



## The *Just Beautiful* Heavy Metals in Cosmetics Factsheet

Environmental Defence tested the makeup bags of six Canadian women. 49 face makeup items were chosen, including five foundations, four concealers, four powders, five blushes or bronzers, seven mascaras, two eye liners, 14 eye shadows, and eight lipsticks or glosses. We released the results in a report titled, “Heavy Metal Hazard: The Health Risks of Hidden Heavy Metals in Face Makeup”.

For the full “Heavy Metal Hazard: The Health Risks of Hidden Heavy Metals in Face Makeup” report, please visit [www.environmentaldefence.ca/heavy-metal-hazard](http://www.environmentaldefence.ca/heavy-metal-hazard). To sign a petition asking for better regulation of impurities in cosmetics, please visit [www.petition.environmentaldefence.ca/Heavy\\_Metal](http://www.petition.environmentaldefence.ca/Heavy_Metal).

### What’s in my makeup?

In the 49 face makeup items we tested, seven of the eight metals of concern tested were found, but results varied for each product. While all eight of the metals of concern are associated with various health effects, arsenic, cadmium, and lead are of the most concern because they are deemed “toxic” in Canada due to their health effects (Environment Canada, 2010b), are banned as intentional ingredients in cosmetics (Health Canada, 2010a), and have draft limits as impurities in cosmetics (Health Canada, 2009a).

Of the chemicals of most concern, arsenic was detected in 20 per cent, cadmium was detected in 51 per cent, lead was detected in 96 per cent, and mercury was found in none of the items tested. Other chemicals of concern – nickel, beryllium, thallium, and selenium – were found in 100 per cent, 90 per cent, 61 per cent, and 14 per cent of all items, respectively.

HEAVY METAL	% Of Items	Average (Qg/g)	ITEMS WITH THE MOST	Amount (Qg/g = ppm)	Above Canada's Draft Impurity Limits
ARSENIC	20%	1.8	1. Benefit Benetint Pocket Pal (Clear Gloss)	70	YES
			2. Benefit Benetint Pocket Pal (Red Tint)	12	YES
			3. L'Oreal Bare Naturale Mascara (Black/Brown), Clinique Stay True Makeup Foundation (Stay Ivory), Avon Astonishing Lengths Mascara (Black A01)	1.2	NO
CADMIUM	51%	0.3	1. NYX Mega Shine Lip Gloss (110 Cosmo)	3.0	NO
			2. Cover Girl Perfect Point Plus Eyeliner (Black Onyx)	2.9	NO
			3. Cover Girl Ultimate Finish Liquid Powder Makeup (450 Creamy Beige (Cool))	0.9	NO
LEAD	96%	4.6	1. Benefit Benetint Pocket Pal (Clear Gloss)	110	YES
			2. Benefit Benetint Pocket Pal (Red Tint)	28	YES
			3. Avon Ultra Color Rich- Mega Impact Lipstick, SPF 15 (Pink Pop C01)	9.9	NO
MERCURY	ND*	N/A	N/A	N/A	N/A

\*ND means the chemical was not detected in the product  
Source: Environmental Defence testing of 49 different face makeup items from a total of 35 different face makeup products

### Why the concern?

While science still doesn't have an answer for us about what constitutes "safe" levels of heavy metal exposure, or the health effects of it being absorbed through skin, it is notable that the highest levels of arsenic (70 ppm), cadmium (3 ppm), and lead (110 ppm) were all found in lip glosses, something which could be easily be ingested. And, some metals, such as arsenic, cadmium, and lead, can accumulate in a person's body over time.



Some may wonder why heavy metals in our makeup measured in the parts per million are really a cause for concern; for some of these metals, science has not established a "safe" level of exposure. Cumulative exposure over time is especially difficult to study, as different combinations of exposures can have different effects, and the possible combinations are seemingly endless, given the number of cosmetics products out there. In other words, even trace amounts may be of concern, because it all adds up.

The concern is not just that heavy metals are in our makeup, but exposures from products, air, water, and food can all add up and accumulate in your body—this is cumulative exposure, the total exposure of the body to toxins over time. Human purging of elements like lead, cadmium, and chromium from the body takes over 40 years, with accumulation leading to problems such as nervous system disruption and kidney damage (Gondal, Seddigi, Nasr, & Gondal, 2009).

### How can some heavy metals still be found in makeup?

Heavy metals in our cosmetics are not ingredients but rather are "impurities" that are not added intentionally, but are an environmental contaminant of raw ingredients (Environmental Working Group, 2006). The persistence of heavy metals in the

environment and their natural presence in rocks, soil, and water cause them to be present in the manufacture of pigments and other raw materials used in various industries, including cosmetics (Health Canada, 2009a). As product impurities, their presence in cosmetics does not need to be on the label.

Health Canada has a draft set of guidelines for some metal impurities that it considers "technically avoidable" by cosmetics companies (Draft Guidelines on Heavy Metal Impurities in Cosmetics), but progress on the guidelines has stalled, as they have remained in draft form for over two years. Further, the level Health Canada has established as "technically avoidable" is higher than what studies show is necessary and does not constitute a level that is safe (US FDA, 2009; Bellinger 2008).

### **What can I do?**

Here's what you can do to protect yourself, your loved ones and future generations from unnecessary exposure to toxic chemicals in personal care products.

**1. Choose safer products:** It's unfortunately impossible to tell if the face makeup you are using contains heavy metals by reading the label unless you know exactly which ingredients may contain a heavy metal impurity (e.g., D&C Red 6 and aluminum starch octenylsuccinate). You can, however, visit our website, [www.environmentaldefence.ca](http://www.environmentaldefence.ca) and use [our pocket shopping guide](#) or use EWG's Skin Deep database, [www.safecosmetics.org](http://www.safecosmetics.org) to help you identify safe products.

**2. Less is better.** If you are very attached to your product, consider eliminating other products from your routine or use makeup less often.

**3. Help pass smarter, health-protective laws.** Buying safer products is a great start, but we can't just shop our way out of this problem. In order for safer products to be widely available and affordable for everyone, we must pass laws that shift the entire industry to non-toxic ingredients and safer production. Ask that Health Canada be given the authority and resources it needs to ensure the safety of cosmetics by visiting [www.environmentaldefence.ca](http://www.environmentaldefence.ca). [\[link to petition\]](#)

**4. Demand that cosmetics companies fully disclose ingredients and support those that do.** Tell cosmetics companies that you want them to fully disclose the ingredients in the products they make – including impurities. You can find companies' toll-free customer hotlines on product packages and online, and calling them only takes a moment.