

September 19, 2007

Stephen Johnson, Administrator
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Commissioner Thomas Moore
U.S. Consumer Product Safety Commission
4330 East West Highway
Bethesda, MD 20814

Re: Citizen Petition to EPA and CPSC Regarding Air Fresheners

Dear Administrator Johnson and Commissioner Moore:

Sierra Club, Alliance for Healthy Homes, the National Center for Healthy Housing, and the Natural Resources Defense Council (NRDC) petition the U.S. Environmental Protection Agency (EPA) and the U.S. Consumer Product Safety Commission (CPSC) to undertake specific actions to assess fully the risk to the public from exposure to air fresheners and to take reasonable steps to reduce that risk. The petitioners are national organizations committed to protecting public health.

Almost every American is exposed to air fresheners in some manner. Millions use air fresheners in their home. Outside their home, they are exposed in bathrooms where air fresheners are common. Many offices, retail stores, and restaurants use air fresheners as well. Often, the public is unaware of the nature, extent, and consequences of the exposure.

American's extensive exposure to air fresheners has grown more significant in recent years. According to a market research firm in New Jersey, total U.S. sales excluding home fragrance products such as incense and scented candles are expected to reach \$1.72 billion – up 50 percent or \$600 million since 2003.¹ When incense is included, the U.S market was estimated at \$2.9 billion in 2004² with market studies reporting further growth.³

¹ Louise Story, "Sensing Opportunity in Dormitory Air," *New York Times*, January 3, 2007, www.nytimes.com/2007/01/03/business/media/03fresh.html (July 26, 2007).

² The-InfoShop, 2004, *The U.S. Market for Home Fragrance Products*, 4th Edition. See www.the-infoshop.com/study/pf21070_us_home_fragrance_toc.html.

³ Mintel Report: Air Fresheners-US, Household-Feb 2006 (available at: academic.mintel.com/sinatra/academic/index/&letter=1/display/id=112837) (stating that "From 1999 to 2004, sales of air fresheners rose nearly 30% in current dollars. While the increase in the market is substantial, the bulk of the growth occurred in 2000 and 2001 following the advent of air freshener candles and widespread acceptance of plug-in air fresheners, and year-on-year sales growth has been significantly slower" and "[t]he growing Hispanic

The volatile organic compounds (VOCs) released by air fresheners are intended to be inhaled by humans.⁴ People use them because of their potential impact on the olfactory system. This exposure can be significant, especially for asthmatics. A 2004 study noted that “29.7% of those with asthma said air fresheners caused breathing difficulties, and 37.2% found scented products irritating.”⁵ Many people may not make the connection between exposure to air fresheners and potential symptoms that they are experiencing. Those who do make the connection may call their local poison control center for advice. The American Association of Poison Control Centers (AAPCC) documented more than 14,000 calls involving actual exposure in 2005. More than 2500 exposures resulted in injuries of some type including one death.⁶

Petitioners believe, and are concerned, that air fresheners are a significant source of human exposure to a veritable cocktail of dangerous and potentially dangerous volatile organic compounds (VOCs). Compounding this concern is that fact that air fresheners provide no public health benefit: they serve primarily to mask objectionable odors. In fact, in cases of mold and damp indoor environments, air fresheners may hide an indicator of potentially serious health threats to the respiratory system.⁷

Petitioners are also concerned about how little both federal agencies and the general public understand the risks posed by exposure to the multitude of chemicals in air fresheners. As with many products, consumers may assume that if they can buy it and if they follow the directions on the label, it is a safe and healthy product. They also may assume that a federal agency has evaluated the product and carefully considered the dangers, especially on products designed to introduce a wide variety of chemicals into their lungs. Unfortunately, with regard to air fresheners, these consumers are mistaken.

There are no specific federal standards regulating air fresheners. Manufacturers and importers are not required to evaluate carefully the risk posed by the product. They are not required to make a tangible assessment of any cumulative risks posed by air fresheners or possible synergies between the different VOCs contained in the products. Rather, under the Toxic Substances Control Act § 8(e), only manufacturers who receive “information which reasonably supports the conclusion that

population of the U.S., identified by the Fall 2003 Simmons NCS as being more probable and more frequent air freshener users (more than whites or Asians), promises to spur increased growth.”)

⁴ Nazaroff for California Air Resources Board and the California Environmental Protection Agency, 2006, Indoor Air Chemistry: Cleaning Agents, Ozone and Toxic Air Contaminants, Final Report: Contract No. 01-336, See www.arb.ca.gov/research/abstracts/01-336.htm.

⁵ 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.

⁶ 2005 Annual Report of the American Association of Poison Control Centers’ National Poisoning and Exposure Database, *Clinical Toxicology*, 44:803–932, 2006. See www.aapcc.org/2005.htm. 2005 is the most recent year available. The number and significance of the exposures were greater in 2004 with 16242 documented exposures and more moderate and major injuries. See www.aapcc.org/2004.htm.

⁷ Institute of Medicine of the National Academies, *Damp Indoor Spaces and Health*, National Academies Press, 2004, ISBN 0-309-09246-9. See www.nap.edu/books/0309091934/html/. The Institute of Medicine found sufficient evidence of an association between the presence of mold and other agents in damp indoor environments and five health impacts: upper respiratory (nasal and throat) tract symptoms, coughs, wheezing, asthma symptoms in sensitized persons, and hypersensitivity pneumonitis in susceptible persons.

such substance or mixture presents a substantial risk of injury to health or the environment” must notify EPA of that information.⁸

Under the Federal Hazardous Substances Act § 4, a manufacturer cannot introduce into commerce any “misbranded hazardous substance” or “banned hazardous substance.”⁹ Because the federal regulatory system relies on manufacturers and importers to evaluate the risk and report the problems, if these companies do not consistently act with the best interests of the public in mind, there are few mechanisms to alert the federal government or the public to any problems.

In the absence of federal regulation, the general public is left in the dark about the types and toxicity of chemicals being introduced into their homes. Despite the little data gathered by the government, there are reports that provide a glimpse of just how expansive the risk to public health could be. Three such reports are summarized below.

American Association of Poison Control Centers – 2005 Annual Report

The American Association of Poison Control Centers (AAPCC) reported that in 2005 exposure to air fresheners contributed to a death.¹⁰ A 13-year-old died from inhaling air fresheners.

Overall, the AAPCC reported the following findings:

- 11,800 children younger than six and 14,094 people overall were exposed to air fresheners and called their local poison control center;
- 98% of these exposures were unintentional;
- 2,492 of the exposures resulted in minor injuries;
- 125 of the exposures resulted in moderate injuries; and
- 5 of the exposures resulted in major injuries.

These numbers represent only a fraction of the actual exposures that may have warranted a call to the poison center. Parents will usually call the local poison center when there is a direct and obvious exposure such as a child playing with an air freshener plugged into a wall. However, many people may not recognize the connection between an adverse health effect and their exposure to air fresheners that have been released into their indoor air environment. Therefore, the data from the AAPCC report vastly underrepresents the extent of exposure to air fresheners.

European Commission’s SCHER Report on Air Fresheners

The Scientific Committee on Health and Environmental Risks (SCHER) is one of three non-food scientific committees that provide advice to the European Commission’s Health & Consumer Protection Directorate-General. On January 27, 2006, it published its assessment of a report by the Bureau Européen des Consommateurs (BEUC) that measured and assessed the emissions of chemicals by 74 air fresheners sold in Europe.¹¹ The report focused on emissions of total VOCs,

⁸ Toxic Substance Control Act, § 8(e) (15 U.S.C. § 2607(e)).

⁹ Federal Hazardous Substances Act § 4 (15 U.S.C. § 1263); *see also* FHSA § 2(p) and (q) (15 U.S.C. 1261).

¹⁰ 2005 Annual Report of the American Association of Poison Control Centers’ National Poisoning and Exposure Database, *Clinical Toxicology*, 44:803–932, 2006, *see* Table 22, page 888.

¹¹ Commission’s Scientific Committee on Health and Environmental Risks (SCHER), Opinion on the report “Emission of chemicals by air fresheners. Tests on 74 consumer products sold in Europe. January 2005”. *See* at http://ec.europa.eu/health/ph_risk/committees/04_scher/docs/scher_o_026.pdf. *See also* SCHER, Opinion on risk

allergens, benzene, formaldehyde, terpenes, styrene, diethyl phthalate, and toluene. BEUC found “for most products tested the emitted total VOC values exceeded 200 µg/m³, the proposed maximum limit value in indoor air in several countries and the emissions contained substances classified carcinogenic, such as benzene and formaldehyde, at rather high concentrations.”¹²

In addressing the potential health effects of emissions from air fresheners, SCHER noted that the data on exposure was too limited. An overall exposure assessment would require more data. SCHER stated that “[e]missions from air fresheners contain many more compounds than those assessed by BEUC, and several of these may also give health effects. Furthermore, several of the primary emitted compounds may undergo reactions (e.g. with ozone, hydroxyl or nitrate radicals) to form new compounds with other effects. The real situation may be even more complicated as there may be combined effects between some of these substances, but the knowledge in this field is so far very limited.”¹³ SCHER stated that the “[o]verall, the BEUC study may be taken as an indication that under certain conditions notable concentrations of VOCs may result in indoor air from air fresheners.”¹⁴

SCHER concluded that “[d]espite the limitations of the BEUC study, some observations may be made from the emissions in this specific case. Burning of incense produced abnormally high benzene concentrations in the indoor air. Because benzene is a human carcinogen, such benzene emissions need attention to diminish the exposure. For formaldehyde, styrene and toluene the highest values found in the BEUC study are below the WHO [World Health Organization] guidance values. d-Limonene concentrations obtained from natural products, gel fresheners and sprays exceed the upper value suggested for repeated exposure but not a limit based on the NOAEC [No Observed Adverse Effect Concentration] found in the critical effect study (reflecting acute irritation).”¹⁵ Although total VOCs exceeded limits adopted by several countries, SCHER questioned the value in using it to predict health effects, because the actual composition of total VOCs would vary.¹⁶ “The guidance values used in the SCHER evaluation cover to some extent the vulnerable groups but the most sensitive persons (e.g. people having asthma, children) may already react at these concentrations.”¹⁷

SCHER continued that the results of from the BEUC study could even underestimate exposure to the emissions from air fresheners because of other conditions such as “concomitant use of several air fresheners, smaller room volumes, less ventilation, addition to high background values from other sources.” In addition, “[t]he substances studied by BEUC all have higher vapour densities than air, and concentrations close to the floor may therefore be higher than in the point of measurement. Also droplets from spray products may reach the floor before total evaporation, which may increase the concentrations there. These circumstances can give an elevated exposure

assessment on indoor air quality, 2007 at http://ec.europa.eu/health/ph_risk/committees/04_scher/docs/scher_o_055.pdf.

¹² Id at page 11.

¹³ Id at 12.

¹⁴ Id at 14.

¹⁵ Id.

¹⁶ Id.

¹⁷ Id.

to children playing on the floor, due also to a breathing rate which, calculated per unit bodyweight, is twice that of an adult over the first 12 years of life (Gerdes et al, 2004).”¹⁸

Most importantly, SCHER recommended further research on emissions from and consumers use pattern of air fresheners, actual use data, new studies to identify compounds in the emissions, especially from the combustion/pyrolysis processes in candles and incense (including dioxins as the temperature seems to be in the optimal range for formation of these types of compounds) and more data on fine and ultra fine particles.¹⁹

Natural Resources Defense Council Report on Phthalates in Air Fresheners

NRDC recently tested a number of air fresheners currently on the market specifically for the presence of phthalates. Phthalates are associated with a number of reproductive health risks, including changes in hormone levels and changes in genital development.²⁰ Exposures to phthalates have also been associated with allergic symptoms and asthma.²¹ California’s Office of Environmental Health Hazard Assessment lists some phthalates (including some found in these air fresheners) as chemicals known to the state to cause reproductive toxicity under California’s Proposition 65 (“Prop 65”).²² As reported in “Masking the Danger: Toxic Chemicals in Air Fresheners,” NRDC’s independent testing found phthalates in 86% of air freshener products tested; however, none of the products listed phthalates on their labels.²³ In fact, some air fresheners labeled as “all-natural” and “unscented” contained measurable amounts of phthalates.

In addition to the data gaps on exposure from air fresheners, there is little toxicity data available on many of the chemicals found air fresheners. The identities and concentrations of the organic chemicals used in an air freshener are closely-held secrets by the manufacturers. Petitioners understand that EPA does not know the ingredients of most of the air fresheners on the market and, even if it did, EPA would have, at best, only basic screening information on those chemicals. But even with the screening information, the Screening Information Data Set tests do not sufficiently identify the presence of chemicals that cause chronic respiratory tract impacts, and particularly not the complex mixtures of chemicals used in air fresheners. Petitioners reviewed EPA’s High Production Volume Information System²⁴ for the common fragrances found in air fresheners in the BEUC/ICRT study²⁵ and found no repeat dose toxicity studies for respiratory exposure.

¹⁸ Id at 15.

¹⁹ Id.

²⁰ K. M. Main et al., “Human Breast Milk Contamination with Phthalates and Alterations of Endogenous Reproductive Hormones in Infants Three Months of Age,” *Environmental Health Perspectives* 114 (2006), pp.270-276; R. Hauser et al., “Altered Semen Quality in Relation to Urinary Concentrations of Phthalate Monoester and Oxidative Metabolites,” *Epidemiology* 17, no. 6 (2006), pp. 682-691; S. H. Swan et al., “Decrease in Anogenital Distance among Male Infants with Prenatal Phthalate Exposure,” *Environmental Health Perspectives* 113 (2007), pp. 1056-61.

²¹ C.G. Bornehag et al., “The association between asthma and allergic symptoms in children and phthalates in house dust: a nested case-control study,” *Environmental Health Perspectives* 112 (2004), pp. 1393-7.

²² California Safe Drinking Water and Toxic Enforcement Act of 1986.

²³ Cohen, Alison, Sarah Janssen, and Gina Solomon. “Masking the Danger: Toxic Chemicals in Air Fresheners.” Natural Resources Defense Council. September 2007.

²⁴ www.epa.gov/hpvis/

²⁵ BEUC / International Consumer Research & Testing, *Emission of chemicals by air fresheners. Tests on 74 consumer products sold in Europe*, (2005).

Petitioners also reviewed manufacturers' material safety data sheets (MSDS) for various air fresheners. Despite the widespread use of air fresheners, manufacturers appear to have no information on the potential respiratory hazards associated with their products. For example, since 2001, Canada has required manufacturers to report "Respiratory Tract Sensitization" on the MSDS.²⁶ However, a review of more than 25 MSDSs for air fresheners written pursuant to those regulations, all of which were available for purchase in the United States, noted that there was "No Data Available" as the response for "Respiratory Tract Sensitization."

Petitioners believe that data on respiratory tract sensitization and other health impacts from respiratory exposure to air fresheners should be available to EPA, CPSC, and the general public so they can assess the potential risk associated with inhaling these products. If the information is not available, EPA should require that the manufacturers of air fresheners conduct the necessary testing and make that information available. When EPA assembles the information in a comprehensive compilation can it adequately assess and reveal the risk to the public.

Altogether, it becomes alarmingly apparent that the federal government and the general public have scant information about what toxins, how many different toxins, and how much of each toxin they are releasing purposely into their homes. Therefore, we petition EPA and CPSC to gather that data and act to protect the public health.

For purposes of these petitions, "air freshener" refers to a broad range of product types, from traditional sprays to outlet- and battery-operated plug-ins, solid gel dispenses, hanging car air fresheners and potpourri. Air fresheners can serve two purposes: odor control (which includes unscented air fresheners) and aesthetic scent. Some products may serve both purposes, and others may serve only one. Cleaning products that kill germs, clean surfaces and leave a pleasant fragrance are not included in these petitions.

PETITION TO U.S. ENVIRONMENTAL PROTECTION AGENCY

The Sierra Club, Alliance for Healthy Homes, National Center for Healthy Housing, and the Natural Resources Defense Council petition EPA pursuant to the Toxic Substances Control Act ("TSCA") § 21, 15 U.S.C. § 2620 to:

1. Call-in allegations of adverse reactions recorded by manufacturers and processors pursuant to TSCA § 8(c) and 40 CFR 717.
2. Adopt a rule pursuant to TSCA § 8(d) to require submittal of health and safety studies related to air fresheners, including lab results of ingredients and health effects from respiratory exposures.
3. Adopt a rule pursuant to TSCA § 4 to require manufacturers to test their products for respiratory exposures and sensitization.
4. Adopt a rule pursuant to TSCA § 6 to require labeling on all air fresheners that contain phthalates.

²⁶ Workplace Hazardous Materials Information System (WHMIS), CPR Section 32 (Classes of Controlled Products – Definitions), Section 56 (Respiratory Tract Sensitizer). See Reference Manual for the WHMIS Requirements of the *Hazardous Products Act* and Controlled Products Regulations the Hazardous Products Act and Controlled Products Regulations. See also www2.worksafebc.com/publications/OHSRegulation/HazardousProductsAct.asp.

Section 8(c) Call-In

According to 40 CFR 717, manufacturers and processors of chemical substances and mixtures such as air fresheners must record allegations that the chemical substance or mixture caused a significant adverse reaction to their health or the environment. A significant adverse reaction is “a substantial impairment of normal activities or long-lasting or irreversible damage to health or the environment.”²⁷ Effects already reported in scientific publications or in MSDSs do not have to be recorded.

Petitioners request that EPA exercise its authority under 40 CFR 717.17 and request that the following manufacturers and processors report such allegations they have received related to air freshener products:

1. Blyth, Inc., One East Weaver Street, Greenwich, CT, 203-661-1926, www.blyth.com
2. Lancaster Colony Corporation, 37 W. Broad Street, Columbus, Ohio 43215, www.lancastercolony.com
3. Limited Brands, Three Limited Parkway, Columbus, OH 43230, www.limitedbrands.com/index.jsp
4. Procter & Gamble, One Procter & Gamble Plaza, Cincinnati, OH 45202, www.pg.com
5. Reckitt Benckiser, 103-105 Bath Road, Slough, Berkshire SL1 3UH, UK, www.reckittbenckiser.com
6. SC Johnson & Son, 1525 Howe St., Racine, WI 53403-5011, www.scjbrands.com
7. SOPUS, TSP19, PO Box 4427, Houston, TX 77210-4427, www.auto-expressions.net
8. The Dial Corporation, 15501 N. Dial Blvd, Scottsdale, AZ 85260-1619, www.dialcorp.com
9. Sara Lee Corporation, 3500 Lacey Road, Downers Grove, IL 60515-5424, www.saralee.com

Petitioners believe these nine companies are the primary manufacturers and processors of air fresheners sold in the United States. By focusing its resources on this group, EPA should be able to assess the extent of the problems with air freshener exposure fairly. Because a request involving nine entities would not be subject to the Paperwork Reduction Act notice requirements, EPA could act quickly.

Section 8(d) Call-In

Petitioners request that EPA require manufacturers and processors to submit unpublished health and safety studies they have in their possession that relate to the following areas:

1. Ingredients of air fresheners;
2. Exposure of consumers to air fresheners
3. Health effects of exposure to air fresheners
4. Toxicity, persistence, and other characteristics of air fresheners that affect health and/or the environment.

These studies will provide EPA with the essential information it needs to assess the merits of the potential allegations and understand the impacts of the air fresheners on human health.

²⁷ 40 CFR 717.3(i)

Section 4 Testing

Petitioners request that EPA adopt a rule pursuant to TSCA § 4 to require manufacturers to conduct acute and chronic studies that use appropriate exposure routes and that capture a diversity of life stages and health conditions, such as asthma, for large populations of mammals evaluating the impact of air fresheners on human health. These tests must consider the byproducts of a reaction of the air fresheners with ozone and analyze both exposure and sensitization.

Petitioners believe that EPA has sufficient basis to issue a TSCA Section 4 Test Rule. The research shows that air fresheners may pose a risk to public health as identified above. In addition to the direct health effects, air fresheners may present an unreasonable risk because they may mask the presence of the potentially dangerous condition of mold in damp indoor environments. They meet the requirements in § 4(a) for an “A” hazard/risk finding. Since air fresheners only serve a cosmetic purpose, that risk is unreasonable. Air fresheners can be eliminated from consumer use without significant disruption to the consumers.

Air fresheners also meet the requirements for § 4(b) for a “B” exposure finding. At \$2.9 billion in sales, these products are produced in substantial quantities. The research makes clear that there is significant human exposure to the air fresheners. The more than 14,000 consumer exposures documented by the AAPCC that resulted in a call to a poison control center exceeds the 10,000 consumer threshold. Virtually every American is exposed to air fresheners. The European research shows that the potential risk from this exposure is significant.

Finally, there are insufficient data and experiences upon which the effects of air fresheners on the general public can reasonably be determined or predicted, and testing is necessary to develop the needed data. EPA and the public need to know whether air fresheners pose a respiratory sensitization hazard.

Section 6 Labeling

Petitioners request that EPA require that air freshener be labeled to identify all their ingredients pursuant to TSCA § 6(a)(3). This labeling requirement will provide at least some protection to sensitive subpopulations – such as people who are allergic to one or more of the ingredients and pregnant women and children who would be exposed to chemicals have known reproductive toxicity – as well as the general public from the various adverse health risks associated with some of the ingredients.

A manufacturer or importer is well aware of the ingredients of their product; as such, requiring them to list those ingredients would impart an insignificant cost. Air fresheners provide no public health value, and consumers should be given the opportunity to make an informed choice about whether to introduce voluntarily those unnecessary chemicals into their homes. Because of the anticipated toxicity associated with many of these chemicals, requiring labels on air fresheners to identify their ingredients can result in significant potential gains and improvements to public health.

PETITION TO U.S. CONSUMER PRODUCT SAFETY COMMISSION

Sierra Club, Alliance for Healthy Homes, National Center for Healthy Housing, and NRDC petition CPSC pursuant to the Administrative Procedures Act, 5 U.S.C. § 553(e) to:

1. Ban the use of toxins in air fresheners, and
2. Promulgate consumer product safety standards requiring that all air fresheners be labeled with the full list of ingredients present.

Ban Toxins in Air Fresheners

Petitioners request that the CPSC declare that air fresheners containing one or more of the chemicals present on the California Proposition 65 list of chemicals known to cause cancer and chemicals known to cause reproductive toxicity be declared banned hazardous substances, as defined by the Federal Hazardous Substances Act, 15 U.S.C. § 1261(q)(1) (“FHSA”). Furthermore, Petitioners request CPSC to promulgate regulations banning any air fresheners containing those Prop 65 chemicals. These chemicals are toxic substances, which have “the capacity to produce personal...illness to man through ingestion, inhalation, or absorption through any body surface.”²⁸

The chemicals that fall on the Prop 65 list have been identified to cause cancer or reproductive toxicity in humans by the state of California. Because air fresheners are household products explicitly intended to be released into the air and inhaled by the consumer, the proper and intended use will necessarily result in the continuous inhalation of any toxins present in the product. Inhalation of toxins give rise to many dangerous adverse human health effects. Therefore, public health can only be served adequately by preventing these known toxins from entering the household air and from being continuously inhaled. Any air freshener that contains and emits a known toxin into the household air must be declared to be banned hazardous substances and taken out of the channels of interstate commerce.

Promulgate a Labeling Rule

Petitioners request that the CPSC immediately promulgate a consumer product safety standard requiring air fresheners to be labeled to identify their full list of ingredients. A label identifying all the ingredients in an air freshener will alert the general public to all carcinogens and reproductive toxins that are present in the air freshener. Even after air fresheners containing Prop 65 chemicals are banned, a labeling rule requiring a full listing of ingredients will protect those people who have special sensitivities to allergens, which may not be reproductive toxins or carcinogens.

²⁸ FHSA § 1261(g).

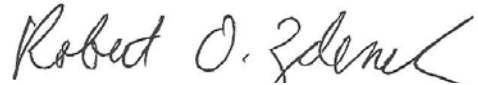
For more information or questions, please contact:

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Respectfully submitted,



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