



Popular kids' trinkets loaded with toxic metal

Barred from using lead, Chinese makers using more dangerous cadmium



Tony Dejak / AP
This Rudolph charm, sold at a Dollar N More store, consisted of up to 90 percent cadmium, lab tests found.

By **JUSTIN PRITCHARD**

AP Associated Press

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LOS ANGELES— Barred from using lead in children's jewelry because of its toxicity, some Chinese manufacturers have been substituting the more dangerous heavy metal cadmium in sparkling charm bracelets and shiny pendants being sold throughout the United States, an Associated Press investigation shows.

The most contaminated piece analyzed in lab testing performed for the AP contained a startling 91 percent cadmium by weight. The cadmium content of other contaminated trinkets, all purchased at national and regional chains or franchises, tested at 89 percent, 86 percent and 84 percent by weight. The testing also showed that some items easily shed the heavy metal, raising additional concerns about the levels of exposure to children.

Cadmium is a known carcinogen. Like lead, it

can hinder brain development in the very young, according to recent research.

Children don't have to swallow an item to be exposed — they can get persistent, low-level doses by regularly sucking or biting jewelry with a high cadmium content.

To gauge cadmium's prevalence in children's jewelry, the AP organized lab testing of 103 items bought in New York, Ohio, Texas and California. All but one were purchased in November or December.

The results: 12 percent of the pieces of jewelry contained at least 10 percent cadmium.

Troubling results for charms

Some of the most troubling test results were for bracelet charms sold at Walmart, at the jewelry chain Claire's and at a dollar store. High amounts of cadmium also were detected in "The Princess and The Frog" movie-themed

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pendants.

"There's nothing positive that you can say about this metal. It's a poison," said Bruce A. Fowler, a cadmium specialist and toxicologist with the [U.S. Centers for Disease Control](#)



and Prevention. On the CDC's priority list of 275 most hazardous substances in the environment, cadmium ranks No. 7.

Jewelry industry veterans in China say cadmium has been used in domestic products there for years. Zinc, the metal most cited as a replacement for lead in imported jewelry being sold in the United States, is a much safer and nontoxic alternative. But the jewelry tests conducted for AP, along with test findings showing a growing presence of cadmium in other children's products, demonstrate that the safety threat from cadmium is being exported.

A patchwork of federal consumer protection regulations does nothing to keep these nuggets of cadmium from U.S. store shelves. If the products were painted toys, they would face a recall. If they were industrial garbage, they could qualify as hazardous waste. But since there are no cadmium restrictions on jewelry, such items are sold legally.

While the agency in charge of regulating children's products, the U.S. Consumer Product Safety Commission, has cracked down on the dangers posed by lead and products known to have killed children, such as cribs, it has never recalled an item for cadmium — even though it has received scattered complaints based on private test results for at least the past two years.

There is no definitive explanation for why children's jewelry manufacturers, virtually all

from China in the items tested, are turning to cadmium. But a reasonable double whammy looms: Cadmium prices have plummeted as factories grasp for substitutes now that lead is heavily regulated under the Consumer Product Safety Improvement Act of 2008.

That law set a new, stringent standard for lead in children's products: Only the very smallest amount is permissible — no more than 0.0003 percent of the total content. The statute has led manufacturers to drastically reduce lead in toys and jewelry.

The law also contained the first explicit regulation of cadmium, though the standards are significantly less strict than lead and apply only to painted toys, not jewelry.

Stomach test

To determine how much cadmium a child could be exposed to, items are bathed in a solution that mimics stomach acid to see how much of the toxin would leach out after being swallowed.

The jewelry testing for AP was conducted by chemistry professor Jeff Weidenhamer of Ashland University in Ohio, who over the past

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few years has provided the CPSC with results showing high lead content in products that were later recalled. His lab work for AP assessed how much cadmium was in each item. Overall, 12 of the 103 items each contained at least 10 percent cadmium. Two others contained lower amounts, while the other 89 were clean.

Ten of the items with the highest cadmium content were then run through the stomach acid test to see how much would escape. Although that test is used only in regulation of toys, AP used it to see what hazard an item could pose because unlike the regulations, a child's body doesn't distinguish between cadmium leached from jewelry and cadmium leached from a toy.

"Clearly it seems like for a metal as toxic as cadmium, somebody ought to be watching out to make sure there aren't high levels in items that could end up in the hands of kids," said Weidenhamer.

His test results include:

- Three flip flop bracelet charms sold at Walmart contained between 84 and 86 percent cadmium. The charms fared the worst of any item on the stomach acid test; one shed more cadmium in 24 hours than what World Health Organization guidelines deem a safe exposure over 60 weeks for a 33-pound child.

The charms were purchased for testing in August 2008. The company that imported them, Florida-based Sulyn Industries, stopped selling the item to Wal-Mart Corp. in November 2008, the firm's president said. Wal-Mart would not comment on whether the charms

are still on store shelves, or how many have been sold.

Sulyn's president, Harry Dickens, said the charms were subjected to testing standards imposed by both Wal-Mart and federal regulation — but were not tested for cadmium.

In separate written statements, Dickens and Wal-Mart said they consider safety a very high priority. "We consistently seek to sell only those products that meet safety and regulatory standards," Wal-Mart said. "Currently there is no required cadmium standard for children's jewelry."

As was the case with every importer or retailer that responded to AP's request for comment on the tests, neither Sulyn nor Wal-Mart would address whether the results concerned them or if the products should be recalled.

- Four charms from two "Rudolph the Red-Nosed Reindeer" bracelets sold at a Dollar N More store in Rochester, N.Y., were measured at between 82 and 91 percent cadmium. The charms also fared poorly on the stomach acid test. Two

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other charms from the same bracelets were subjected to a leaching test which recreates how much cadmium would be released in a landfill and ultimately contaminate groundwater. Based on those results, if the charms were waste from manufacturing, they would have had to be specially handled and disposed of under U.S. environmental law. The company that imported the Rudolph charms, Buy-Rite Designs, Inc. of

The Frog" necklaces bought at Walmart ranged between 25 and 35 percent cadmium, though none failed the stomach acid test nor the landfill leaching test. The Walt Disney Co., which produced the popular animated movie, said in a statement that test results provided by the manufacturer, Rhode Island-based FAF Inc., showed the item complied with all applicable safety

Freehold, N.J., has gone out of business.

- Two charms on a "Best Friends" bracelet bought at Claire's, a jewelry chain with nearly 3,000 stores in North America and Europe, consisted of 89 and 91 percent cadmium. The charms also leached alarming amounts in the simulated stomach test. Informed of the results, Claire's issued a statement pointing out that children's jewelry is not required to pass a cadmium leaching test.

"Claire's has its products tested by independent accredited third-party laboratories approved by the Consumer Product Safety Commission in compliance with the commission's standards, and has passing test results for the bracelet using these standards," the statement said. Those standards scrutinize lead content, not cadmium.

- Pendants from four "The Princess and

standards. An official at FAF's headquarters did not respond to multiple requests for comment when informed of Weidenhamer's results; a woman at the company's office in southern China who would not give her name said FAF products "might naturally contain some very small amounts of cadmium. We measure it in parts per million because the content is so small, for instance one part per million." However, the tests conducted for AP showed the pendants contained between 246,000 and 346,000 parts per million of cadmium.

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"It comes down to the following: Cadmium causes cancer. How much cadmium do you want your child eating?" said Michael R. Harbut, a doctor who has treated adult victims of cadmium poisoning and is director of the environmental cancer program at the Karmanos Cancer Institute in Detroit. "In my view, the answer should be none."

Xu Hongli, a cadmium specialist with the Beijing office of Asian Metal Ltd., a market research and consultancy firm, said test results showing high cadmium levels in some Chinese-made metal jewelry did not surprise her. Using cadmium alloys has been "a relatively common practice" among manufacturers in the eastern cities of Yiwu and Qingdao and the southern province of Sichuan, Xu said.

"Some of their products contain 90 percent cadmium or higher," she acknowledged. "Usually, though, they are more careful with export products."

She said she thought that manufacturers were becoming aware of cadmium's dangers, and are using it less, "But it will still take a while for them to completely shift away from using it."

No enforcement so far

The CPSC has received dozens of incident reports of cadmium in products over the past few years, said Gib Mullan, the agency's director of compliance and field operations. Though the CPSC has authority to go after a product deemed a public danger under the Federal Hazardous Substances Act — the law used in lead-related recalls several years ago — there have been no enforcement actions.

"We are a small agency so we can't do everything we think would be a good idea. We have to try to pick our spots," Mullan said. At

most, the agency can investigate 10 percent of the tens of thousands of reports filed by the public each year, he said.

With the help of an outside firm, the CPSC has started a scientific literature review of cadmium and other heavy metals, including how the substances fare in leaching tests, according to spokesman Scott Wolfson. "If there has been a shift in manufacturing to the use of cadmium, CPSC will take appropriate action."

"We are actively looking at cadmium right now," Wolfson said, adding that the agency will "take the right actions to protect children from either toys or other children's products" when an item violates the new stomach acid leaching standard or exhibits "a significant exposure problem."

Meanwhile, the CPSC's Mullan cites "a trend upward" in cadmium reports the agency has received — and private-sector testing AP reviewed shows cadmium is showing up more frequently.

Two outfits that analyze more than a thousand children's products each year checked their

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data at AP's request. Both said their findings of cadmium above 300 parts per million in an item — the current federal limit for lead — increased from about 0.5 percent of tests in 2007 to about 2.2 percent of tests in 2009. Those tests were conducted using a technology called XRF, a handheld gun that bounces X-rays off an item to estimate how much lead, cadmium or other elements it contains. While the results are not as exact as lab testing, the CPSC regularly uses XRF in its product screening.

Much of the increase found by the Michigan-based HealthyStuff.org came in toys with polyvinyl chloride plastic, according to Jeff Gearhart, the group's research director. Both lead and cadmium can be used to fortify PVC against the sun's rays. Data collected by a Washington-based company called Essco Safety Check led its president, Seth Goldberg, to suspect that substitution of cadmium for lead partly explains the increase he's seen.

Lawyers representing the Toy Industry Association of America and the Fashion Jewelry Trade Association said their products are safe and insist cadmium is not widely used.

Sheila A. Millar, a lawyer representing the Fashion Jewelry Trade Association, said jewelry makers often opt for zinc these days. "While FJTA can only speak to the experience of its members," Millar wrote in an e-mail, "widespread substitution of cadmium is not something they see."

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Wal-Mart pulls Miley Cyrus jewelry after cadmium tests

Updated 5/19/2010 7:28 PM

By Justin Pritchard

LOS ANGELES — [Wal-Mart](#) said Wednesday it is pulling an entire line of Miley Cyrus-brand necklaces and bracelets made in China from its shelves after tests performed for The Associated Press found the jewelry contained high levels of the toxic metal cadmium.

In a statement issued three hours after AP's initial report of its findings, Wal-Mart ([WMT](#)) said it would remove the jewelry, made exclusively for the world's largest retailer, while it investigates. The statement was issued along with Cyrus and [Max Azria](#), the designer who developed the jewelry for the 17-year-old "Hannah Montana" star.

Wal-Mart Stores Inc. had learned of cadmium in the Mylie Cyrus jewelry, as well as in an unrelated line of bracelet charms, back in February, based on an earlier round of tests by a chemistry professor, but had continued selling the items. It said as recently as last month that it would be too difficult to test products already on its shelves.

In its statement, Wal-Mart did not say whether it would also remove the bracelet charms.

Exactly how many of the items have been sold was unclear. The charms also available exclusively at Walmart stores were sold under the name "Fashion Accessories," though Walmart has not said when they began appearing on shelves. The [Miley Cyrus](#) jewelry first hit stores in December.

Long-term exposure to cadmium can lead to bone softening and kidney failure. It is also a known carcinogen, and research suggests that it can, like lead, hinder brain development in the very young.

Cadmium in jewelry is not known to be dangerous if the items are simply worn. Concerns come when youngsters bite or suck on the jewelry, as many children are apt to do.

In the statement, Wal-Mart said that while the jewelry is not intended for children, "it is possible that a few younger consumers may seek it out in stores."

"We are removing all of the jewelry from sale while we investigate its compliance with our children's jewelry standard," Wal-Mart said.

That was a reference to a policy Wal-Mart voluntarily implemented last month, under which suppliers are required to prove their products contain little cadmium, or else Wal-Mart would not accept the items.

The company's policy of not checking products already on the shelves appears to have changed: In its statement, Wal-Mart said it reviewed children's jewelry and pulled "the few products that did not" comply with its new testing regimen.

To judge the availability of pieces that Wal-Mart has known were contaminated, AP dispatched reporters throughout the country last month to search for and buy any of 13 items. Three of those were Miley Cyrus jewelry; the rest were from the line of bracelet charms. The packaging said they were made in China; all were bought for \$6 or less.

All but one of the 13 were on store shelves in the eight states where AP reporters looked.

The items were then tested by Professor Jeff Weidenhamer, a chemist at Ashland University in Ohio. Of 61 samples, 59 contained at least 5% cadmium by weight, with 53 of those measuring 10% or higher.

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Weidenhamer's prior research has shown that the testing method he used an X-ray gun that can roughly tell the amount of cadmium in an item typically underestimates how much is present.

Representatives of the jewelry industry have argued that the presence of cadmium, even at high levels, is not by itself proof that an item is dangerous. The important thing, they say, is how much can escape if the item is sucked, bitten or swallowed.

Cadmium in children's jewelry became a public concern in January when the AP published the results of an investigation that showed items at Wal-marts and other large chains were as much as 91% of the toxic metal by weight. Lab testing conducted by Weidenhamer at AP's request showed that several items easily shed the metal when exposed to a mixture that simulated human stomach acid.

The day after AP's original report, Wal-Mart said it was pulling two of the highlighted items pendants with themes from the Disney movie "[The Princess and the Frog](#)." Within three weeks, the chain had agreed to recall all the pendants already sold.

Since then, federal regulators have issued two more recalls, for charm bracelets sold at the international jewelry chain Claire's and at a Dollar N More store. Last week, the agency's spokesman said there will be more recalls.

While AP's January investigation focused on jewelry clearly intended for children, the items tested for AP this time were labeled "not intended for children under 14 years." That is an important legal distinction: Under current law, children's items are defined as for kids 12 and under, and children's products are subject to regulations that others are not.

For reasons that are not fully understood, girls ages 6 to 11 an age range that includes many fans of Cyrus' "Hannah Montana" TV show, movies and CDs appear to be more at risk from cadmium.

Data from a major national study found that girls of that age absorb more cadmium than other children or adults, according to Bruce A. Fowler, a toxicologist with the [Centers for Disease Control and Prevention](#).

The increased absorption could be because those girls typically have iron deficiency and their bodies grab on to cadmium as a substitute, Fowler said, or

it could be because they encounter more of the metal in objects such as jewelry.

The importer of the bracelet charms, Cousin Corp. of America, said that earlier this year, it persuaded one of the Chinese factories with which it works to stop using cadmium. The cadmium-heavy jewelry Weidenhamer tested came was produced in 2008 and 2009 at the problem factory, said Roy Gudgeon, vice president of merchandise at Florida-based Cousin.

"Our intention as a company is to never willingly cause harm to a child," he said.

Federal regulators' own research says that kids start becoming interested in making their own jewelry around age 6 or 8. As for products featuring Cyrus, her fans includes teenagers, tweeners and even kindergartners.

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AP IMPACT: Cadmium, lead found in drinking glasses

By Justin Pritchard

Associated Press / November 21, 2010

LOS ANGELES—Drinking glasses depicting comic book and movie characters such as Superman, Wonder Woman and the Tin Man from "The Wizard of Oz" exceed federal limits for lead in children's products by up to 1,000 times, according to laboratory testing commissioned by The Associated Press.

The decorative enamel on the superhero and Oz sets -- made in China and purchased at a Warner Brothers Studios store in Burbank -- contained between 16 percent and 30.2 percent lead. The federal limit on children's products is 0.03 percent.

The same glasses also contained relatively high levels of the even-more-dangerous cadmium, though there are no federal limits on that toxic metal in design surfaces.

In separate testing to recreate regular handling, other glasses shed small but notable amounts of lead or cadmium from their decorations. Federal regulators have worried that toxic metals rubbing onto children's hands can get into their mouths. Among the brands on those glasses:

Coca-Cola

,

Walt Disney

, Burger King and

McDonald's

.

Coca-Cola, which had been given AP's test results last week, announced Sunday evening that after retesting it was voluntarily recalling 88,000 glasses.

The AP testing was part of the news organization's ongoing investigation into dangerous metals in children's products and was conducted in response to a recall by McDonald's of 12 million glasses this summer because cadmium escaped from designs depicting four characters in the latest "Shrek" movie.

The New Jersey manufacturer of those glasses said in June that the products were made according to standard industry practices, which includes the routine use of cadmium to create red and similar colors.

To assess potential problems with glass collectibles beyond the "Shrek" set, AP bought and analyzed new glasses off the shelf, and old ones from online auctions, thrift shops and a flea market. The buys were random.

The fact it was so easy to find glasses that appeal to kids and appear to violate the federal lead law suggests that contamination in glassware is wider than one McDonald's promotion.

The irony of the latest findings is that AP's original investigation in January revealed that some Chinese manufacturers were substituting cadmium for banned lead in children's jewelry; that finding eventually led to the McDonald's-Shrek recall; now, because of the new testing primarily for cadmium in other glassware, lead is back in the spotlight as well.

AP's testing, conducted by ToyTestingLab of Rhode Island, found that the enamel used to color the Tin Man had the highest lead levels, at 1,006 times the federal limit for children's products. Every Oz and superhero glass tested exceeded the government limit: The Lion by 827 times and Dorothy by 770 times; Wonder Woman by 533 times, Superman by 617 times, Batman by 750 times and the Green Lantern by 677 times.

Federal regulators will decide whether the superhero and Oz glasses are "children's products" and thus subject to strict lead limits; if U.S. Consumer Product Safety Commission staffers conclude the glasses to fall outside that definition, the lead levels would be legal.

Judging by the agency's own analysis, obtained by the AP under the Freedom of Information Act, the Oz and

superhero glasses appeal to kids.

"Licensed characters based on action superhero themes or friendship themes are very popular" with children ages 6 to 8, CPSC staff wrote when explaining why the "Shrek" glasses, which featured the cartoon ogre and his friends, would end up in children's hands.

Warner Brothers said, "It is generally understood that the primary consumer for these products is an adult, usually a collector."

However, on Warner Brothers' website, the superhero glasses are sold alongside kids' T-shirts with similar images and a school lunch box. An online retailer, <http://www.retroplanet.com>, describes the 10-ounce glasses as "a perfect way to serve cold drinks to your children or guests."

The importer, Utah-based Vandor LLC, said it "markets its products to adult collectors." The company said less than 10,000 of each set had been sold and that the products were made under contract in China.

The company said that superhero and "Oz" glasses both passed testing done for Vandor by a CPSC-accredited lab, including the same lead content test that ToyTestingLab did for AP -- a test only required of children's products. Spokeswoman Meryl Rader did not answer when asked why a test specific to children's products would be performed on glasses the company said were not intended for kids.

"The results were well within the legal limits" of 0.03 percent lead, Rader wrote in an e-mail. The company would not share those results.

Informed in general terms of AP's results, CPSC spokesman Scott Wolfson said that the agency would pursue action against any high-lead glasses determined to be children's products. The agency has authority to enforce lead levels for glasses going back decades, he said.

AP's testing showed Vandor's Chinese manufacturer also relied on cadmium. That toxic metal comprised up to 2.5 percent of the decorative surface of the Oz and superhero glasses, nearly double the levels found in the recalled "Shrek" glasses. But the CPSC only limits how much cadmium escapes from the designs, not how much cadmium the designs contain. Even that regulation is new: The CPSC used the "Shrek" glasses to establish a standard for how much cadmium coming out of children's glassware creates a health hazard.

Five of the glasses that AP tested, including one ordered from the online Coca-Cola store, shed at least as much cadmium as the CPSC found on the "Shrek" glasses. While those five could have been deemed a health hazard under the CPSC guidelines used for the recall, recent revisions tripled the allowable amount of cadmium and the agency may no longer consider them a problem. The agency has said its upward revision means the "Shrek" glasses did not need to be recalled.

The all-red Coke glass shed three times more cadmium than the Puss in Boots "Shrek" glass that worried federal regulators the most last summer. Coke Zero and Diet Coke glasses did not exhibit the same problem.

In announcing that it was voluntarily recalling 22,000, four-glass sets "for quality reasons," the Coca-Cola Co. said the glass designed to look like a red can of Coca-Cola "did not meet our quality expectations. While recent tests indicated some cadmium in the decoration on the outside of the glass, the low levels detected do not pose a safety hazard or health threat."

The company said consumers who purchased the glasses from Coke's online store will receive an automatic credit; customers who bought the glasses in retail stores will be instructed on what to do starting Nov. 30.

The glasses, which Coke said were "designed for the general adult population," were manufactured in the United States by Arc International, the same company that made the recalled "Shrek" glasses.

In all, AP scrutinized 13 new glasses and 22 old ones, including glasses sold during McDonald's promotion for a 2007 "Shrek" movie. The used glasses date from the late 1960s to 2007, mostly from promotions at major fast-food restaurants. Thousands of such collectibles are available at online auction sites; countless others are kept in American kitchen cabinets, and used regularly by children and adults.

First, AP screened them using a state-of-the-art Olympus Innov-X gun that shoots X-rays into a glass and delivers an estimate of how much lead, cadmium or various other elements are present.

The glasses were then sent to ToyTestingLab, which is accepted by the CPSC as an accredited laboratory for a

range of procedures.

The glasses were tested according to the procedure that the safety commission used in the "Shrek" recall. The decorated surface of each glass was stroked 30 times with water-soaked wipes, with each stroke representing a hand touch. The wipes were then analyzed for how many micrograms of lead, cadmium or other elements they collected.

Finally, for seven of the superhero and Oz glasses the lab extracted samples of the decorations. That colored enamel was analyzed for its total lead content.

"I was extremely surprised at the levels," said Paul Perrotti, ToyTestingLab's director, of the total content test. He said his lab has seen glasses that fail to meet government standards, "But not 30 percent lead."

Despite what Perrotti described as "grossly high" levels, the wipe testing picked up very little lead coming out from these seven glasses. His staff had to use a diamond-tipped grinder to remove the colors, suggesting the enamel was strongly bonded to the glass.

Perrotti and glass engineers interviewed by AP said the surface of the glasses AP tested could break down with repeated use, scouring and trips to the dishwasher, making the metals more accessible.

Following a cascade of problems with products manufactured in China, Congress in 2008 passed strict new limits that effectively ban lead in any children's product. The underlying materials in these products -- including the baked-in enamel -- cannot be more 0.03 percent lead.

Lead has long been known to reduce IQ in kids; recent research suggests cadmium also can damage young brains. Cadmium also is a carcinogen that can harm kidneys and bones, especially if it accumulates over time.

Cadmium, however, also happens to be an indispensable pigment for an important part of the color palette -- without it there is no "fire engine red" (think Superman's cape and Dorothy's slippers). Lead on the other hand is not essential.

A lot of a toxic metal in a glass does not necessarily mean a health hazard. Most of the 35 lab-tested glasses were safe under normal conditions -- their decorations shed very low or no detectable amounts of lead or cadmium. Among those that did release higher levels in the wipe test, none gave off nearly enough to make someone immediately sick, according to AP's analysis of the results.

Instead, the concern is low levels of exposure over weeks or months, whether kids also are eating a sandwich or licking their fingers.

In addition to the seven contaminated Oz and superhero glasses, 10 others raised concern over longer-term contact -- two for both lead and cadmium, five for lead only and three for cadmium only. According to widely used computer modeling, the contamination that came off three of the glasses could measurably increase a child's blood lead level.

If half of what gets onto a child's hand enters their mouth, as the CPSC calculates, seven of the glasses would require fewer than 20 hand touches for kids age 6 and under to exceed U.S. Food and Drug Administration guidelines for the maximum amount of lead they should ingest in a day.

Most of the 10 additional glasses were released before 2000, including a Disney "Goofy" glass distributed by McDonald's that shed lead and cadmium, and three "Return of the Jedi" glasses from 1983 released by Burger King. One of the "Jedi" glasses hit the FDA lead level for 6-year-olds after just eight touches.

Both fast food chains said in statements that their glasses met applicable safety standards at the time they were manufactured. Disney, which ran several promotions with McDonald's for glassware AP tested, had no comment.

Using computer modeling, nationally recognized toxicologist Dr. Paul Mushak, who has advised government agencies including the CPSC and now operates a consulting practice in North Carolina, concluded that if half of what came off the glasses was ingested, it could raise a 5- to 6-year-old's blood lead level by 11 percent on the high end and 4 percent on average.

The blood level changes didn't alarm Mushak, but he expressed concern because lead from the glasses would be absorbed into the bones, only to be released much later in life, for example in menopausal women.

Mushak suggested that the safety commission's wipe test could underestimate real-world exposure, because it uses water on the wipes, a very mild approach. AP's testing showed that when glasses were subjected to a wipe wetted

with artificial sweat, the amounts of lead or cadmium that came off were up to four times higher than water wipes.

Members of the association representing the U.S. glassware industry say the glasses are safe and strongly protest that the wipe test does not accurately reflect how much lead or cadmium escapes in the real world.

Myra Warne, executive director of the Society of Glass and Ceramic Decorated Products, said she is frustrated that the CPSC used it, rather than a more commonly used method developed by the FDA.

"As we are aware, government agencies don't always (or perhaps often) share their insight and knowledge with one another which is likely why CPSC and others are fixated on improper test protocol for our products," she wrote in an e-mail.

The AP National Investigative Team can be reached at [investigate\(at\)ap.org](mailto:investigate@ap.org)

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