Children’s Products, Kitchenware, and Other Products in China (2011)

Toxic heavy metals found in children's products on the Chinese market

Every day, many Chinese citizens head into supermarkets and toy stores, and buy children's products without knowledge of what these products might contain. No product labels describe whether toxic metals or other hazardous substances are present. And among all those journeying migrant workers some are carrying in their big bundles and suitcases toys that may very well bring their children some short-term joy, but in the long run could be endangering their health.

What do these children's products contain?

A Greenpeace-IPEN study measured toxic metals in 500 children's products purchased in five Chinese cities: Beijing, Guangzhou, Hong Kong, Shanghai, and Wuhan. The products came from shopping trips to more than 40 retailers including shopping malls, street markets, and chain stores. Shoppers purchased a wide variety of products, ranging from school supplies to clothing to popular products for young children. Many were plastic, others included metal parts and jewelry. As far as we know, this was the first publically available large-scale investigation of toxic metals in children's products in China.

To measure products for levels of lead and other metals, investigators used a portable X-ray fluorescence analyzer (XRF), testing for six toxic metals: antimony, arsenic, cadmium, chromium, lead, and mercury. All six metals are well-known to cause serious harm to human health, especially in children.

Toxic metals in toys, school supplies, household products, and apparel

The results showed that one-third of tested products contained at least one toxic metal at levels of concern. Forty-eight samples (9.6% of the products) contained more than one toxic metal, increasing the possibility of harm. None of the tainted products contained warning labels to inform consumers about their toxic ingredients. The toys that tested positive for heavy metals, including lead, were found in every category of product, no matter whether it was branded or non-branded, cheap or expensive. In short, no matter who or where you buy your toy from in China, there is a possibility that a toxic metal is present.

Lead is extremely harmful to children, and yet we easily found products available for sale that tested positive for lead. In China, the regulatory limit for lead in consumer products at the time of the testing was 600 ppm. However the study turned up 48 store-bought products with levels exceeding this level. These included dolls, balls, pencil boxes, toy cars, and backpacks. The top five lead-contaminated products contained truly shocking levels ranging from 12,467-120,960 ppm. These included a boy's ring, children's glassware, and a doll. A total of 82 products (16% of the products) violated a more protective lead standard of 90 ppm used in the US and Canada.

The study found other well-known toxic metals available in popular children's products including arsenic and mercury. Five children's products contained mercury at levels ranging from 39-78 times higher than the regulatory limit for mercury in cosmetics in China. Fifty-two products (10% of the products) contained significant levels of arsenic. These included dolls, toy cars, shoes and school supplies.

The Greenpeace-IPEN findings raise safety concerns for children. Children's developing bodies are especially vulnerable to damage from heavy metals. Not to mention, kids are more likely to chew objects and put their hands in their mouth thereby increasing their exposure to toxic substances in these products. Put simply, **toxic substances should not be present in children's products.**

Industry responsibility

The primary responsibility for safe products lies with manufacturers who should ensure that toxic substances are not present. Fortunately, the high percentage of products (67%) with no, or low levels of metals indicates that elimination of metals in children's products is technically and economically feasible. The data in the Greenpeace-IPEN study shows that some companies are already paying attention to the toxic metal content in their products. **But now it's time for *all* companies to eliminate them.**

Recommendations

Based on the results of this joint study, Greenpeace and IPEN recommend the following:

1. Brands and manufacturers should actively improve manufacturing processes and product design, and rapidly reduce and ultimately eliminate all hazardous substances, especially toxic heavy metals such as lead, from their products and production processes. The industry should also disclose information on chemical ingredients in products.

2. The government should strengthen its supervision over hazardous substances in children's products. It should adopt a more protective lead concentration limit in children's products and extend the concept of "total concentration limits" to other heavy metal substances using protective regulatory limits.

3. Consumers should carefully read product labels and try to identify chemical safety information before purchasing children's products. Through their inquiries about corporate environmental policy and product chemical information, consumers can help drive companies to progressively reduce and ultimately eliminate hazardous chemicals from their products and production processes. Consumers should also support rigorous regulatory policies to limit the presence of toxic substances in products.

Hong Kong Kitchenware Product with High Levels of Lead

Previous studies of painted glasses and kitchen mugs in the Philippines and USA revealed high levels of lead, presumably due to the use of lead paint on the ceramic or glass surface. To investigate kitchen products on the Hong Kong market, Greenpeace East Asia and IPEN tested 25 kitchen glasses, cups, and mugs to follow-up on their investigation of toxic metals in children's products, accessories, and jewelry. The choice of products was deliberately inclined toward products with painted surfaces to test whether they would contain high levels of lead.

- 25 products from 10 different stores were tested using an XRF analyzer
- The products primarily consisted of ceramic mugs and painted glasses
- Thirteen products (52%) contained lead greater than the 90 ppm standard for lead in paint used in some countries
- Ten of these lead-containing products contained very high lead levels of more than 10,000 ppm, more than 100 times the 90 ppm standard
- Two glasses contained more than 40,000 ppm lead
- Two products contained high levels of cadmium but did not contain lead
- Three products did not contain lead or other toxic metals: a white plastic mug, a white ceramic mug, and a plain unpainted glass, indicating the economic and technical feasibility of substitution
- Price was not an indicator of the likelihood of purchasing a lead-containing product; the three products that did not contain toxic metals were similar or cheaper than the cost of lead-containing products in this study
- Many products contained other toxic metals such as antimony, arsenic, cadmium, and chromium.
- None of the products were labeled to reveal lead content or to say that the product did not contain lead or other toxic metals

Recommendations

- Consumers should stop using painted mugs, cups, and glasses and refrain from buying these types of items unless labeled as being lead-free.
- Manufacturers have the primary responsibility for the content and safety of their products. They should immediately substitute lead-free paint on glasses, mugs, cups, and other kitchenware and label them appropriately. Other toxic metals should also be eliminated.
- Government regulators should investigate this issue and strengthen regulations surrounding lead and other toxic metals in kitchenware. The government should adopt a more protective lead concentration limit in kitchen products and other consumer products.
- Retailers selling lead-containing glasses, mugs, and cups identified in this study should remove them from sale to protect consumers from lead exposure.

Accessories and Jewelry from Hong Kong with High Levels of Lead

Greenpeace East Asia and IPEN tested 57 accessory and jewelry products on the Hong Kong market to follow-up on their investigation of toxic metals in children's products. The products included mobile phone cases, wallets, belts, business card cases, earrings, necklaces, and photo frames. Thirty-nine percent of the products contained lead greater than the 90 ppm standard for lead in paint used in some countries. The top 10 products containing lead ranged from 1882 ppm (phone pouch) to more than 115,000 ppm (decorative item on a mobile phone strap). Many products contained other toxic metals such as antimony, arsenic, cadmium, and chromium. None of the products were labeled as to their toxic metal content.