment from unnecessary toxic exposures. Government has a role to play in requiring more user-friendly ingredient lists and keeping harmful chemicals out of our products in the first place.

Ninety-eight per cent of survey participants agreed that Canada’s cosmetic laws should be strengthened.

The David Suzuki Foundation offers the following recommendations to protect our health and the health of our environment from unnecessary exposure to toxic chemicals in cosmetics.

1. Replace potentially harmful ingredients in cosmetics with safer alternatives.
2. As an interim step, implement hazard labelling for ingredients linked to chronic health concerns and strengthen EcoLogo™ certification criteria for personal care products.
3. Require pre-market approval of the chemical composition of cosmetics and allow public access to a searchable online database of information submitted by manufacturers.
4. Extend restrictions on cosmetic ingredients to “unintentional ingredients” (e.g., impurities, by-products).
5. Extend ingredient restrictions and labelling requirements to personal care products regulated as “drugs.”
6. Require manufacturers to disclose specific fragrance ingredients.
7. Prohibit use of the terms unscented and fragrance-free in the marketing of products that contain fragrance ingredients (including masking agents).
8. Prohibit anti-bacterial household products, including cosmetics.
9. Restrict use of the terms natural and organic in the marketing of products that contain non-organic and synthetic ingredients.
10. Extend ingredient disclosure requirements to other types of consumer products, including household cleaners, toys and furnishings.

Download the full report at [www.davidsuzuki.org/publications](http://www.davidsuzuki.org/publications).



Ninety-eight per cent of survey participants agreed that Canada’s cosmetic laws should be strengthened.



# Introduction

**WHAT COMES TO MIND WHEN YOU THINK OF POLLUTION?** Probably not your shampoo, soap or hand lotion. But some of the chemicals found in personal care products<sup>a</sup> aren't that pretty. U.S. researchers identified 10,500 industrial chemicals used as cosmetic ingredients, including carcinogens, pesticides, reproductive toxicants, endocrine disruptors, plasticizers, degreasers and surfactants.<sup>1</sup>

In 2004, Canada's *Cosmetic Regulations* were updated to require manufacturers to list ingredients on the retail package.<sup>2</sup> When this requirement took effect in 2006, the long lists of obscure chemicals that appeared on personal care product labels sparked headlines across the country. People were surprised to discover that popular brands contain dozens of chemical ingredients.

Apart from the *length* of the newly unveiled ingredient lists, the labelling requirement substantiated concerns about the presence of countless potentially harmful ingredients in cosmetics. We buy these products to keep ourselves and our families clean and well-groomed. The news that some products contain a cocktail of potentially harmful chemicals comes as a shock to most consumers.

These are products that we slather right onto our bodies. Many ingredients of concern can be absorbed through the skin, coming into direct contact with sensitive tissues, organs and glands. Moreover, chemicals in cosmetics that we rinse off in the shower or at the end of the day get flushed down the drain and can contaminate our water and aquatic ecosystems.<sup>3</sup>

The quantity of any particular chemical of concern in a single application of a single cosmetic is, in most cases, very small. Yet it is not uncommon for a given cosmetic to contain multiple ingredients linked to health and environmental hazards, and most of us regularly use several products *every day*. These individually small doses add up and combine with other daily exposures to toxic substances in the air we breathe, the water we drink, the food we eat and the manufactured products we use at work and at home. Some cosmetic ingredients are persistent and bioaccumulate; exposure to these chemicals can increase as they build up in the environment.



Many popular brands have double-digit ingredient lists. For example, Nioxin Shampoo for Normal to Thin-looking Hair lists 61 ingredients. Jergens Naturals Ultra Hydrating Daily Moisturizer lists 34.

<sup>a</sup> Throughout this report the terms *personal care product* and *cosmetic* are used interchangeably.

Furthermore, even small doses of some of these chemicals show harmful effects. In particular, scientists have known for many years that chronic exposure to low levels of endocrine disruptors and weakly endocrine-active compounds in the environment can interfere with hormone function.<sup>4</sup> The American Chemical Society acknowledges that these low-dose effects are not predicted by animal testing at higher doses<sup>5</sup> – which has nevertheless been the basis for conclusions that chemicals presently in use are acceptably safe.

Canada's cosmetic ingredient labelling requirement marked a major victory for consumers. Notwithstanding some notable loopholes in the regulation, cosmetics are currently the only type of product, other than food, for which Canadian consumers are afforded the right to know about chemical ingredients. Initially, many people hoped that this transparency would prompt manufacturers to improve product formulations and develop product lines that did not contain so many ingredients of concern. Some companies may have indeed risen to this challenge, but unfortunately, toxic ingredients are still present in many personal care products.

## WHAT'S INSIDE? THAT COUNTS.

In the spring of 2010, the David Suzuki Foundation invited Canadians to pull back the shower curtain and participate in an online survey about toxic ingredients in their personal care products. We wanted to investigate the prevalence of 12 chemicals of concern in the products that Canadians regularly use. We also hoped that our survey would prompt consumers to take a closer look at cosmetic ingredient lists and build support for better regulations that keep toxic chemicals out of consumer products, especially when safer substitutes are available.

Over the course of three months, more than 6,200 individuals participated in our survey, providing information for more than 12,500 products. This report presents a summary and analysis of responses and concludes with recommendations for strengthening Canada's *Cosmetic Regulations* and other relevant standards.



Over the course of three months, more than 6,200 individuals participated in our survey, providing information for more than 12,500 products.

## DEFINITIONS

**BIOACCUMULATION:** *The increase in concentration of a contaminant in an organism or in the food chain over time.*

**PERSISTENT:** *A contaminant that does not readily degrade in the environment, thus increasing the potential for environmental exposure to the substance.*

**ENDOCRINE DISRUPTOR:** *A contaminant that mimics hormones and interferes with the endocrine system, which regulates growth, metabolism, sexual development, reproduction and other body functions.*



# A Dirty Dozen



WITH 10,500 CHEMICALS used as ingredients in personal care products,<sup>6</sup> it simply wasn't feasible to ask about all of them all in our survey. Instead we decided to focus on a dozen chemicals of concern found in a wide range of common products. To develop this short list, we reviewed the work of various respected scientific and advocacy organizations, including the U.S. Campaign for Safe Cosmetics, the U.S. Breast Cancer Fund, Environmental Defence, the Environmental Health Association of Nova Scotia (*Guide to Less Toxic Products*), Toxic Free Canada (*CancerSmart*) and Breast Cancer Action Montreal. We also consulted the Environmental Working Group's Skin Deep database of chemicals in personal care products and reviewed international chemical hazard reference lists, in particular the European Union's *Cosmetic Directive* and *Classification and Labelling Regulation*.

Some chemicals of concern had to be excluded because they don't appear on ingredient lists in Canada. Diethyl phthalate (pronounced *thal-ate*), or DEP, is a good example. It is widely used in cosmetic fragrance mixtures to make the scent linger. Phthalates are suspected endocrine disruptors<sup>7</sup> that have been linked to reduced sperm count in men and reproductive defects in the developing male fetus (when the mother is exposed during pregnancy), among other health effects.<sup>8</sup> Phthalate metabolites have also been associated with obesity and insulin resistance in men.<sup>9</sup> Health Canada recently announced regulations banning six phthalates in children's toys, noting evidence that exposure to phthalates may cause liver and kidney failure in young children when products containing phthalates are sucked or chewed for extended periods.<sup>10</sup> DEP would have been an obvious candidate for inclusion in our survey – however, manufacturers are not required to itemize individual fragrance ingredients on the product label. Instead, the generic term *parfum* is listed, representing a mysterious mixture of potentially dozens of chemicals. Thus, we couldn't ask survey participants whether their products contained diethyl phthalate. Short of a laboratory analysis, there's no way to know.

Our survey focused on a dozen chemicals of concern found in a wide range of common products.



Download our shopper's guide to the Dirty Dozen. Keep it in your wallet and use it to check the ingredient list on personal care products before you make a purchase. [www.davidsuzuki.org/publications/resources](http://www.davidsuzuki.org/publications/resources)

With these sorts of considerations in mind, we decided to investigate the following Dirty Dozen ingredients in our survey, in some cases grouping related chemicals. They are identified here in bold – and throughout this report – using the naming convention Health Canada requires for Canadian cosmetic ingredient lists.<sup>b</sup>

#### 1. **BHA and BHT**

Used mainly in moisturizers and makeup as preservatives. Suspected endocrine disruptors and may cause cancer (BHA). Harmful to fish and other wildlife.

#### 2. Coal tar dyes: **p-phenylenediamine** and colours listed as “**CI**” followed by five digits<sup>c</sup>

P-phenylenediamine is used in some hair dyes; other colours are used in a variety of cosmetics. Potential to cause cancer and may be contaminated with heavy metals toxic to the brain.

#### 3. **DEA, cocamide DEA and lauramide DEA**

Used in some creamy and foaming products, such as moisturizers and shampoos. Can react to form nitrosamines, which may cause cancer. Harmful to fish and other wildlife.

#### 4. **Dibutyl phthalate**

Used as a plasticizer in some nail care products. Suspected endocrine disruptor and reproductive toxicant. Harmful to fish and other wildlife.

#### 5. Formaldehyde-releasing preservatives: **DMDM hydantoin, diazolidinyl urea, imidazolidinyl urea, methenamine, quarternium-15** and **sodium hydroxymethylglycinate**

Used in a variety of cosmetics. Slowly release small amounts of formaldehyde, which causes cancer.

#### 6. **Paraben, methylparaben, butylparaben and propylparaben**

Used in a variety of cosmetics as preservatives. Suspected endocrine disruptors and may interfere with male reproductive functions.

#### 7. **Parfum**

Any mixture of fragrance ingredients used in a variety of cosmetics. Some fragrance ingredients can trigger allergies and asthma. Some linked to cancer and neurotoxicity. Some harmful to fish and other wildlife.

<sup>b</sup> The International Nomenclature of Cosmetic Ingredients (INCI) system.

<sup>c</sup> In addition to coal tar dyes, natural and inorganic pigments used in cosmetics are also assigned Colour Index (CI) numbers (in the 75000 and 77000 series, respectively).

8. **PEGs** (e.g., PEG-60)

Used in some cosmetic cream bases. Can be contaminated with 1,4-dioxane, which may cause cancer.

9. **Petrolatum**

Used in some hair products for shine and as a moisture barrier in some lip balms, lip sticks and moisturizers. A petroleum product that can be contaminated with polycyclic aromatic hydrocarbons, which may cause cancer.

10. Siloxanes: **cyclotetrasiloxane, cyclopentasiloxane, cyclohexasiloxane** and **cyclomethicone**

Used in a variety of cosmetics to soften, smooth and moisten. Suspected endocrine disruptor and reproductive toxicant (cyclotetrasiloxane). Harmful to fish and other wildlife.

11. **Sodium laureth sulfate**

Used in some foaming cosmetics, such as shampoos, cleansers and bubble bath. Can be contaminated with 1,4-dioxane, which may cause cancer.

12. **Triclosan**

Used in some antibacterial cosmetics, such as toothpastes, cleansers and antiperspirants. Suspected endocrine disruptor and may contribute to antibiotic resistance in bacteria. Harmful to fish and other wildlife.

*References and more information about health and environmental concerns is available at [www.davidsuzuki.org/dirtydozen](http://www.davidsuzuki.org/dirtydozen)*



**SKIN DEEP DATABASE**

Look up information about your personal care products and the ingredients they contain on Environmental Working Group's Skin Deep database: [www.cosmeticsdatabase.org](http://www.cosmeticsdatabase.org).

**DISCLAIMER**

The David Suzuki Foundation recommends avoiding cosmetics that contain these Dirty Dozen ingredients. Not only will this help to reduce your daily dose of potentially harmful chemicals and protect the environment, it will also signal to manufacturers that there's a market demand for healthier, safer products. Avoiding the Dirty Dozen is a good place to start, but it's important to recognize that this is not an exhaustive list. Thousands of potentially harmful chemicals are used as ingredients in cosmetics, so just because a product doesn't contain any of the ingredients on our list doesn't *necessarily* mean that it is safe. You can do your own research on particular brands and products using the Skin Deep database. Limiting the number of products you use and opting for products with shorter ingredient lists are good ways to reduce your total exposure as well. But when it comes right down to it, we need stronger regulations to protect human health and the environment from toxic chemicals in cosmetics.

# Survey Results



Now select the type of Baby Product

Baby Bubble Bath

Enter the product line/brand and the name of the product.

Product Line or Brand (e.g. "Body Shop")

Name (e.g. "Spa Wisdom Plunge & Purify Bath Soak")

Did you purchase this product?

Yes  
 No

Next

## SNAPSHOT

- Number of people participating in the survey: 6,243
- Total number of products analyzed: 12,550
- Products containing at least one Dirty Dozen ingredient: 80 per cent
- Average number of Dirty Dozen ingredients per product: 1.9
- Products with more than one Dirty Dozen ingredient: 57 per cent
- Most commonly occurring Dirty Dozen ingredient: fragrance/parfum (in 56 per cent of products entered)
- Products containing none of the Dirty Dozen ingredients: 20 per cent
- Products for which an ingredient list could not be identified: 8 per cent
- Product most likely to not have an ingredient list: oral care products (28 per cent of products in this category)
- Participants who look at the ingredient list when shopping for cosmetics: 62 per cent
- Support for strengthening Canada's cosmetic laws: 98 per cent

## WHO PARTICIPATED

There were 6,243 individual participants in the survey, including residents of every province and territory in Canada and 310 international participants (five per cent).<sup>d</sup> Participants were diverse in age, ranging from teens to seniors. The average age fell within the bracket of 35 to 39 years old, and over half of respondents were younger than 40.

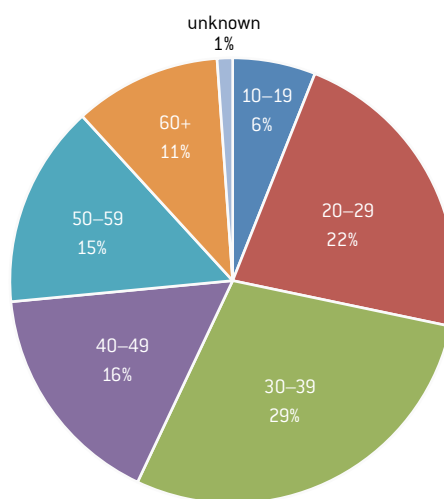
Women were much more likely to participate in the survey than men: 84 per cent of participants were female. Some people equate cosmetics with makeup, and this terminology confusion may have dissuaded men from participating.<sup>e</sup> More broadly, this statistic likely reflects a greater interest in cosmetics among women. Marketing campaigns, as well as other cultural influences, perpetuate an association between cosmetics and femininity. Furthermore, women are often responsible for purchasing household items for the family, including common personal care products (e.g., soap, shampoo, moisturizer, baby care products, etc.). Researchers with the National Network on Environments and Women's Health point out that typical gender roles within families allocate the task of "precautionary consumption" — taking the time to check ingredient lists to identify safer products — to women in their capacity as primary household shopper and caregiver.<sup>11</sup>

Three out of five Canadian respondents (62 per cent) told us that they already check the ingredient list when shopping for cosmetics and try to avoid harmful chemicals, but on average these people found just as many Dirty Dozen ingredients in the products they reported as people who stated they did not regularly check ingredient lists. This might be because product ingredient lists can be hard to decipher, and while diligently avoiding one bad-actor ingredient, even the conscientious consumer might inadvertently load up on another. Time and money also limit consumer choice. Products that do not contain potentially harmful ingredients tend to cost more and can be harder to find. There is certainly room for improvement in making the ingredient lists more user-friendly and in keeping harmful chemicals out of our products in the first place.

## ANALYSIS OF RESPONSES

The table on page 14 shows the reported prevalence of Dirty Dozen ingredients in the products entered in the survey. It is important to note that some of the ingredients we asked about are specific to particular types of products. For example, dibutyl phthalate is used almost exclusively in nail polishes (as well as in some fragrances, but manufacturers are not required to itemize fragrance ingredients on the package). Sodium laureth sulfate and DEA compounds are detergents; they are most likely to be found in sudsy products. We would therefore not expect these chemicals to be evenly distributed among (or within) product categories. On the other hand, parabens (an inexpensive preservative), fragrance and many coal tar dyes are widely used across product types.

Figure 1: Age of Participants



Participants were diverse in age, ranging from teens to seniors; 84 per cent were female.

d Products entered by participants outside of Canada were excluded in the analysis of results.

e Some people contacted us to say they had not completed the questionnaire because they did not wear makeup.



## SMIFF TEST

Environmental Defence analyzed the chemical composition of top-selling colognes and perfumes. The study identified an average of 14 chemicals per product not listed on the label, including multiple chemicals that can trigger allergic reactions or interfere with hormone function.<sup>13</sup>

## NUMBER OF PRODUCTS IN WHICH DIRTY DOZEN INGREDIENTS WERE REPORTED<sup>(a)</sup>

Dirty Dozen ingredient	Number of products in which ingredient was reported
BHA or BHT	637 (6%)
Coal tar dyes <sup>(b)</sup>	1,202 (10%)
DEA-related ingredients <sup>(c)</sup>	702 (6%)
Dibutyl phthalate	34 (<1%)
Formaldehyde-releasers <sup>(d)</sup>	1,610 (14%)
Parabens <sup>(e)</sup>	2,744 (24%)
Fragrance or Parfum	6,469 (56%)
PEGs	3,193 (28%)
Petrolatum	957 (8%)
Siloxanes <sup>(f)</sup>	1,228 (11%)
Sodium laureth sulfate	2,518 (22%)
Triclosan	149 (1%)
None of the above on ingredient list	2,350 (20%)
Ingredient list not found	1,066 (8% of all products)

<sup>a</sup> Entries from outside of Canada are excluded. Unless otherwise specified, percentages are calculated on the basis of total number of products *with ingredient lists*.

<sup>b</sup> P-phenylenediamine or colours identified as "CI" followed by a 5-digit number.

<sup>c</sup> DEA, cocamide DEA or lauramide DEA.

<sup>d</sup> DMDM hydantoin, diazolidinyl urea, imidazolidinyl urea, methenamine, quarternium-15 or sodium hydroxymethylglycinate.

<sup>e</sup> Paraben, methylparaben, butylparaben or propylparaben.

<sup>f</sup> Cyclomethicone, cyclotetrasiloxane, cyclopentasiloxane or cyclohexasiloxane.

## MOST COMMONLY REPORTED TARGET INGREDIENTS

By far the most commonly reported target ingredient reported in the survey was parfum, sometimes referred to as fragrance. It was identified in more than half of all products with ingredient lists and was also the most commonly reported Dirty Dozen ingredient in each product category except makeup and oral care products. *Parfum* is actually a code word that can represent any number of unspecified fragrance chemicals in a cosmetic. Some 3,000 chemicals are used as fragrances.<sup>12</sup> Manufacturers are not required to disclose specific fragrance ingredients, so when *parfum* appears on the ingredient list there's no way to know which of these chemicals are contained in the product.

What we do know is many of these unlisted ingredients are irritants and can trigger allergies, migraines and asthma symptoms.<sup>14</sup> People with multiple chemical sensitivities (MCS) or environment-related illnesses are particularly vulnerable, with fragrances implicated both in development of the condition and triggering of symptoms.<sup>15</sup> In laboratory experiments, individual fragrance ingredients have also been associated with cancer<sup>16</sup> and neurotoxicity,<sup>17</sup> and other adverse health effects. Synthetic musks used in fragrances are of particular concern from an ecological perspective. Environment Canada has categorized several synthetic musks as persistent, bioaccumulative and/

or toxic, and others as human health priorities. Measureable levels of synthetic musks are found in fish in the Great Lakes and the levels in sediment are increasing.<sup>18</sup> Laboratory tests of human umbilical cord blood commissioned by the U.S. Environmental Working Group detected common synthetic musks (Galaxolide and/or Tonalide) in seven out of 10 newborns sampled.<sup>19</sup>

The second and third most commonly reported ingredients, respectively, were PEGs (in 28 per cent of all products with an ingredient list) and parabens (in 24 per cent of all products with an ingredient list). The main concern with PEGs and other “ethoxylated” ingredients (which usually have chemical names including the letters “eth”) is contamination with 1,4-dioxane.<sup>20</sup> The International Agency for Research on Cancer classifies 1,4-dioxane as a possible human carcinogen,<sup>21</sup> and it is also persistent.<sup>22</sup> For these reasons, 1,4-dioxane is actually prohibited on Health Canada’s Cosmetic Ingredient Hotlist; however, the Hotlist restriction does not necessarily apply if the chemical is present as an impurity, rather than an intentional ingredient. PEG also functions as a “penetration enhancer,” increasing the permeability of the skin to allow greater absorption of the product — including potentially harmful ingredients.<sup>23</sup>

Parabens are the most widely used preservative in cosmetics.<sup>24</sup> They easily penetrate the skin,<sup>25</sup> and the European Commission on Endocrine Disruption has listed parabens as Category 1 priority substances, based on evidence that they interfere with hormone function.<sup>26</sup> Limited evidence suggests that parabens can mimic estrogen, the primary female sex hormone. In one study, parabens were detected in human breast cancer tissues, raising questions about a possible association between parabens in cosmetics and cancer. Parabens may also interfere with male reproductive functions.<sup>27</sup>



Consider making your workplace a scent-free environment. Visit [www.lung.ca](http://www.lung.ca) and [www.ccohs.ca](http://www.ccohs.ca) for more resources.

## DAILY DOSE

How many personal care products do Canadians use daily? We asked this question in the survey and got a surprising response. Among females, the average number of products respondents claimed to use each day was six. Among male respondents, the average was four. There were 181 people who told us they only used one personal care product a day! (Would that be soap or toothpaste?)

A U.S. product survey found that women used an average of 12 products in their daily personal care regimes, and men used six.<sup>28</sup> The lower numbers given in response to the question in our survey may reflect some confusion about the terminology we used. Some people might not have taken into account common products like soap, toothpaste, hand sanitizer and shampoo when tallying the cosmetics they use daily.

According to Canada’s Food and Drugs Act, however, a cosmetic “includes any substance or mixture of substances manufactured, sold or represented for use in cleansing, improving or altering the complexion, skin, hair, or teeth, and includes deodorants and perfumes.” Thinking broadly about cosmetics, it’s easy to see how these products — and the chemicals they contain — add up in our lives. Sixty people (50 females and 10 males) reported using more than 20 products each day.

## MULTIPLE EXPOSURES

The survey showed that the 12 ingredients of concern are used in many different products. Beyond the prevalence of these specific ingredients, the combined effect of multiple chemicals contributing to particular health hazards is a concern. Chemicals are typically assessed individually (if at all) and there are significant gaps in our knowledge about the health effects of the kinds of mixtures found in many cosmetics, especially with long-term (i.e., chronic) exposure.

Fifty-seven per cent of products with ingredient lists reportedly contained one or more Dirty Dozen ingredients linked to cancer (or potentially contaminated by a chemical linked to cancer) – not counting parfum, which represents an unspecified mixture of chemicals with potentially different health effects, or coal tar dyes.<sup>f</sup> Thirty-five per cent contained one or more Dirty Dozen ingredients linked to endocrine disruption. Thirty-two per cent contained one or more Dirty Dozen ingredients linked to reproductive toxicity.

### CHRONIC HEALTH HAZARDS ASSOCIATED WITH DIRTY DOZEN INGREDIENTS AND THEIR CONTAMINANTS/BY-PRODUCTS



There are significant gaps in our knowledge about the health effects of the kinds of mixtures found in many cosmetics, especially with long-term exposure.

Health Hazard	Ingredients Investigated in Survey Associated or Potentially Associated with Health Hazard
Carcinogenicity	BHA <sup>35</sup>
	Nitrosamines <sup>36</sup> – potential reaction products of DEA, cocamide DEA or lauramide DEA
	Formaldehyde <sup>37</sup> – released by DMDM hydantoin, diazolidinyl urea, imidazolidinyl urea, methenamine, quarternium-15, sodium hydroxymethylglycinate
	1, 4-dioxane <sup>38</sup> – potential contaminant of PEGs and sodium laureth sulfate
	Petrolatum <sup>39</sup> [Coal tar dyes –see note f on page 16] <sup>40</sup>
Endocrine disruption	BHA <sup>41</sup>
	Cyclotetrasiloxane, <sup>42</sup> cyclomethicone
	Dibutyl phthalate <sup>43</sup>
	Paraben, methylparaben, butylparaben, propylparaben <sup>44</sup>
	Triclosan <sup>45</sup>
Reproductive toxicity	Cyclotetrasiloxane, cyclopentasiloxane, cyclomethicone <sup>46</sup>
	Dibutyl phthalate <sup>47</sup>
	Paraben, methylparaben, butylparaben, propylparaben <sup>48</sup>

<sup>f</sup> Coal tar dyes have been excluded because it was not possible to definitively distinguish these ingredients in the survey results from inorganic pigments with CI numbers.





### A CLOSER LOOK AT TRICLOSAN

Respondents entered 149 products in the survey that reportedly contained the anti-bacterial agent triclosan. This chemical can be found in a wide range of household products, including garage bags, toys, linens, mattresses, toilet fixtures, clothing, furniture fabric, paints, laundry detergent and facial tissues, as well as cosmetics. It can pass through skin<sup>29</sup> and is suspected of interfering with hormone function (endocrine disruption).<sup>30</sup> The European Union classifies triclosan as irritating to the skin and eyes, and as very toxic to aquatic organisms.<sup>31</sup> Triclosan is a suspected endocrine disruptor, and Environment Canada has categorized it as inherently toxic to aquatic organisms and persistent.<sup>32</sup> In the environment, triclosan can also react to form dioxins, which bioaccumulate and are toxic.<sup>33</sup> In addition, the extensive use of triclosan in consumer products may also contribute to antibiotic resistance in bacteria. The Canadian Medical Association has called for a ban on antibacterial consumer products, such as those containing triclosan.<sup>34</sup>

Health Canada's Cosmetic Ingredient Hotlist limits the concentration of triclosan to 0.03 per cent in mouthwashes and 0.3 per cent in other cosmetics. The problem is that triclosan is used in so many products that the small amounts found in each product add up – particularly since the chemical does not readily degrade.

The antibacterial chemical compound Triclosan can be found in a wide range of household products, including cosmetics

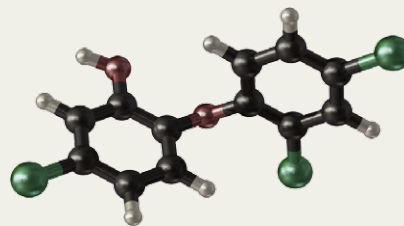
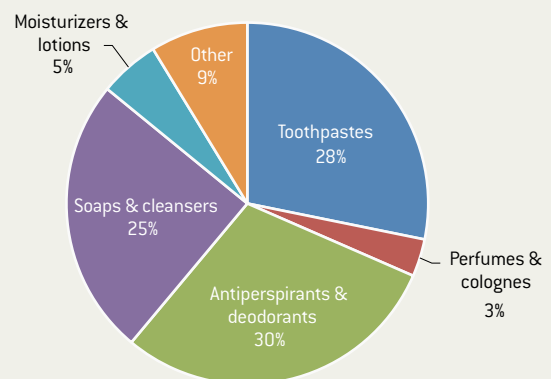


Figure 2: Reported sources of triclosan by product type/category

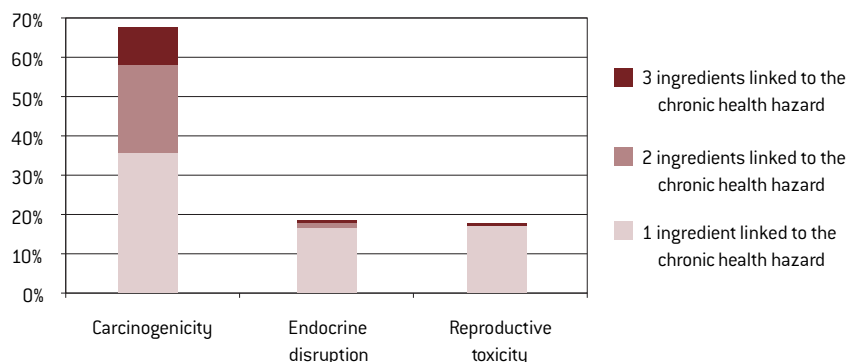


## A CLOSER LOOK AT SOME COMMON PRODUCTS

### SHAMPOOS (2,439 ENTRIES)

The most commonly reported Dirty Dozen ingredient in shampoos was parfum (in 69 per cent of shampoos with ingredient lists), followed by sodium laureth sulfate (in 50 per cent) and PEGs (in 26 per cent). Two thirds of shampoos contained multiple Dirty Dozen ingredients. There were no Dirty Dozen ingredients reported in 18 per cent of the shampoos. Participants were unable to locate the ingredient list for five per cent of the shampoos.

#### Dirty Dozen ingredients linked to specific health hazards in shampoos

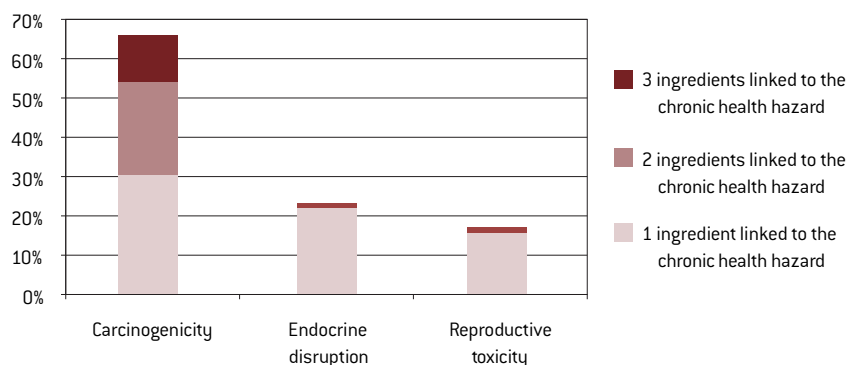


Two thirds of shampoos in our survey contained multiple Dirty Dozen ingredients.

### SOAPS AND CLEANSERS (1,769 ENTRIES)

The results for soaps and cleansers were similar to results for shampoos. The most commonly reported active ingredient was parfum (in 62 per cent of products with ingredient lists), followed by sodium laureth sulfate (in 42 per cent) and PEGs (in 31 per cent). Sixty-two per cent contained multiple target chemicals. There were no Dirty Dozen ingredients reported in 17 per cent of soaps and cleansers. For two per cent of the soaps and cleansers the ingredient list could not be located.

#### Dirty Dozen ingredients linked to specific health hazards in soaps and cleansers



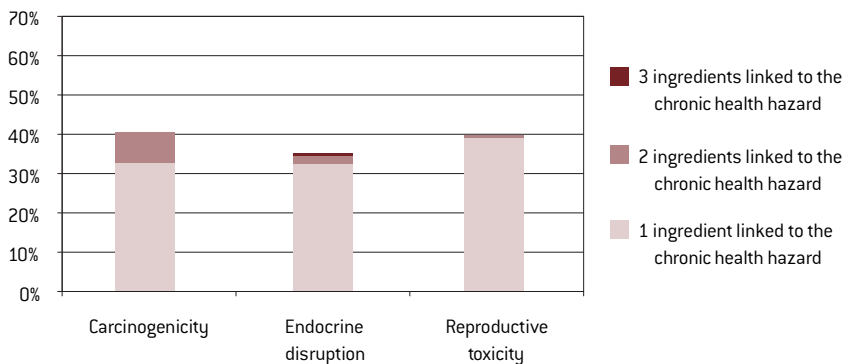


### ANTIPERSPIRANT AND DEODORANTS (923 ENTRIES)

Again, parfum was the most commonly reported Dirty Dozen ingredient in antiperspirants and deodorants (in 67 per cent of the products with ingredient lists), followed by siloxanes (in 39 per cent) and PEGs (in 21 per cent). Slightly more than half the antiperspirants and deodorants reportedly contained multiple target chemicals. There were no Dirty Dozen ingredients reported in 24 per cent. These findings may understate the actual prevalence of target chemicals in antiperspirants and deodorants. The ingredient list on some antiperspirants is incomplete because the product is considered a “drug” (rather than a cosmetic) under Canada’s *Food and Drug Act* and as such manufacturers are required only to list the “active ingredients.” This also likely explains why the ingredient list could not be identified for 14 per cent of antiperspirants and deodorants.

According to Canada’s Food and Drugs Act, a cosmetic “includes any substance or mixture of substances manufactured, sold or represented for use in cleansing, improving or altering the complexion, skin, hair, or teeth, and includes deodorants and perfumes.”

### Dirty Dozen ingredients linked to specific health hazards in antiperspirants/deodorants



Participants in our survey indicated they could not locate the ingredient list for more than 1,000 products. What's going on?



## LISTLESS

Health Canada requires manufacturers to list ingredients on the package of all cosmetics sold in Canada, yet participants in the survey indicated they could not locate the ingredient list for more than 1,000 products. What's going on?

Sometimes ingredients are listed on a box or wrapper and this external packaging may not have been kept. Similarly, if the product is very small, ingredients may be listed on an accompanying box, tag, tape or card. This might have been the case for the 19 per cent of nail care products surveyed and 10 per cent of makeup for which no ingredient lists could be found.

The highest rate of products with no ingredient list was in the category of oral care, at 28 per cent. This likely reflects the fact that some toothpastes and mouthwashes are legally considered “drugs” (rather than cosmetics), on the basis of therapeutic claims or functions. As noted above, the ingredient disclosure requirements of Canada's *Cosmetic Regulations* do not apply in this case. Only “active ingredients”<sup>\*</sup> are required to be listed on the package. Sunscreens, antiperspirants and anti-bacterial cleansers and lotions, among other products, are also sometimes marketed as “drugs,” bypassing the requirement for a complete ingredient list.

The survey findings probably underestimate the actual number of products without a complete ingredient list because the questionnaire did not clearly distinguish between lists of active ingredients only and the more comprehensive ingredient list required under the *Cosmetic Regulations*. In some instances, respondents may have indicated the presence or absence of Dirty Dozen ingredients on the basis of an incomplete ingredient list (i.e., active ingredients only). Also, in the analysis of responses, “I can't locate a complete ingredient list” was considered an exclusive parameter and was disregarded if one or more target chemicals were also identified for a given product. Consequently, any therapeutic product with at least one of the Dirty Dozen listed as an active ingredient would not have been included in the tally of products without complete ingredient lists – even if inactive ingredients were not listed. By the same token, Dirty Dozen chemicals present as inactive ingredients in therapeutic products may also be underrepresented in the survey findings.

\* According to Health Canada, an active ingredient is “any component that has medicinal properties, and supplies pharmacological activity or other direct effect in the diagnosis, cure, mitigation, treatment or prevention of disease, or to affect the structure or any function of the body of man or other animals” ([www.hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/terminolog-eng.php](http://www.hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/terminolog-eng.php)).

## MOST LOADED

The highest number of Dirty Dozen ingredients reported in any product was seven.<sup>g</sup> The following products reportedly contained six or seven of the Dirty Dozen.

- Bath & Body Works Bubble Bath (various)
- Bath & Body Works Antibacterial Moisturizing Hand Lotion (various)
- Bath & Body Works Sweet Pea Body Lotion
- Bath & Body Works Warm Vanilla Sugar Hand Cream
- Canus (Caprina) Li'l Goat's Milk Shampoo and Body Wash
- Caprina Fresh Goat's Milk Body Wash
- Clarins Lift Anti-Rides Jour (Extra-Firming Day Cream)
- Compliments Herbal Bath Foam
- Crabtree & Evelyn Nomad Invigorating Hair & Body Wash
- Delon Grapeseed Body Butter
- Dial Clean and Refresh Antibacterial Bodywash
- Dove Men+Care Clean Comfort Body and Face Wash
- Être Dead Sea Hand and Body Lotion
- Exact Apricot Scrub
- Joico Daily Care Conditioning Shampoo
- L'Oreal Kids Smoothie Shampoo
- L'Oreal Paris Vive Pro Smooth Intense Shampoo
- Lancôme Photogenic Foundation
- Life Extra Strength Skin Lotion
- Lubriderm Advanced Moisture Therapy
- Marc Anthony Curl Defining Shampoo and Instantly Thick Hair Thickening Shampoo
- NeoStrata Intense Daytime Wrinkle Repair
- Neutrogena Deep Clean Invigorating Ultra Foam Cleanser
- Rimmel Lasting Finish Foundation
- The Body Shop Satsuma Shower Gel
- The Healing Garden Sensual Plum Body Spray
- The Healing Garden Uplifting Jasmine Cleansing Body Wash
- TiGi Bed Head Manipulator (hair styling product)
- Vaseline Healthy Hand & Nail Conditioning Hand Lotion



With duplicate entries removed, about 30 products reportedly contained six or seven Dirty Dozen ingredients.

<sup>g</sup> We attempted to verify products for which six or more target chemicals were reported. If errors were detected, the entry was corrected. If the ingredient list could not be verified, the product was excluded from the analysis.

“ Since the survey I  
am more conscious  
of what I buy. ”

— Bobbi, Wellesley (Ontario)  
survey participant



One in five products for which an ingredient list could be identified was reported to contain none of the Dirty Dozen ingredients. It is important to note, however, that this doesn't guarantee the absence of other toxic chemicals – we couldn't ask about all 10,500 cosmetic ingredients in our questionnaire. With this caveat in mind, products sold under the following brand names (among others) were frequently reported to be free of the Dirty Dozen.

- Aubrey's Organics
- Avalon Organics
- Druide
- Green Beaver
- Jason
- Kiss My Face
- Nature's Gate
- Nature Clean
- Prairie Naturals
- Rocky Mountain Soap Company
- Tom's of Maine

## THE FINE PRINT

As with any open online survey, we cannot guarantee that these results are representative of the entire Canadian population or the cosmetics market at large, because individuals self-selected to participate. We know that women were over-represented among survey respondents, at 84 per cent, likely reflecting a greater interest in these issues as discussed earlier in this report. We also suspect that people who share our concern about chemicals in cosmetics were more likely to find out about the survey and take the time to participate (compared to individuals with limited knowledge or interest in the subject). Since these same people are probably more likely to look for safer products when it comes to choosing cosmetics, we consider the survey results to be statistically conservative.

Additionally, any survey is only as accurate as the responses provided by participants. While we did take steps to verify outlier entries and excluded obviously fake entries from our analysis, there is always the possibility of accidental or intentional entry error. However, assuming that entry error was not widespread and given the large number of products entered, we do not expect that this significantly affected the results.

On the whole, we expect these findings offer a realistic indication of the prevalence of the Dirty Dozen in products Canadians use daily.

# Canada's Cosmetic Regulations Could Use a Makeover



**HEALTH CANADA IS RESPONSIBLE FOR REGULATING COSMETICS** under the *Food and Drug Act* and the *Cosmetic Regulations*. The *Canadian Environmental Protection Act, 1999* (CEPA) provides Health Canada and Environment Canada additional authority to regulate chemical ingredients that meet the legal definition of “toxic.”<sup>h</sup>

The ingredient labelling requirement is set forth in the *Cosmetic Regulations*. Manufacturers are also required to disclose the concentration of each ingredient to the Minister of Health, but the public cannot easily access this information. The other limitation of the notification provision is its *post-market* orientation. Manufacturers have until 10 days *after* the product hits the market to notify Health Canada of the ingredients.

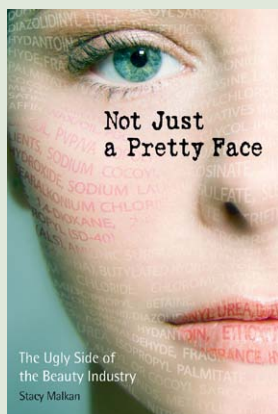
Most chemical ingredients in cosmetics have never been tested for their effects on human health and the environment,<sup>49</sup> and many of them predate modern environmental controls. Health Canada and Environment Canada are slowly working their way through the assessment of some 4,000 so-called legacy substances – including chemicals used in cosmetics – that have been categorized as potentially posing a risk to human health or the environment. However, these assessments generally rely on the results of external research and testing. As a result, assessment of cosmetic ingredients is often frustrated by a lack of data, especially concerning cumulative exposure and long-term health effects. Health Canada does not routinely require pre-market testing of chemicals used in cosmetics.

**Most chemical ingredients in cosmetics have never been tested for their effects on human health and the environment, and many of them predate modern environmental controls.**

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<sup>h</sup> According to CEPA, a substance is toxic if it is entering or may enter the environment in a quantity or concentration or under conditions that:

- have or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- constitute or may constitute a danger to the environment on which life depends; or,
- constitute or may constitute a danger in Canada to human life or health.



The solutions already exist in the marketplace, and many companies have already begun reformulating. To get all companies to reformulate is going to take market pressure, as well as new laws to better regulate these products.

— Stacy Malkan, author of *Not Just a Pretty Face: The Ugly Side of the Beauty Industry*, interviewed by the Washington Post March 13, 2009.

## THE HOTLIST – NOT SO HOT

Health Canada lists prohibited and restricted ingredients on the Cosmetic Ingredient Hotlist. While the Hotlist itself has no legal authority and cannot be enforced directly, it serves as a guideline for interpreting more general prohibitions and provisions in the *Food and Drug Act* and *Cosmetic Regulations*. In contrast to the European Union's *Cosmetic Directive*, which explicitly restricts carcinogens, mutagens and reproductive toxicants in cosmetics, Canada's legal framework lacks a clear priority basis for adding substances to the Hotlist.

Furthermore, the Hotlist restricts only the direct and intentional use of listed substances in cosmetics. Chemicals that are prohibited or restricted as *ingredients* may therefore still be present in cosmetics as byproducts or impurities (as in the case of 1,4-dioxane in PEGs and other ethoxylates).

## LABELLING LOOPHOLES

As with the Hotlist, Canada's cosmetic labelling and notification requirements do not apply to "unintentional ingredients" – i.e., byproducts and impurities. For example, there is usually no mention of formaldehyde (a chemical known to cause cancer<sup>50</sup>) on the label of Canadian cosmetics that contain formaldehyde-releasing preservatives, such as DMDM hydantoin, diazolidinyl urea, imidazolidinyl urea, methenamine or quarternium-15. In contrast, European regulations require the notice, "contains formaldehyde" on the package label of any cosmetic in which the concentration of formaldehyde exceeds 0.05 per cent.<sup>51</sup>

A similar loophole exists for chemicals used in cosmetics fragrances. The term *parfum* on an ingredients list usually represents a complex mixture of dozens of chemicals. Manufacturers are not required to disclose specific fragrance chemicals in the list of ingredients. Adding to the confusion, even products marketed as "fragrance-free" or "unscented" may in fact contain fragrance ingredients, in the form of masking agents<sup>52</sup> that prevent the brain from perceiving odour.

## WHEN IS A COSMETIC NOT A COSMETIC?

"Some products normally thought of as cosmetics are not covered by the Cosmetic Regulations."  
— Health Canada<sup>53</sup>

A range of personal care products are regulated as drugs under Canada's *Food and Drug Act* because they are considered to have a therapeutic function – including, for example, antiperspirants, face cream with sun protection, toothpaste and hand sanitizers. Others may be regulated as natural health products if they contain natural ingredients with a therapeutic function. The Hotlist and labelling requirements in the *Cosmetic Regulations* do not apply to personal care products classified as drugs or natural health products. As a result, ingredient lists and standards for seemingly similar products can be inconsistent and incomplete.





# Conclusion and Recommendations

**THE RESULTS OF OUR SURVEY PROVIDE** a disconcerting indication of the widespread presence of toxic chemicals in the personal care products used by Canadians. Thanks to the ingredient labelling requirements introduced four years ago, consumers can take action to reduce these unnecessary exposures – and many do pay attention to product ingredient lists. But our survey results indicate how difficult it can be, even for the conscientious shopper, to avoid chemicals of concern in cosmetics. “Buyer beware” is inadequate when it comes to protecting human health and the environment from potentially harmful chemicals. This is especially true considering that ingredient lists are often incomplete, so consumers don’t have full information to make informed choices. Nor do all consumers have the scientific background – or time – to determine which listed ingredients may be more problematic than others. And alternative products can be hard to find and may be priced out of reach of shoppers on a budget.

The David Suzuki Foundation offers the following recommendations for strengthening Canada’s cosmetic and consumer-protection regimes:

## 1. **Replace potentially harmful ingredients in cosmetics with safer alternatives.**

More research is needed on the health effects of many chemicals used in cosmetics, particularly effects associated with extended exposure. Chemicals with suspected links to adverse health effects should be prohibited in cosmetics on a precautionary basis unless and until their safety can be demonstrated. As a place to start, Canada’s *Food and Drugs Act* should be strengthened to explicitly prohibit known and suspected carcinogens and mutagens, endocrine disruptors and reproductive toxicants in cosmetics. This would build upon the approach recently adopted by the European Union. The E.U. *Cosmetic Directive* restricts the use of substances considered to be carcinogenic, mutagenic or toxic to reproduction.

Survey results indicate how difficult it can be, even for the conscientious shopper, to avoid chemicals of concern in cosmetics.

Ingredients that are toxic to wildlife should also be prohibited – especially if they are persistent or bioaccumulate.

It follows that a number of the Dirty Dozen ingredients should be banned in cosmetics:

- BHA and BHT
- Coal tar dyes
- Formaldehyde and formaldehyde-releasing preservatives
- Parabens
- Petrolatum
- Phthalates (including dibutyl phthalate)
- Siloxanes
- Triclosan

**2. As an interim step, implement hazard labelling for ingredients linked to chronic health concerns, as recommended by the Canadian Cancer Society,<sup>54</sup> and strengthen EcoLogo™ certification criteria for personal care products.**

Ingredients associated with chronic health hazards or capable of harming the environment should be accompanied by warning labels, pending the recommended regulatory changes to prohibit these substances. The David Suzuki Foundation supports the Canadian Cancer Society's recommendations for hazard labelling on consumer products to indicate cancer-causing substances. The new *European Regulation on Classification, Labelling and Packaging* of chemical substances and mixtures (CLP) provides a model for the design and implementation of such a system. Although the European CLP regulation does not currently apply to cosmetics, its scope could reasonably be expanded.

While hazard labelling would help consumers to recognize potentially harmful ingredients in cosmetics, third-party certification systems like EcoLogo™ can make it easier to identify environmentally preferable products and services. The EcoLogo™ certification criteria for personal care products are currently under review. They should be strengthened to include requirements for certified products to be free of known and suspected human carcinogens, endocrine disruptors and reproductive toxicants, including fragrance ingredients. In addition, the aquatic toxicity criteria for cosmetics should be expanded include tests for chronic toxicity (the most insidious type of toxicity associated with cosmetic products) in all aquatic environments.

**3. Require pre-market approval of the chemical composition of cosmetics and allow public access to a searchable online database of information submitted by manufacturers.**

The notification provisions of the *Cosmetic Regulations* should be strengthened to require manufacturers to analyze the complete chemical composition of cosmetics and submit results to Health Canada for approval prior to marketing any product for sale in Canada. This would identify the presence and concentrations of impurities and by-products that may be harmful to human health or the environment, in addition to the information currently gathered



The Canadian Cancer Society and other groups are advocating for full ingredient disclosure on all products and for hazard symbols on products that contain cancer-causing substances.  
— Canadian Cancer Society

about “intentional” ingredients. Health Canada should make these reports available to the public in an up-to-date, searchable online database.

**4. Extend restrictions on cosmetic ingredients to “unintentional ingredients” (e.g., impurities, by-products).**

At present, Health Canada’s Cosmetic Ingredient Hotlist generally applies only to ingredients intentionally used to formulate products. Restrictions on chemicals in cosmetics should be more broadly applied to capture impurities and by-products (“unintentional ingredients”) as well. This would help to ensure, for example, that 1,4-dioxane (a prohibited ingredient) is removed from ethoxylates like PEGs and sodium laureth sulfate. Cosmetics should be free of prohibited chemicals, regardless of whether the chemical is present as an “intentional” or “unintentional.”

**5. Extend ingredient restrictions and labelling requirements to personal care products regulated as “drugs.”**

Personal care products regulated as “drugs” under Canada’s *Food and Drugs Act* on the basis of therapeutic claims or functions should be subject to the ingredient labelling and notification requirements that apply under the *Cosmetic Regulations*. Likewise, ingredients restricted or prohibited on Health Canada’s Cosmetic Ingredient Hotlist should not be permitted in these products, unless essential to the product’s therapeutic application and function.

**6. Require manufacturers to disclose specific fragrance ingredients.**

The labelling provisions of the *Cosmetic Regulations* should be revised to require manufacturers to list specific fragrance ingredients parenthetically, following the word *parfum*. At a minimum, generic chemical identities of the ingredients of fragrance ingredients should be identified on the product package, paralleling requirements for information reported on Material Safety Data Sheets under Canada’s Workplace Hazardous Materials Information System (WHMIS).<sup>55</sup>

**7. Prohibit use of the terms unscented and fragrance-free in the marketing of products that contain fragrance ingredients (including masking agents).**

With many workplaces and public buildings adopting “scent-free” policies to protect individuals with chemical sensitivities, there is a growing market for unscented cosmetics. However, product claims can be misleading. According to Health Canada, the term *fragrance-free* or *unscented* on a cosmetic product label can mean either “that there have been no fragrances added to the cosmetic product, or that a masking agent has been added in order to hide the scents from the other ingredients in the cosmetic.”<sup>56</sup> Chemicals used as masking agents may themselves trigger allergic reactions or be associated with other adverse health effects. Industry Canada should control commercial use of the terms *unscented* and *fragrance-free* in cosmetic marketing so that they are used only in connection with products that contain no fragrance ingredients (including masking agents).

**8. Prohibit anti-bacterial household products, including cosmetics,**



Ingredients that are toxic to wildlife should also be prohibited – especially if they are persistent or bioaccumulate.

as recommended by the Canadian Medical Association.<sup>57</sup>

The extensive use of anti-bacterial agents, like triclosan, in consumer products may contribute to an increase in the prevalence of antibiotic-resistant bacteria.<sup>58</sup> The use of triclosan in cosmetics is unnecessary and should be prohibited, in keeping with the Canadian Medical Association's recommendation.



9. **Restrict use of the terms natural and organic in the marketing of products that contain non-organic and synthetic ingredients.**

Many products surveyed had “natural,” “nature,” “bio” or “organic” in their names but nevertheless contained at least one of the Dirty Dozen ingredients. To the extent that consumers [62 per cent of participants in our survey] seek to avoid hazardous chemicals in cosmetics, these names can be misleading. Canada should develop robust requirements for the use of these terms in cosmetic marketing.

10. **Extend ingredient disclosure requirements to other types of consumer products, including household cleaners, toys and furnishings.**

“ To ensure ingredients in cosmetics are safe for people and the environment, I think it involves education, information and legislation. ”

— Gisèle, Sherbrooke, survey participant

**TAKE ACTION FOR SAFE COSMETICS!**

- ✓ When shopping for cosmetics, avoid the Dirty Dozen and opt for products with shorter ingredient lists – and try to buy fewer personal care products.
- ✓ Avoid scented and anti-bacterial household products.
- ✓ Write to Canada's Health Minister in support of strengthening cosmetic regulations.
- ✓ Let companies that make and sell cosmetics know that you prefer to buy products that are free of ingredients that may harm human health and the environment. Encourage manufacturers to sign the Compact for Safe Cosmetics: [www.safecosmetics.org/compact](http://www.safecosmetics.org/compact).
- ✓ Learn more at [www.davidsuzuki.org/whatsinside](http://www.davidsuzuki.org/whatsinside) and sign up for updates from the David Suzuki Foundation.
- ✓ Tell a friend! Pass this report onto a friend and encourage your networks to get involved.



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In the spring of 2010, the David Suzuki Foundation invited Canadians to pull back the shower curtain and participate in an online survey about toxic ingredients in cosmetics. We asked participants to check ingredient lists for 12 sets of chemicals – a Dirty Dozen ingredients linked to health and environmental concerns, including cancer, reproductive disorders, asthma and severe allergies.

This report summarizes key findings from the survey, highlights weaknesses in Canada's legal framework governing toxic chemicals in cosmetics and outlines recommendations for strengthening laws and regulations to better protect human health and the environment.



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