



BUILDING A FRAMEWORK FOR HEALTHY HOUSING

“Air Fresheners,” Indoor Air Quality & Federal Policy

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Alliance for Healthy Homes
September 16, 2008

Overview

- “Air fresheners” as consumer products
- Health issues
- Policy issues
- Citizen petition
- Companies’ response
- Suit vs. EPA to get info from companies



“Air fresheners” are everywhere

Almost every American is exposed to air fresheners

- Used in 75% of U.S. homes; use is growing
- Common in public bathrooms
- Offices, stores, restaurants use them, too
- Often, the public is unaware of the nature, extent, and consequences of the exposure



Broad range of product types



- Traditional sprays
- Continuous release (outlet- and battery-operated)
- Solid gel dispensers
- Hanging car air fresheners
- Potpourri



“Air fresheners” are big business

- US sales (excluding home fragrance products such as incense and scented candles): about **\$1.7 billion** in 2007
- \$600 million increase since 2003



What are “air fresheners” good for?



FMA says:

Fragrances contribute to our:

- “Individuality”
- “Self-esteem”
- “Personal hygiene”

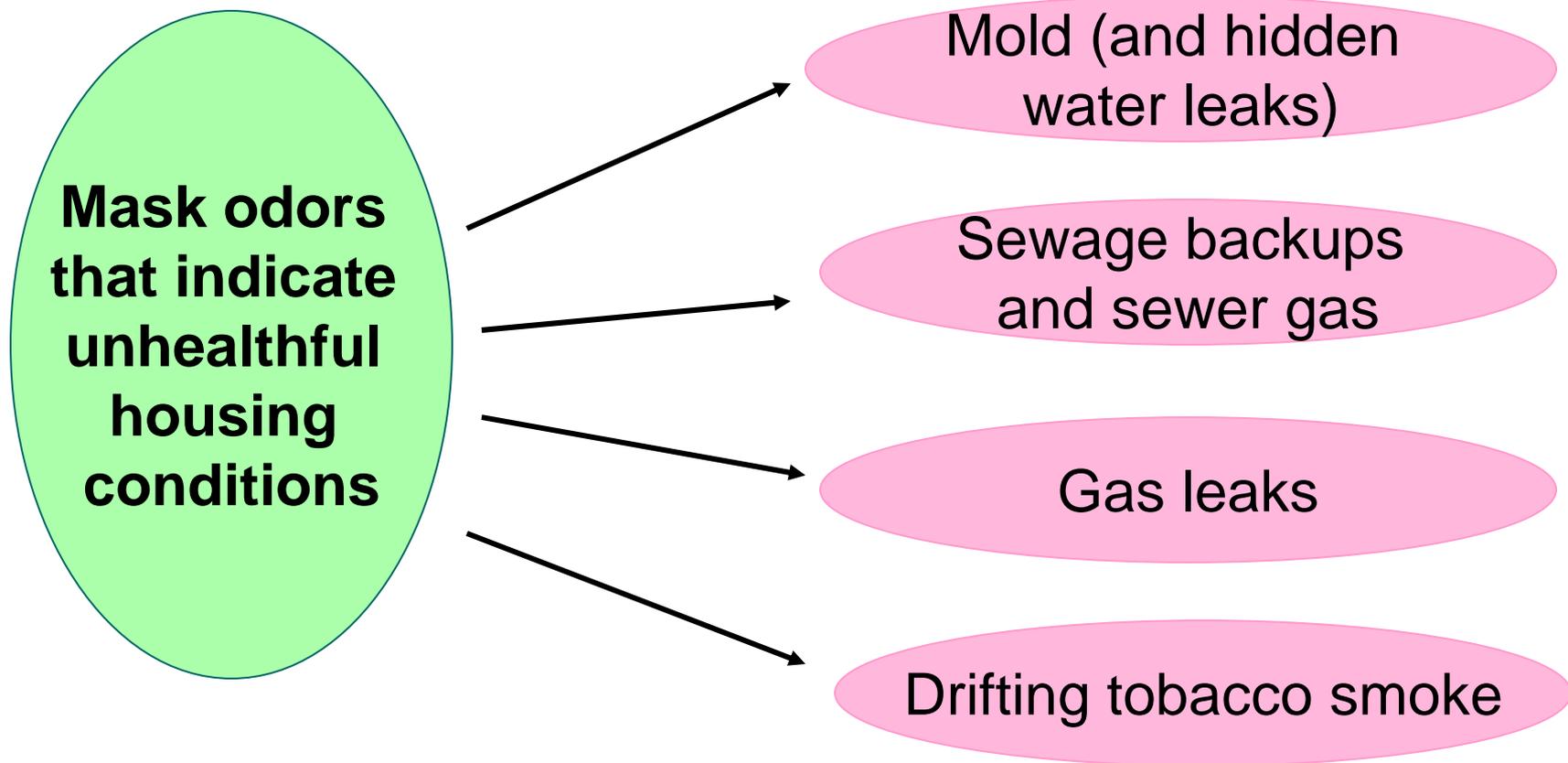


We say... Nothing!

- **Fail to remove contaminants**
- **They add toxic chemicals**
- **Intended to be inhaled by people**



Even neglecting toxic chemical ingredients, they do obvious harm



Potentially hazardous chemicals (we know of)

VOCs (including formaldehyde & phthalates)

- Lung irritants
- Associated with asthma attacks and migraines
- Formaldehyde is a lung irritant and probable carcinogen
- Some phthalates are endocrine disrupters



Respiratory issues - 2004 Study

- 29.7% of those with asthma said air fresheners caused breathing difficulties
- 37.2% found scented products irritating



Caress SM and AC Steinemann. 2005. National prevalence of asthma and chemical hypersensitivity: an examination of potential overlap. *J Occup Environ Med.* May; 47(5): 518-22.

Serious exposures

- Amer. Assoc. of Poison Control Centers documented 14,000+ calls involving air freshener exposure in 2005
- 2,500+ exposures resulted in injuries of some type

2005 Annual Report of the American Association of Poison Control Centers' National Poisoning and Exposure Database, *Clinical Toxicology*, 44:803–932, 2006.



NRDC Study – “Clearing the Air: Hidden Hazards of Air Fresheners”

- September 2007
- Independent testing of 14 common air fresheners
- None listed phthalates as ingredients
- Some labeled “all natural” or “unscented”
- 12 of 14 (86%) contained phthalates
- Phthalates are known to cause hormonal abnormalities, birth defects, reproductive problems



NRDC Study – Types of phthalates found in 12 common air fresheners

Phthalate	Effect
Di-ethyl Phthalate (DEP)	Changes in hormone levels and genital development
Di-n-butyl Phthalate (DBP)	Called reproductive toxicant by National Toxicology Program and State of CA Causes changes in genital development
Di-isobutyl Phthalate (DIBP)	Metabolites associated with changes in male genital development
Di-methyl Phthalate (DMP)	Inconclusive evidence of reproductive toxicity in animal studies
Di-isohexyl Phthalate (DIHP)	Limited testing has shown it's probably a developmental and reproductive toxicant

Source: Clearing the Air: Hidden Hazards of Air Fresheners (NRDC, 2007)



Virtually unregulated

- Makers of air fresheners don't have to reveal ingredients
- They haven't done it voluntarily
- Chemicals and their concentrations have been secrets



What's in a name?

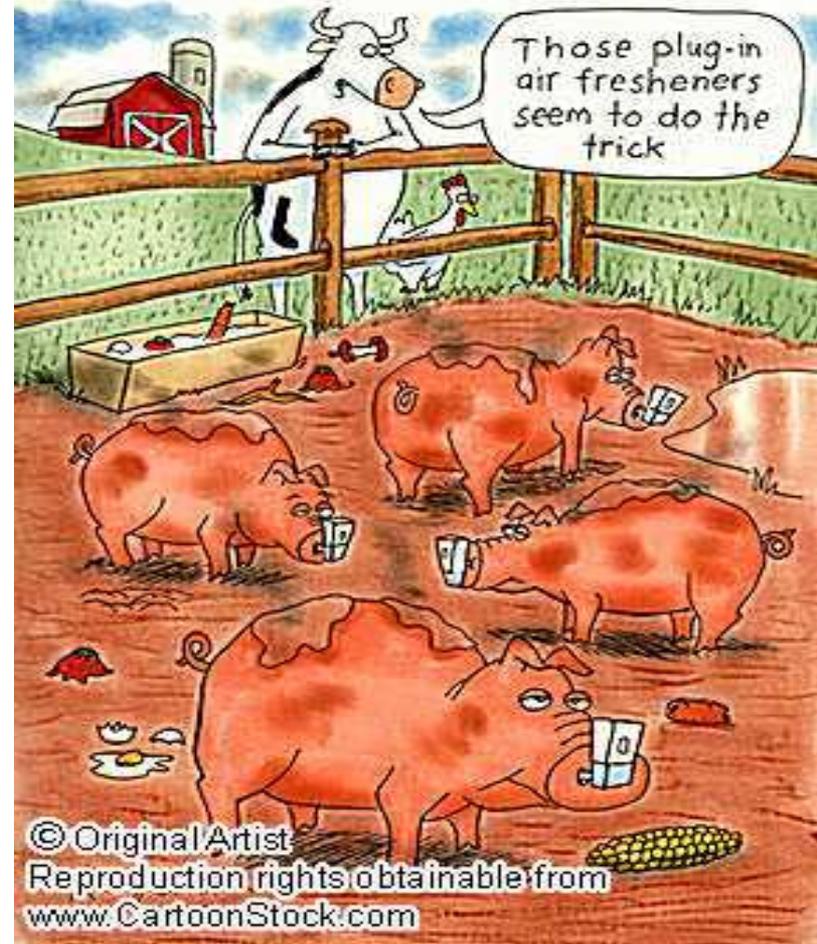
“Air freshener”

Manufacturers reinforce concept with ads implying they magically clean air



They simply mask odors with chemicals

You can't smell sewage and mold, but you're still being exposed



To fight back...



Let's call them what they really are:

- Chemical bad smell maskers
- Chemical odor dispensers
- Chemical air soilers
- Chemical air spoilers



Petition to EPA and CPSC



- September 2007
- NRDC, Sierra Club, National Center for Healthy Housing, Alliance for Healthy Homes



Asked CPSC to use Federal Hazardous Substances Act to...

- Ban air fresheners containing chemicals known to cause cancer or reproductive toxicity
- Require all air fresheners to be labeled with full list of ingredients

CPSC rejected our petition because they said we didn't ID the toxic chemicals of concern to us with enough specificity



Petition asked EPA to use TSCA to force manufacturers to...

- Provide consumer reports of health problems from air fresheners to EPA
- Submit existing health and safety studies
- Test for potential harm to people's respiratory systems
- Label products containing phthalates



EPA's response (Dec. 2007)

Denied our petition, too, but...

- Asked 7 largest manufacturers to voluntarily submit product ingredients, range of concentrations for each chemical, each chemical's function, and total annual amount used
- Set Mar. 31, 2008 deadline



Our decision about suing EPA

Timing

- Our legal deadline for filing suit came before the deadline EPA gave companies to submit data
- Thus, we decided to sue but delay serving EPA (to save agency from unnecessary work if companies' responses were satisfactory)



Our goals

- EPA obtain info on ingredients (as a basis for additional regulatory action)
- As much as possible of the info be made public



Companies' response

- Offered to provide EPA aggregated info on ingredients and concentrations to “protect confidential business information”
- CSPA would aggregate non-fragrance ingredients
- FMA would aggregate fragrance data
- Only chemicals with $>0.1\%$ concentration



Delaying tactics

- CSPA requested 60 day extension
- EPA granted CSPA 45 days (to May 15, 2008)
- On May 15, FMA said they needed until Oct. 1, 2008, to provide fragrance data



May 15, 2008 data submission

- No info on chemicals below 0.1% provided to EPA
- Public version severely redacted
- Fragrance data delayed until Oct. 1
- Fragrance concentrations would not be given to EPA

We decide to serve EPA with suit



Public data submission

Sample page from CSPA's May 15 response – public version

Want some info to go with those redactions?

5/15/2008

Aggregate Ingredient Data for Continuous Release Air Fresheners

Public Version

Chemical Name	CAS #	Min % in Products	Max % in Products	Function of Ingredient	Estimated Total Annual Usage 2007 (Pounds)
Benzophenone 4	4085-45-8	0.10	0.10	Preservative	52
2,4-dihydro-5-methyl-2-phenyl-4-phenylazo-3H-pyrazol-3-one	4314-58-1				
Exerxal Violet 2	4430-19-0			colorant	
Rad 4	4548-63-2			colorant	
Alcohol	66-17-5	2.74	70.68	Solvent	
Hydantoin	6440-58-0	0.28	0.25	Preservative	68
Isopropyl Alcohol	67-63-0	10.0	15.0	solvent	
Alcohol, C12-15, ethoxylated	69131-39-5	2.5	3.1	Surfactant	
14H-benz[4,5]siquino[2,1-a]peridin-14-one	6875-22-7				
12H-pthaloperin 12-one	6925-69-5				
Gel Base (Potassium Chloride)	7447-40-7			Crosslink	
Silicon Dioxide	7631-86-9				
Sodium Metasilicate	7801-07-4			Anti-oxidant	
Water	7732-18-5			Solvent/Carrier	
1-hydroxy-4-(p-toluidino)anthraquinone	81-49-1				
1-methylaminoanthraquinone	82-36-2				

Page 2 of 3



Public report is virtually useless

- Water is a non-secret ingredient, but how much?
- Cardboard is a non-secret ingredient
- 27 of the 100 ingredients are redacted
- Total tonnage provided for only 11 of the 100 ingredients



Some info was provided

Companies say...

- Phthalates not intentionally added among the non-fragrance ingredients
- They believe only one phthalate, DEP, is added as a fragrance ingredient
- Formaldehyde is an ingredient
- Benzene, styrene or toluene aren't added above 0.1% as non-fragrance ingredients



Status of lawsuit



- Pre-trial stage – discovery
- Companies & trade associations haven't intervened and probably won't



The future

- Still waiting for fragrance ingredients to be submitted to EPA
- Will EPA seek to avoid trial by requiring companies to provide & reveal more info?
- We believe ingredient info can be made public in an aggregated format



For more information

- Visit EPA's web site at:
www.epa.gov/oppt/chemtest/pubs/petitions.htm
- Visit NRDC's web site at:
www.nrdc.org/health/home/airfresheners/airfresheners.pdf
- Contact me at:
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Lead In Consumer Goods

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Presented by Bill Radosevich



Lead Fatality Drives Media Attention



A sneaker manufacturer recalled 510,000 charms when a 4 year old died from lead poisoning after swallowing one in 2006.

- The charm contained more than 94% lead
- Lead professionals and regulatory agencies immediately began testing similar charms
- Some contained lead, some did not

Media



EIBLL linked to consumer goods
Consumer Reports, December 2007

Scope of Problem

1. Yellow

2. Orange

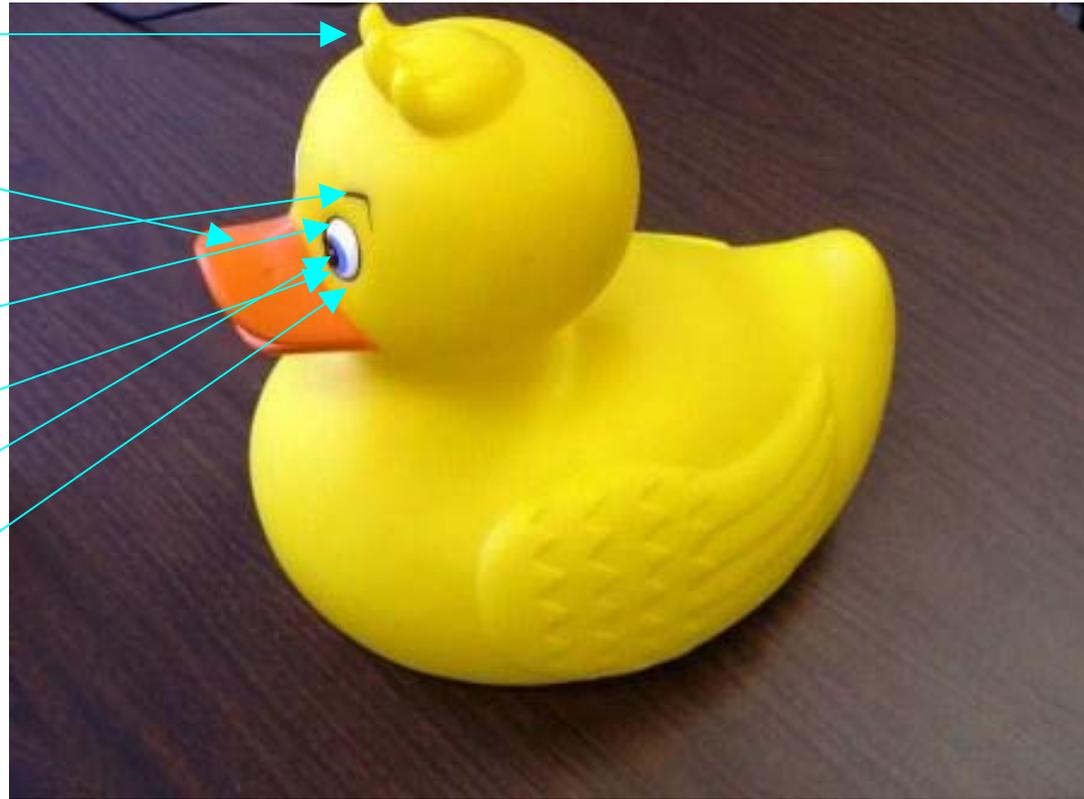
3. Brown

4. White

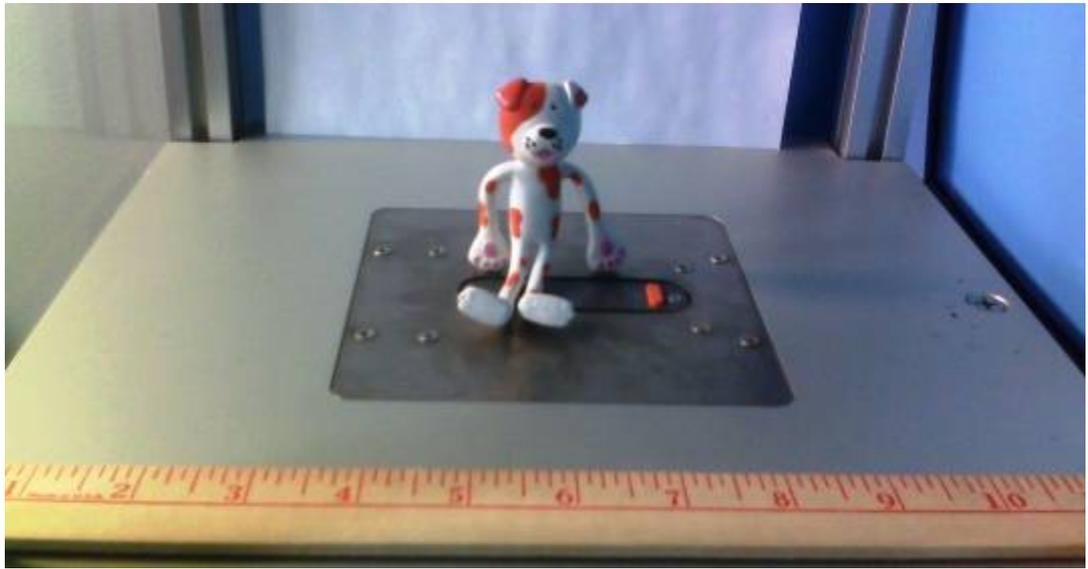
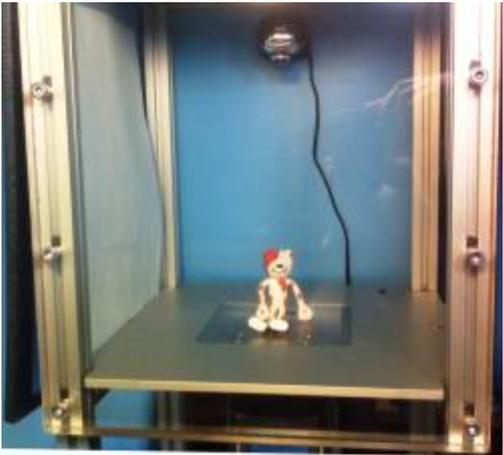
5. Blue

6. Black

7. Black



Using Handheld or test stand



Small Spot Example

The screenshot displays the NDT software interface (v6.2.1) with a handheld device on the left and a large data window on the right. The handheld device screen shows a similar data view. The large window displays the following information:

2 Plastic Mode
Time 8.6 sec
Non-PVC Type
Fail
Doll-237

Ele	ppm	+/-	3mm
Pb	873	410	▲
Cd	nd <	132	
Hg	nd <	593	
As	nd <	303	
Ba	nd <	1020	

Below LOD List
[Main]

Download to C:\Program Files\NITON\NDT\Data\SS screen captures 20071220.ndt

Thermo Scientific NITON Analyzer Coverage

September 19:
Rep. Ed Markey
Brings NITON
Analyzer to Toy
Safety Hearing;
Video Viewed
More Than 600
Times on
YouTube.com



The Boston Globe

SAFETY'S IN BIG DEMAND

By Todd Wallace

Mr. X. Casper had two thoughts when he noticed a flurry of warnings about the safety of Chinese imports, ranging from pet food and toothpaste to toys.

THE WALL STREET JOURNAL

Supplier of Toys to Mattel Is Investigated in China

The Chinese government is investigating a Hong Kong-based company that Mattel Inc. says supplied it with 1.5 million toys believed to be contaminated with lead paint, according to a government official.

The company, Lee Der Industrial Co., has told the government that it might have been cheated by its own paint supplier, the official said, highlighting both the difficulty American companies face in policing increasingly long-supply chains and the prevalence of lead paint in China.

Mr. Liao, the senior official at the

Entry-Exit Inspection and Quarantine Bureau of China's southern Guangdong province, where the Hong Kong company's factory is located, said that while the government is investigating the factory, the factory hasn't been shut down. Mr. Liao didn't give his full name during a telephone interview.

"During this period, they will not export toys overseas," Mr. Liao said.

Employees at Lee Der Industrial's office and warehouse in Hong Kong declined to comment yesterday, although a man who answered the phone at the office confirmed that the company makes toys for Mattel and has a factory in Guangdong province. At the company's office and warehouse, boxes of toys were scattered about, including those labeled Fisher-Price. Officials at the company's office in the city of Foshan, where the factory is located, weren't available to comment.

Last week, Mattel, of El Segundo, Calif., recalled Chinese-made toys believed to contain lead paint. The toys included items involving popular characters like Elmo and Dora the Explorer. At first, Mattel declined to release the name of the factory. It reversed course late Tuesday. Industry observers said it is possible the Chinese toy factory was duped by one of its own paint suppliers, which might have substituted cheaper lead paint for what the company ordered. A Mattel spokesperson said the company is still investigating the matter on its own. She added that the company had informed many of its competitors of the factory's name before Tuesday's disclosure and the news of the government's probe.

Mattel's experience might force the toy maker and other companies that make goods in China to do more testing on their own. "They'll have to take the responsibility and do it with their own staff rather than let the factory do it," said Bill Kinsey, director of Asian sales in Shanghai for a unit of Thermo Fisher Scientific, a Waltham, Mass., maker of scientific-instrumentation and testing equipment.

Mattel has said it allowed the manufacturer to perform its own tests because of their trusted 15-year relationship.

—Zhou Yang in Beijing and Juliet Ye in Hong Kong contributed to this article.

The New York Times

"A Boon for Lead-Testing Companies"
By Louise Story
As toy makers and retailers try to reassure consumers that dolls, action figures and other toys are safe, a group of relatively unknown companies that test toys and other products are emerging as clear beneficiaries.



October 18:
"How Safe Are the Toys in Your Home?"
November 1:
"ABC Tests 100 Children's Products and Finds 10 With Lead"



October 22:
"Home Tests For Lead Found Wanting"
November 6:
"Getting The Lead Out"



November 2:
"Testing Toys For Lead"

