



“Air Fresheners,” Indoor Air Quality & Federal Policy

Ralph Scott
Alliance for Healthy Homes
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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:

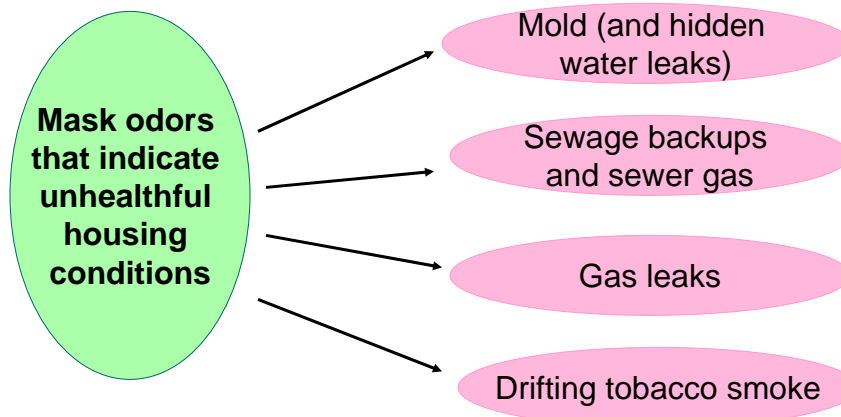
- “Individuality”
- “Self-esteem”
- “Personal hygiene”

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 disruptors

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-isoheptyl 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?

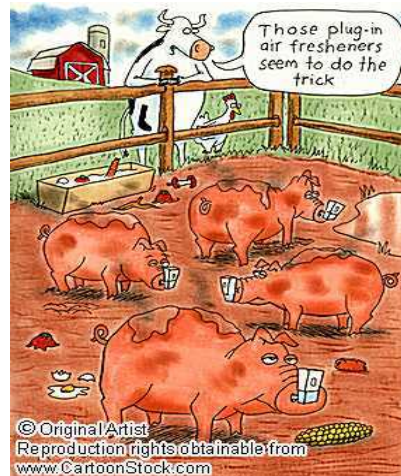


“Air freshener”

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?

6/10/2008 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 Sales (\$B) (2007)
Benzophenone-4	8055-03-8	0.10	0.10	Preservative	52
2,4-dihydroxybenzyl(2-aminoethyl)carbamate (H-preset 2-one)	6214-16-1				
Diethyl Sulfide	1100-10-6			Solvent	
Diethyl Ether	6048-83-2			Solvent	
Alcohol	64-17-5	2.74	75.00	Solvent	
Hydroquin	6445-58-0	0.20	0.25	Preservative	68
Hydroxyacetone	87-63-0	10.0	10.0	Solvent	
Acetic Acid (5-aminocyclohexylmethyl) ester	8012-39-2	2.6	3.1	Surfactant	
1,6-hexanediol(2-ethylhexyl)carbamate (H-preset 14-one)	6055-22-7				
1,6-hexanediol(2-ethylhexyl)carbamate (H-preset 14-one)	6055-89-6				
Octyl Stearoyl Stearate (C18-18)	7467-43-7			Conditioner	
Silicon Dioxide	7631-86-9				
Sodium Metasilicate	7631-87-4			Anticaking	
Water	7732-18-5			Solvent/Carrier	
Hydroxyethyl Methacrylate (H-preset 1)	81-48-1				
1-propyl-3-(3-dimethylammonio)propanyl carbodiimide	83-30-1				

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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:
Ralph Scott
Alliance for Healthy Homes
202-347-7610 ext 11
rscott@afhh.org