

March 12, 2021

sent *via* electronic mail

Clerks' Office
California Air Resources Board
1001 I Street
Sacramento, California 95814
<https://www.arb.ca.gov/lispub/comm/bclist.php>

Subject: Comments on consumerproducts2021; Board Agenda Item # 21-2-1

Dear Board Members:

The Household and Commercial Products Association (HCPA) appreciates the opportunity to provide comments to the California Air Resources Board (CARB) on the proposed amendments to the state's comprehensive Consumer Products Regulation.¹

HCPA appreciates the open, transparent, and collaborative manner in which CARB staff conducted this complex rulemaking. Despite significant logistical challenges posed by the COVID-19 pandemic, CARB staff worked hard to ensure that all interested stakeholders had the opportunity to participate in the development of the proposed amendments.

HCPA member companies take seriously the environmental health and safety benefits of our products, and continuously seek to improve them. Therefore, HCPA member companies commit to expend the time and money to develop the new technologies necessary to reformulate their products to meet the aggressive and technology-forcing VOC standards that will be established by this proposed regulation.

HCPA's commitment to meet these new VOC standards and other regulatory provisions is consistent with our member companies' long-standing efforts to work constructively and cooperatively with CARB staff, environmental groups, and other stakeholders. During the past 31 years, HCPA member companies spent hundreds of millions of dollars in researching and developing reformulated products to help improve air quality in California while maintaining our industry's ability to supply effective products that consumers can rely upon to contribute positively to their health, safety, and quality of life.

¹ The text of the proposed amendments to the California Consumer Products Regulation is posted on the CARB website at: <https://ww3.arb.ca.gov/regact/2021/consumerproducts2021/appa.pdf>. The CARB "Staff Report: Initial Statement of Reasons (ISOR)," notice of the public hearing and other relevant documents are posted at: https://ww2.arb.ca.gov/rulemaking/2021/consumerproducts2021?utm_medium=email&utm_source=govdelivery

Statement of Interest

HCPA is the premier trade association representing companies that manufacture and sell \$180 billion annually of products used for cleaning, protecting, maintaining, and disinfecting homes and commercial environments. HCPA member companies employ 200,000 people in the U.S. whose products help consumers and workers to create cleaner, healthier, and more productive lives.

Comments

I. Comments on Proposed Definitions and VOC Standards for Product Categories

A. Aerosol Air Freshener

Air fresheners provide an efficient and cost-effective way to control and disrupt the cycle of malodors in indoor environments. Malodors are not just an annoyance – they can have significant adverse impacts on human health, behavior, and quality of life, as detailed in the review paper titled, “The Impact of Indoor Malodor: Historical Perspective, Modern Challenges, Negative Effects, and Approaches for Mitigation.”² This article was published in *Atmosphere*, an international peer-reviewed journal, as part of a special issue on indoor air quality (January 2020). In summary, this publication consolidates into one article the science-based evidence substantiating the fact that exposure to malodor is harmful to individuals’ health and wellness, and summarizes the technological approaches used by air freshening products to help mitigate such harmful malodors. As noted in this study:

Malodors propagate a variety of psychological, social and economic disturbances, many of which are preventable. As defined at the International Health Conference, ‘health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.’ Although crafted in 1946, this definition of health has remained in use by organizations such as the World Health Organization. Combating the sources and mitigating the impacts of malodors therefore represents an important public health undertaking.³

The effective control of malodors is particularly important today as people are spending an extraordinary amount of time indoors during the Coronavirus Pandemic. Many people are exposed to the same indoor air almost 100% of the time. In many cases, these homes are not suitable for such intensive use, with little interior space in relation to the number of people and, in many situations, without adequate systems for indoor air circulation. Moreover, residential

² Pamela Dalton, Ph.D., Anna-Sara Claeson, Ph.D. and Steve Horenziak, M.S., “The Impact of Indoor Malodor: Historical Perspective, Modern Challenges, Negative Effects, and Approaches for Mitigation,” *Atmosphere*, Vol. 11 Issue 2 (Jan. 2020); see <https://www.mdpi.com/2073-4433/11/2/126>.

³ *Id.* at p. 2, citing Card, A.J. Moving beyond the WHO definition of health: A new perspective for an aging world and the emerging era of value-based care: Redefining health. *World Med. Health Policy* 2017, 91, 127–137.

buildings, particularly in low-income communities, may be located in areas with poor outdoor air quality and consequently cannot achieve better ventilation and air circulation by merely opening the windows. Therefore, affordable approaches to mitigating indoor malodor, such as air freshening products, provide an effective option, when eliminating malodor is often not easily achievable.

1. Definitions – Section 94508(a)(6)(B)

CARB's proposal to redefine the aerosol air freshener product forms required a substantial amount of time and effort by both stakeholders and CARB staff to develop new definitions that more accurately reflect current product technology and use. HCPA member companies appreciate CARB staff's efforts to ensure that these new definitions provide the clarity that manufacturers require to formulate products to comply with the regulatory standards.

HCPA member companies support the definitions that CARB is proposing for each of the four new product categories:

- Manual Aerosol Air Freshener
- Automatic Aerosol Air Freshener
- Concentrated Aerosol Air Freshener
- Total Release Aerosol Air Freshener

Within the Automatic Aerosol Air Freshener category, HCPA also supports the proposed definition of, and the requirement for, the use of an "Automatic Air Freshening Dispenser."

2. VOC limits – Section 94509(a)

a. Manual Aerosol Air Freshener

HCPA member companies are committed to reformulating products to comply with the stringent proposed two tiers of VOC standards for this proposed new product category. The "Manual Aerosol Air Freshener" product category will include products that are currently regulated as "Single Phase Aerosol" (30 percent VOC standard by weight) and "Double Phase Aerosol" (20 percent VOC standard by weight) air freshener products.⁴ HCPA member companies are confronted with a significant technological challenge to reformulate these products to comply with the proposed two tiers of VOC standards:

- 10 percent VOC standard by weight by 2023; and
- Five percent VOC standard by weight by 2027.

Based on the CARB 2015 Consumer Products Survey data, ethanol constitutes a significant portion the VOC content for this product category.⁵ An adequate amount of ethanol is critical to

⁴ ISOR at p. III-35.

⁵ Data from the 2015 Consumer Product Survey data (CARB 2019) indicated that ethanol accounts for approximately 40 percent of the VOC content of Manual Aerosol Air Fresheners. Figure III-2: Manual Aerosol Air Freshener Speciation, ISOR at p. III-36. See also CARB, "Regulatory Strategies Work Group

create and retain particle breakup necessary to prevent droplets from falling to the floor and causing a potential slip hazard and/or causing degradation of furniture and floor finishes. Therefore, as an initial matter, it will be technologically challenging for manufacturers to reformulate effective and safe products to comply with the proposed 10 percent VOC standard by the January 1, 2023 compliance date.

Furthermore, manufacturers will be required to reformulate many products a second (and possibly a third) time to comply with the very stringent five percent VOC standard by weight that will take effect on January 1, 2027 with the current two percent fragrance exemption and then again by January 2031 with a 0.25 percent exemption for the VOC content of fragrance.⁶ Reformulating products to meet these proposed VOC standards will require manufacturers and fragrance houses to expend a considerable amount of time and money to perform the necessary research, development, engineering and consumer testing for ensuring compliance.

HCPA member companies are committed to producing products that meet these challenging two tiers of VOC standards, meet consumers' expectations, and are safe when used according to label instructions.

b. Automatic Aerosol Air Freshener

HCPA member companies support the proposal to maintain the VOC standard of 30 percent by weight for this product category, which is the currently applicable VOC limit for the "Single Phase Aerosol Air Freshener" category. To comply with this regulatory standard, these niche products⁷ must be used with an "Automatic Air Freshening Dispenser," a specific type of device that must meet very prescriptive requirements.⁸ Formulating products that meet the requirement to function in this unique device will significantly limit the number of products that can comply with the clear definition for this category of aerosol air fresheners.

c. Concentrated Aerosol Air Freshener

HCPA member companies support the proposed VOC standard for this niche product category.⁹ It will be technologically challenging to reformulate products to comply with the proposed VOC standard of 15 percent by weight by the January 1, 2023 compliance date, and the second tier VOC standard of 10 percent by weight by the January 1, 2027 compliance date. In addition to complying with stringent VOC limits, manufacturers must also comply with unique requirements

Webinar" (Oct 17, 2019) at Slide #13. See https://ww2.arb.ca.gov/sites/default/files/2020-04/Remediated_work_group_presentation_101719.pdf.

⁶ See proposed Section 94510(C)(4).

⁷ Based on the 2015 Consumer Product Survey data (CARB 2019), the "Automatic Aerosol Air Freshener" products accounted for less than three percent of the reported aerosol air freshener products. See ISOR at p. III-35.

⁸ See proposed 17 CCR § 94508(a)(6)(B)(1).

⁹ Based on the 2015 Consumer Product Survey data (CARB 2019), the "Concentrated Aerosol Air Freshener" products accounted for 0.05 percent for the reported aerosol air freshener products. See ISOR at p. III-37.

that a product: (1) be designed with a unique valve to ensure that the product dispenses no more than 185 microliters with each activation; and (2) is sold in aerosol containers of two ounces or less by weight. HCPA member companies commit to reformulate products to ensure that they comply with these unique and prescriptive requirements.

d. Total Release Aerosol Air Freshener

HCPA member companies support the proposed VOC standard for products in this niche subcategory.¹⁰ To comply with the proposed VOC standard of 25 percent by weight will be challenging since the product must also dispense all or most of the contents during a single application and be sold in containers of five ounces or less by weight. HCPA member companies commit to work to reformulate products to comply with these strict requirements.

3. General comment: empty aerosol air freshener containers are recyclable.

HCPA members respectfully comment on the statement made by CARB staff in the description of the Air Freshener Product category, which in pertinent part states that these products are "...packaged in a disposable aerosol container."¹¹ While it is true that products packaged in aerosol containers are not refillable, aerosol containers are typically made of steel or aluminum, both of which are recyclable. The California Department of Resources Recycling and Recovery (CalRecycle) states that "Aerosol containers are generally made of steel, which is easily recycled."¹²

In 2016, HCPA (formerly the Consumer Specialty Products Association), the Can Manufacturers Institute, the Aluminum Association, and the Steel Recycling Institute sponsored a study¹³ organized by the Sustainable Packaging Coalition, a project of GreenBlue, which found that, as pertains to California, approximately 87 percent of residents have access for recycling aerosol containers curbside and 28 percent have drop-off access for recycling.

B. Aerosol Crawling Bug Insecticide and Bed Bug Insecticide

The efficacy of aerosol crawling bug insecticide products is critically important since these

¹⁰ Based on the 2015 Consumer Product Survey data (CARB 2019), the "Total Release Aerosol Air Freshener" products accounted for 0.05 percent for the reported aerosol air freshener products. See ISOR at p. III-35.

¹¹ ISOR at p. III-33.

¹² "[Aerosol and Paint Containers](#)" CalRecycle (Jan. 9, 2020).

¹³ 2015-16 Centralized Study on Availability of Recycling is available at: <http://greenblueorg.s3.amazonaws.com/smm/wp-content/uploads/2017/06/SPCs-Centralized-Availability-of-Recycling-Study-3.pdf>

products kill or control pests of “significant public health importance”¹⁴ such as cockroaches, spiders, and scorpions, which can carry infectious diseases. In addition to complying with the applicable CARB VOC standard, these products must meet rigorous efficacy testing requirements established by the U.S. Environmental Protection Agency (EPA). Products with claims to kill or control pests of significant public health importance must provide at least 90 percent efficacy in laboratory trials before the products can be registered.¹⁵ This EPA registration is a prerequisite for a product to be registered by the California Department of Pesticide Regulation for sale or use in the State.

Developing the proposed VOC standards for the Aerosol Crawling Bug Insecticide and the Bed Bug Insecticide product categories required a significant amount of time, effort, and analysis of data by both CARB staff and stakeholders to fully address public health concerns.

1. Aerosol Crawling Bug Insecticide

HCPA member companies are committed to reformulating products to comply with the technology-forcing eight percent by weight VOC standard for this product category. While propellants constitute the majority of the VOCs in these products,¹⁶ these propellants are also solvents that aid in the delivery and the efficacy of the active pesticidal ingredient to control the target pest. Complying with the proposed eight percent by weight VOC standard would likely require product manufacturers to move away from using hydrocarbon propellants, which currently allows product formulators to precisely control the pressure in the aerosol container to achieve the desired safety, efficacy, and spray characteristics.

HCPA member companies do not agree with CARB staff’s stated strategies for meeting the proposed VOC standard. Reformulation will entail more than simply “...substituting VOC petroleum distillates with LVP-VOC petroleum distillates; using other LVP-VOC solvents; reducing the hydrocarbon propellant content; and substitution of VOC propellants with exempt or compressed gas propellants.”¹⁷

The aerosol delivery form is a complex system – both the formulation’s physical and chemical properties and container stability must be retested after any formulation modification. Further, altering the formulation can modify how the product sprays (*i.e.*, particle size distribution). More

¹⁴ U.S. EPA Pesticide Registration (PR Notice) Notice 2002-1. Section 28(d) of the Federal Insecticide Fungicide and Rodenticide Act [7 U.S.C. § 136w-3(d)], requires EPA, in coordination with the U.S. Department of Health and Human Services and the U.S. Department of Agriculture to identify pests of significant public health importance and, in coordination with the Public Health Service, to develop and implement programs to improve and facilitate the safe and necessary use of chemical, biological and other methods to combat and control such pests of public health importance. See <https://www.epa.gov/sites/production/files/2014-04/documents/pr2002-1.pdf>.

¹⁵ U.S. EPA, “Guidance on Efficacy Testing for Pesticides Targeting Certain Invertebrate Pests,” see <https://www.epa.gov/pesticide-registration/guidance-efficacy-testing-pesticides-targeting-certain-invertebrate-pests>.

¹⁶ See ISOR, “Figure III-15: Aerosol Crawling Bug Insecticide Speciation,” at p. III-66.

¹⁷ See ISOR at p. III-68.

importantly, particle size distribution can negatively impact efficacy, even if the active ingredient remains unchanged. The formulation is designed to deliver a narrow range of droplet sizes and changes would significantly alter the product functionality. Research has been performed on aerosol products showing that changes in droplet size, even small changes in the range of 14-30 microns, significantly changes the efficacy of an aerosol pesticide.¹⁸

Aerosol crawling bug insecticides need to deliver the product in a spray pattern and particle size with optimal range for safety and efficacy. Oil based products will have the tendency to create a smaller particle size with the higher pressure from the use of a compressed gas. With water-based products the effect of higher pressure from a compressed gas may be variable depending on formulation.

In addition, the use of non-VOC propellants, such as compressed gas, could raise the pressure in the product containers. This could have a negative effect on product safety. Higher aerosol container pressure will cause more breakup of the spray pattern creating smaller particles. This combination of smaller particles and greater pressure in the delivery could create a situation in which the particles would “bounce-back” towards the applicator (*i.e.*, the consumer).

Furthermore, the use of compressed gases or lowering the amount of hydrocarbon propellants may not produce a sufficient amount of dispersant energy to completely empty the contents of the container, causing the partially empty product container to be disposed in the household hazardous waste stream rather than being recycled.¹⁹ While this consideration is outside the scope of the Consumer Products Regulation, this could have a negative impact on California’s environment and manufacturers’ sustainability profiles.

HCPA member companies do not agree with the statement in the ISOR that, “Staff’s evaluation of the ‘Crawling Bug Insecticide’ (aerosol) product category shows that some complying products already exist.”²⁰ HCPA members believe that products reported at the eight percent by weight VOC standard in the 2015 survey may not have included pests of “significant public health importance,” or may be “minimum risk pesticides” (*i.e.*, FIFRA 25(b) products),²¹ which are exempt from EPA registration requirements, including EPA testing requirements for efficacy and

¹⁸ “Effect of different droplet size on the knockdown efficacy of directly sprayed insecticides,” Masaaki Subira, Yoshihiro Horibe, Hitoshi Kawadab and Masahiro Takagi, SCI (wileyonlinelibrary.com) DOI 10.1002/ps.2157 (May 11, 2011). See <http://www.tm.nagasaki-u.ac.jp/medical/PDF/Pest%20Manag%20Sci%2067%201115-1123.pdf>.

¹⁹ In pertinent part, the CalRecycle website states, “Aerosol containers are generally made of steel, which is easily recycled; however, full or partially-full aerosol containers cannot be placed at the curb because they are under pressure and may pose a hazard to solid waste workers and others. The best bet with aerosols is to completely use up the contents of the can, including the propellant. If this cannot be safely done, the product should be disposed at your local household hazardous waste (HHW) collection site or at a locally sponsored HHW event.” See <https://www.calrecycle.ca.gov/metals/paintcans>.

²⁰ ISOR at p. III-68. See also Table III-15 “Crawling Bug Insecticide (aerosol) Proposal” at p. III-68.

²¹ Under section 25(b) of FIFRA, certain pesticides products are considered to be “minimum risk pesticides” if the active ingredients in the pesticide product are listed in 40 CFR 152.25. See also [Title 3 California Code of Regulations Sections 6147-6148](#).

toxicity. Thus, HCPA members believe that the products listed in Table III-15 cannot be compared fairly with the reported products in the survey that comply with the current 15 percent by weight VOC standard.

Moreover, since EPA updated the efficacy testing requirements after the 2015 survey data was submitted, it is possible that the products cited by CARB staff as complying with the eight percent by weight VOC standard may not meet the current EPA requirement for efficacy data to support a “knockdown,” “quick kill” or “kills on contact” claim.²²

Notwithstanding the significant technological challenges discussed above, HCPA member companies commit to expend the time, money, and effort necessary to conduct the research and development needed to reformulate products to comply with the proposed eight percent by weight VOC standard by the proposed effective date.

HCPA member companies will maintain an ongoing dialogue with CARB staff to communicate progress in meeting this new regulatory standard while continuing to comply with EPA's current efficacy requirements for controlling pests of significant public health importance.

Finally, as detailed in Section III, “Comments on the Proposed 0.25 Percent Exemption for the VOC Content of Fragrance in Specified Product Categories” of these comments, HCPA respectfully requests that CARB include Aerosol Crawling Bug Insecticide as one of the product categories listed in Section 94510(c)(4) of the final regulation. This will provide product manufacturers the much needed flexibility to comply with the very stringent proposed eight percent by weight VOC standard by allowing an exemption of 0.25 percent of the VOC content of fragrance for these products.

2. Bed Bug Insecticide

HCPA member companies support the proposed definition²³ and VOC regulatory standards for this product category. HCPA member companies commend CARB staff's diligent effort in working with stakeholders to address the significant public health concerns related to bed bugs. The proposed definition of “Bed Bug Insecticide” precisely identifies the target insects by identifying the family, genus, and species of bed bugs, which effectively limits the crawling arthropods that can be included in this product category. Moreover, by maintaining the 15 percent by weight VOC standard for the aerosol form and the 20 percent by weight VOC standard for all (other) forms, CARB's proposal will ensure that manufacturers can continue to meet the EPA efficacy testing requirements needed to formulate effective products for controlling bed bugs.

II. Comments on the Proposed Sunset of the Two Percent Fragrance Exemption - Section 94510(c)(2)

HCPA members do not support the proposed sunset of the current two percent fragrance exemption which impacts almost all regulated products manufactured on or after January 1, 2031.

²² ISOR at p. III-68.

²³ See proposed Section 94508(a)(76)(A).

Fragrance is an important component of almost every consumer product: it encourages proper product use; covers base malodors; and creates a mechanism for product manufacturers to differentiate between brands and products. For the past 30 years, the current exemption that allows product formulators to include a *de minimis* level of fragrance in products²⁴ has provided much-needed flexibility to comply with CARB's increasingly stringent VOC regulatory standards to meet customers' expectations. Consequently, the proposal to sunset the two percent fragrance exemption will constitute a *de facto* reduction of the VOC standards for almost every product category included in the Consumer Products Regulation.

Manufacturers only use the necessary amount of fragrance ingredients required to cover the malodor of base active ingredients, to prevent over-use by consumers and to differentiate their brands and products. Moreover, CARB's own data provides irrefutable evidence that product manufacturers do not over-use the current fragrance exemption. The sunset of the two percent fragrance exemption is estimated to result in producing only 0.3 tons per day of additional VOC reductions towards meeting California's State Implementation Plan (SIP) commitment for 2031.²⁵

A. Proposed sunset of the two percent fragrance exemption will impose significant burdens on product manufacturers while achieving only minimal additional VOC reductions.

If the proposed Section 94510(c)(2) is adopted, the sunset of the two percent fragrance exemption will significantly alter the existing process for formulating and manufacturing consumer products. Manufacturers frequently produce a product that has a single base formulation but is manufactured with different fragrances to meet customer preferences. The fragrance ingredients that create these various scents have different levels of VOC and LVP-VOC content. Currently, manufacturers typically do not need to speciate the fragrance ingredients since the fragrance houses communicate that the supplied fragrance ingredients comply with the requirements of the current two percent exemption in Section 94510(c). However, if this exemption is eliminated, product manufacturers will require detailed speciation for the VOC and LVP-VOC content for each of the different fragrance compounds when formulating a product to determine whether each individually scented variant of that product complies with the applicable VOC limit.

Since California's consumer product VOC limits are so strict and technology-forcing, many manufacturers currently formulate their products to be at – or just below – the applicable regulatory limit. The proposed sunset of the two percent fragrance exemption will require manufacturers to expend extensive amounts of labor and capital resources to review compliant product formulations to ensure that these products will continue to meet applicable VOC limits without the currently allowable fragrance exemption. In many cases, manufacturers may be required to completely reformulate a large number of consumer products. And the fragrance industry may have to reformulate a huge number of fragrances, which could include extensive

²⁴ As explained in the CARB Staff's Technical Support Document for the Phase 1 Rulemaking for Consumer Products (August 1990), "This exemption was established to allow manufacturers a *de minimus* [sic] level of these substances in various products such that the products may be marketed in an appealing manner to consumers." See <https://ww3.arb.ca.gov/consprod/regact/ph1cptsd.pdf> at pp.6-7.

²⁵ ISOR at pp. ES-4 and I-20.

research and development to check base compatibility, consumer product testing and stability testing.

Furthermore, product manufacturers and fragrance houses need the narrowly-tailored fragrance exemption to provide a reasonable degree of flexibility so that they can quickly respond to unforeseen events (disruptions in supply chains, unavailability of essential raw materials) to make necessary changes to product formulations and fragrance ingredients. It is neither reasonable nor realistic to require manufacturers and/or fragrance houses to reassess product compliance every time ingredient adjustments are required in responding to unforeseen circumstances.

B. The proposed sunset of the two percent fragrance exemption will not “simplify compliance determinations.”

HCPA members do not agree with CARB’s statement that the proposal to sunset the current fragrance exemption will “simplify compliance determinations.”²⁶ Currently, CARB can buy and test a single variant of a product to determine compliance. However, if the VOC content of fragrance is required to be included in determining compliance, the Enforcement Division would have to purchase each differently-scented variant of a particular product and the Monitoring and Laboratory Division (MLD) would be required to include the speciation of fragrance ingredients contained in each differently-scented product as part of its determination of the total volatile material contained in that product. Because the VOC content of each fragrance may be different, there is a potential for the same product to be compliant with one scent and non-compliant using another scent. Moreover, due to the large number and complexity of fragrance ingredients that comprise a single fragrance mixture, MLD will still be required to contact product manufacturers to obtain information about the VOC content of fragrance compounds.

C. The proposed sunset of the two percent fragrance exemption is not needed to “encourage transparency.”

HCPA member companies take umbrage with the erroneous statement that “The Two Percent Fragrance Exemption enables consumer product manufacturers to ignore the properties of fragrance they purchase from third-party vendors...”²⁷ Manufacturers and fragrance houses carefully review and assess **all** ingredients used to formulate products to ensure compliance with applicable federal and state regulatory requirements. In addition, HCPA member companies go beyond the boundaries of regulatory compliance and are committed to providing consumers with understandable information about product ingredients and to formulating products using sustainable chemistry.

²⁶ ISOR at p. III-75.

²⁷ ISOR at p. II-30.

- D. If the proposed Section 94510(c)(2) is approved, HCPA requests confirmation that the following compliance calculation is accurate.

Under proposed Section 94510(c)(2), and in conjunction with the proposed revisions to Section 94510(d), HCPA respectfully requests confirmation of the fragrance exemption compliance calculation example below for products manufactured before January 1, 2031:

Product A is subject to a 50% VOC standard, it contains:

- 49% VOC in base formula
- 3% fragrance, which is 20% VOC and 80% LVP-VOC

Fragrance VOC exemption calculation:

$3\% \text{ (fragrance)} \times 20\% \text{ (VOC portion of fragrance)} = 0.6\% \text{ (fragrance VOC)}$

$49\% \text{ VOC (base formula)} + 0.6\% \text{ VOC (fragrance)} = 49.6\% \text{ VOC (total)}$

This product would be compliant with the 50% VOC standard and the current two percent fragrance exemption.

CARB staff's confirmation of the above-stated calculation will provide stakeholders with a clear understanding how to comply with proposed Section 94510(c)(2).

III. Comments on the Proposed 0.25 Percent Exemption for the VOC Content of Fragrance in Specified Product Categories

- A. "General Purpose Cleaner" (nonaerosol) and "General Purpose Degreaser" (nonaerosol) products

HCPA member companies support CARB's proposed Section 94510(c)(1), which will allow manufacturers to use up to 0.25% by weight of monoterpenes for "General Purpose Cleaner" (nonaerosol) and "General Purpose Degreaser" (nonaerosol) products as part of two percent fragrance exemption for products manufactured before January 1, 2031. HCPA appreciates this much-needed flexibility to comply with the very stringent VOC standards for these two product categories.

HCPA respectfully requests that CARB modify the date of this proposed provision to take effect immediately upon publication of the final rule. This will eliminate any potential uncertainty about compliance with applicable VOC standards for these two product categories during the time period between the date the final regulation is published and the January 1, 2023 effective date stated in the proposed amendment. HCPA recommends that the following change be included in text of Section 94510(c)(1) in the final regulation:

§ 94510. Exemptions

* * * *

(c) Except for Pressurized Gas Duster, the VOC limits specified in Section 94509(a) shall not apply to the following:

(1) For “General Purpose Cleaner” (nonaerosol) and “General Purpose Degreaser” (nonaerosol) products manufactured ~~between January 1, 2023, and December 31, 2030,~~ before January 1, 2031, fragrances up to a combined 2 percent by weight and monoterpenes up to a combined 0.25 percent by weight, not to exceed a combined total of 2 percent fragrances and monoterpenes by weight.

* * * *

HCPA member companies also support the proposed Section 94510(c)(3), which provides an exemption for fragrances and/or monoterpenes up to a combined 0.25 percent by weight for the “General Purpose Cleaner” (nonaerosol) and “General Purpose Degreaser” (nonaerosol) products that are manufactured on or after January 1, 2031.

B. HCPA respectfully requests that CARB add a definition for the term “monoterpenes” in the final regulation.

As currently drafted, the proposed amendments to sections 94510(c)(1) and (c)(3) use the term “monoterpenes” however, the proposed regulation does not communicate how CARB intends to define “monoterpenes.” A narrowly-defined definition is needed to provide the requisite clarity and to eliminate any uncertainty for regulated parties to determine whether their products comply with the amended provisions of sections 94510(c)(1) and (c)(3) and the applicable VOC standards.

HCPA respectfully requests that CARB add a new section 94509(s) in the final regulation to provide the following definition for “monoterpenes.”

94509. Standards for Consumer Products.

* * * *

(s) Requirements for Monoterpenes. The provisions relating to sections 94510(c)(1) and 94510(c)(3) apply to:

“Monoterpenes,” which means the following chemicals, as listed in the table below, used in General Purpose Cleaner (nonaerosol) and General Purpose Degreaser (nonaerosol) products.

Table 94509(s)

Specified Monoterpenes relating to sections 94510(c)(1) and 94510(c)(3)

Monoterpene	CAS Registry Number
d-limonene	CAS # 5989-27-5
l-limonene	CAS # 5989-54-8

dipentene (dl-limonene)	CAS # 138-86-3 / 7705-14-8
α -pinene	CAS # 80-56-8
α -Pinene (laevo isomer)	CAS # 7785-26-4
α -Pinene (dextro isomer)	CAS # 7785-70-8
β -pinene	CAS # 127-91-3
β -Pinene (laevo isomer)	CAS # 18172-67-3

This recommended definition is based on ongoing discussions between HCPA members and CARB staff beginning in April 2016 when CARB issued the compliance guidance document titled, "Guidance Pertaining to the Two Percent Fragrance Exemption and Limonene." (Hereinafter referred to as the "Guidance Document.")²⁸ HCPA member companies continue to support the definition of "specified monoterpenes" with the addition of the chemical compound "dipentene," which is a racemic mixture of the two stereospecific forms of d-limonene and l-limonene.

HCPA also strongly recommends that CARB include the American Chemical Society CAS Registry Numbers²⁹ for the specifically listed chemical compounds and their associated isomers. The CAS numbers will provide the necessary clarity for product manufacturers and fragrance houses to comply with the amended provisions of Sections 94510(c)(1) and 94510(c)(3). CAS numbers serve as an internationally observed substance identifier by scientists, industry, and regulatory agencies. Including the CAS numbers will remove any potential ambiguity by ensuring that the exemption applies only to these specified monoterpenes.

There is ample precedent for this request. Other California laws and regulations require that certain chemicals include CAS numbers. For example, the California Cleaning Products Right-to-Know Act (SB 258, Lara) requires that the manufacturer of a designated product sold in the state shall post on its Internet Website the name and CAS number of each intentionally added or nonfunctional ingredients.³⁰ And, the Cosmetic Fragrance and Flavor Ingredient Right to Know Act of 2020 (SB 312, Leyva) requires the CAS number be provided for each ingredient or allergen that is included on a designated list.³¹

HCPA member companies respectfully request that CARB staff conduct a meeting with industry stakeholders to discuss the definition for "monoterpenes" during the 15-day comment period.

HCPA also respectfully requests that upon publication of the final rule, CARB withdraw the Guidance Document since the issues addressed in this document will be incorporated in the final regulation.

²⁸ CARB, "Guidance Pertaining to the Two Percent Fragrance Exemption and Limonene for California's Regulation for Reducing Emissions from Consumer Products," (Apr. 19, 2016). See https://ww2.arb.ca.gov/sites/default/files/2020-04/Remediated_frag_exempt_guide.pdf

²⁹ A CAS Registry Number is a unique numeric identifier assigned to only one chemical substance. CAS numbers are managed and assigned by the American Chemical Society's Chemical Abstracts Service and are universally recognized and used to provide a unique, unmistakable identifier for chemical substances.

³⁰ Cal. Health & Safety Code § 108954.5(a)(3).

³¹ Cal. Health & Safety Code § 111792.6(b)(1)(D).

C. “Air Freshener,” “Disinfectant,” and “Sanitizer”

HCPA supports the proposed Section 94510(c)(4), which will provide a much-needed exemption for the VOC content of fragrance up to a combined level of 0.25% by weight for “Air Freshener,” “Disinfectant,” and “Sanitizer” products manufactured on or after January 1, 2031.

Manufacturers of air fresheners formulate these products for the purpose of masking odors and scenting the air. Therefore, fragrance is an essential ingredient of these products. Moreover, the use of fragrance ensures proper dosage, which is essential to avoid overuse of the products. This limited exemption for fragrance is needed for air fresheners to retain their efficacy and safety.

Manufacturers of disinfectants and sanitizers use the allowable amount of VOCs for the requisite amount of alcohol and propellant needed to comply with EPA efficacy testing requirements. Without some level of fragrance exemption, manufacturers would likely be required to re-test and revise their EPA Confidential Statement of formula for their product(s). HCPA members appreciate this exemption which is needed to address feasibility concerns and to eliminate the potential for unintended consequences in a “health benefit product.”³²

D. HCPA requests confirmation of the accuracy of the following calculations for the VOC content of fragrances and/or monoterpenes.

Under proposed Sections 94510(c)(3) and (c)(4), and in conjunction with the proposed revisions to Section 94510(d), HCPA respectfully requests confirmation of the examples below for calculating 0.25 percent of the VOC content of fragrances and/or monoterpenes for specified product categories manufactured on or after January 1, 2031:

Example 1 – Proposed Section 94510(c)(4)

A manual aerosol air freshener will be subject to a 5% VOC standard, it contains:

- 5% VOC in base formula
- 1% fragrance, which is 20% VOC and 80% LVP-VOC

Fragrance VOC exemption calculation:

1% (fragrance) x 20% (VOC portion of fragrance) = 0.2% (the VOC content of fragrance)

Fragrance VOC exemption total:

0.2% (total fragrance VOC) ≤ 0.25% (allowed fragrance VOC exemption)

This product would be compliant with the 5% VOC standard and the exemption for 0.25 percent of the VOC content of fragrance.

³² See Cal. Health & Safety Code § 41712(a)(2).

Example 2 (with monoterpenes) – Proposed Section 94510(c)(3)

A nonaerosol GPC is subject to a 0.5% VOC standard, it contains:

- 0.5% VOC in base formula
- 0.3% fragrance mixture
 - 0.1% fragrance, which is 20% VOC and 80% LVP-VOC
 - 0.2% monoterpene

Fragrance VOC exemption calculation:

0.1% (fragrance) x 20% (VOC portion of fragrance) = 0.02% (fragrance VOC)

Monoterpene VOC exemption (at 100% VOC):

0.2% monoterpene

Fragrance and monoterpene VOC exemption total:

0.02% (fragrance VOC exemption) + 0.2% (monoterpene VOC exemption) = 0.22% (total VOC exempted) ≤ 0.25% (total allowed fragrance and monoterpene VOC exemption)

This product would be compliant with the 0.5% VOC standard and the exemption for 0.25 percent of the VOC content of fragrances and/or monoterpenes.

E. CARB Enforcement Advisory Number 131 - Fragrance Exemptions

HCPA respectfully requests that CARB modify Enforcement Advisory Number 131³³ to include an updated explanation of how the CARB Enforcement Division will interpret and apply the proposed changes to sections 94510(c) and 94510(d).

F. Aerosol Crawling Bug Insecticide

HCPA respectfully requests that CARB provide an exemption for 0.25 percent of the VOC content of fragrances for the Aerosol Crawling Bug Insecticide products manufactured on or after January 1, 2031. Based upon the 2015 CARB Consumer and Commercial Product Survey data, the Crawling Bug Insecticide (aerosol) product category reported use of the 2 percent fragrance exemption at the currently applicable 15 percent by weight VOC standard.³⁴ The proposed eight percent by weight VOC standard constitutes a dramatic reduction from the current VOC limit.

Consequently, some level of fragrance will continue to be needed to ensure the application of proper dosage levels (*i.e.*, the fragrance provides olfactory feedback for gauging the amount of product applied). Fragrance is also needed to mask the strong base odor of the active ingredients. As a practical matter, if the product does not contain an adequate amount of fragrance, the active ingredients' lingering malodor may cause consumers to avoid using (or to

³³ Enforcement Advisory: 1996-07 Advisory #131 Fragrance Exemptions (July 1996).
See <https://ww2.arb.ca.gov/sites/default/files/classic/enf/advs/advs131.pdf>

³⁴ Appendix B: Utilization of the Two Percent Fragrance Exemption (CARB 2021) at p. B-7. See also "Regulatory Strategies Work Group Meeting (CARB, March 10, 2020) at Slide # 46.
See https://ww2.arb.ca.gov/sites/default/files/2020-03/Work%20Group%20Presentation%203-10-20_0.pdf.

use an inadequate dosage of) products that have been proven to be effective in killing and controlling disease-carrying insects when used according to label instructions.

Therefore, HCPA respectfully requests that CARB also include “Crawling Bug Insecticide” (aerosol) as one of the product categories listed in Section 94510(c)(4) of the final regulation. This will provide manufacturers with a small degree of flexibility in complying with the very stringent proposed eight percent by weight VOC standard while maintaining the performance, safety, and efficacy of this product category.

IV. Comments on Other Proposed Regulatory Provisions

A. Energized Electrical Cleaner – Proposed Sections 94508(a)(40) and 94512(f)

Energized electrical cleaners must be formulated with nonflammable chemicals because these products are used to clean electrical equipment while an electric current is running through it, or when a residual current exists. HCPA members support the proposed revisions to the definition because it provides the necessary clarity for products included -- and excluded -- in this product category. HCPA also supports the proposed requirement for an “Automotive Parts and Accessories Store” to retain current routinely generated sales records for a period of at least five years.

B. Definition and VOC Standard for Plastic Pipe Adhesive – Proposed Sections 94508(a)(1)(A)(2)(f) and 94509(a)

HCPA members are neutral on the proposal to create a new definition for the “Plastic Pipe Adhesive” category and to establish a VOC standard of 60 percent by weight for this product category.

C. Amend the Definition of “Multi-Purpose Solvent” to exclude denatured alcohol – proposed Section 94508(a)(89)(B)(7)

HCPA members are neutral on the proposal to amend the definition of “Multi-Purpose Solvent” to exclude denatured alcohol products used exclusively to maintain electrical equipment at public utilities.

D. Proposal to establish prohibitions set forth in Table 94509(m)(1)(B)

HCPA members are neutral on the proposal to prohibit the use of parachlorobenzotrifluoride, methylene chloride, perchloroethylene, and trichloroethylene for the following product categories that are manufactured on or after January 1, 2023:

- Manual Aerosol Air Freshener
- Concentrated Aerosol Air Freshener
- Total Release Aerosol Air Freshener
- Crawling Bug Insecticide (aerosol)

F. Proposed amendment to Table 94509(n)(1)

HCPA members are neutral on the proposal to prohibit the use of any chemical compound that has a Global Warming Potential (GWP) value of 150 or greater for the following product categories that are manufactured on or after January 1, 2023:

- Manual Aerosol Air Freshener
- Concentrated Aerosol Air Freshener
- Total Release Aerosol Air Freshener
- Crawling Bug Insecticide (aerosol)

G. Restriction on innovative product exemption for products that claim to reduce VOC via combustion – proposed Section 94511(f)

HCPA members are neutral on this proposed restriction for granting an innovative product exemption (IPE) for this narrowly-defined type of product.

H. Innovative product exemption for the use of compressed gas propellants in specified product categories – proposed Sections 94511(c)-(e)

HCPA member companies support CARB's intention to create a pathway for exempting an aerosol product using compressed gas propellants from its VOC standard if certain criteria are met. However, as currently written, HCPA members are concerned that the proposed regulatory language does not provide enough clarity and workable direction necessary to achieve CARB's stated intention of encouraging the development of innovative products to reduce the use of GWP compounds.

While HPCA member companies recognize that the proposed provision applies to three specific personal care product categories that are included in the current rulemaking, this IPE provision should be available for future application to other product categories. Thus, it is imperative that the final regulatory language be straightforward, understandable, and clear to all parties involved.

Therefore, HCPA member companies respectfully request that CARB staff conduct a meeting with industry stakeholders to discuss this provision during the 15-day comment period. This requested meeting will address the technical details of this IPE provision and other alternate proposals, including the option for some type of reactivity provision as detailed in the comments filed on March 5, 2021, by the National Aerosol Association. Reactivity is sound science, as evidenced by the fact that aerosol coatings have been subject to CARB's reactivity-based standards since 2002. Thus the requested meeting will ensure that the final regulatory provision will be workable for industry and better achieves CARB's stated intention of encouraging the development of innovative products for limiting the use of GWP compounds.

I. Currently approved IPEs for "Single Phase Air Freshener" - proposed Section 94511(l)(2)

HCPA member companies support the proposed provision because it clarifies that a currently approved IPE for a Single-phase Aerosol Air Freshener product subject to a 30% VOC limit will

continue to be approved and in effect for products that transition from “Single Phase Air Freshener” to “Automatic Aerosol Air Freshener” on January 1, 2023.

J. Adding compounds to the MIR Table of Values – Proposed Section 94700

HCPA member companies support the proposal to add diethyl carbonate, 1-chloro-3,3,3-trifluoropropene; HFO-1233zd and Alkane Mixed - Minimally 90% C13 and higher to the MIR Table of Values.

K. Proposed Amendments to Method 310

HCPA members are neutral on the proposed updates to Method 310.

V. Economic Impact Assessment

HCPA members generally concur that the economic impact assessment for this proposed regulation was conducted in a manner consistent with other CARB rulemakings. HCPA commends CARB staff’s efforts during this rulemaking process in contacting consumer product industry stakeholders in September 2020 to provide input on updated product ingredient costs for use in developing the estimated cost impacts of the proposed amendments.

However, industry has been impacted significantly by the outbreak of the COVID-19 Pandemic, which has disrupted supply chains, and the availability of essential product ingredients, causing prices to increase for some ingredients. Manufacturers, suppliers, and fragrance houses have been focused on making necessary modifications to product formulations. Consequently, HCPA member companies could not give the appropriate time and attention to properly assess the future costs of reformulating products to comply with the new or revised VOC standards and the other provisions of this proposed regulation.

A. Aerosol Air Fresheners Products

As stated previously in these comments, eliminating the source of malodor is often not achievable, particularly in low-income communities. Affordable approaches to mitigating indoor malodor, such as air freshening products, provide an effective option. Recent market data indicates that buying rates of air care products are highest in households with annual incomes less than \$20,000.³⁵ This may be due in part because lower-income households are disproportionately affected by environmental odors, odors arising from crowded conditions, and by economic limitations on their ability to deal with odor sources, such as those associated with sub-standard housing.³⁶ Therefore, HCPA would like to comment that any price increase due to the significant cost of reformulating air freshener products will most likely have a disproportional impact on low-income consumers.

³⁵ Nielsen Holdings Plc. Data Retrieved through a Paid Subscription on March 2019. For More Information about the Nielsen Homescan Database is available online: <https://catalog.data.gov/dataset/nielsen-homescan>.

³⁶ Dalton, Claeson and Horenziak, *supra*. at p. 9.

B. Aerosol Crawling Bug and Bed Bug Insecticide Products

As an initial matter, CARB staff assumes that manufacturers will not begin to incur costs for reformulating Aerosol Crawling Bug Insecticide products until 2028.³⁷ This timeframe is inadequate for reformulating these products to comply with the January 1, 2030,³⁸ compliance date set forth in Section 94509(a). This process will require approximately five to six years before a reformulated crawling bug insecticide can be sold or offered for sale in California as detailed below:

- 1 year for developing new formulation
- 1 year efficacy, physical chemistry, and toxicity testing
- 1 year (and possibly two years)³⁹ for storage stability testing
- 1 year for EPA to evaluate any new formulation (which can take longer if EPA requires additional information/tests), longer if inert ingredient registration is also required
- 1 year to for CDPR to register the product for sale and use in California

Therefore, HCPA member companies will likely begin work to reformulate these FIFRA-registered products in 2023. Consequently, CARB cost estimates in Table IX-1 should be revised to reflect costs beginning in 2023 and continuing through 2035.

Furthermore, CARB's total direct recurring and non-recurring costs of approximately \$10,000,000 for Aerosol Crawling Bug Insecticide⁴⁰ appear to be too low. HCPA member companies estimate the cost for reformulating the 66 products identified in the ISOR⁴¹ to comply with the proposed eight percent VOC standard by weight would range from approximately \$14,850,000 (*i.e.*, \$225,000 per product) on the low-end to approximately \$23,100,000 (*i.e.*, \$350,000 per product) on the high-end. In addition, CARB cost estimates do not include the costs of re-labeling and re-packaging Bed Bug Insecticides.

Finally, the above-stated HCPA estimated cost range does not include future increased costs of EPA reviewing and approving reformulated Aerosol Crawling Bug Insecticide products. The registration fees established under the Pesticide Registration Improvement Extension Act of 2018 (also referred to as "PRIA 4") will expire on September 30, 2023.⁴² HCPA and our member

³⁷ "Table IX-1: Total Direct Recurring and Non-Recurring Cost of Proposed Amendments," ISOR at p. IX-224.

³⁸ Pursuant to Section 94509(d), FIFRA-registered have one additional year to comply with applicable VOC standards.

³⁹ EPA requires one year of stability testing. [Product Properties Test Guidelines: OPPTS 830.6317 Storage Stability [EPA 712-C-02-026]: <https://www.regulations.gov/document?D=EPA-HQ-OPPT-2009-0151-0019> [see (b)(2)(ii)]. However, many companies perform two years of testing to ensure that the product will continue to perform until the contents in the can are completely used.

⁴⁰ ISOR at p. IX-224.

⁴¹ ISOR at p. IX-233.

⁴² Congress approved the Pesticide Registration Improvement Act (PRIA) in 2004, creating a service fee system for registering pesticide products and their ingredients. The goal of the fee system is to create a more predictable evaluation process for pesticide products and link the collection of individual fees with

companies have already begun preliminary talks with congressional committees of jurisdiction, along with other key stakeholders, on the parameters of the next reauthorization, which is likely to include increased fees for registering new product formulations or new active ingredients. Because the legislation has not yet been approved, it is impossible to know with certainty what additional costs will be incurred by pesticide registrants, but CARB should be aware that additional costs may result from Congress' effort to update and reauthorize the pesticide registration fee system under PRIA.

VI. Recommendation for CARB to Consider in a Future Rulemaking

Revise the Definition for the "Institutional Product" or "Industrial and Institutional (I&I) Product"

HCPA respectfully requests that CARB revise the current definition for the "Institutional Product" or "Industrial and Institutional (I&I) Product" category to more clearly define products that are subject to the Consumer Products Regulation.

HCPA member companies support CARB's authority to regulate consumer and commercial products at the statewide VOC standard. While it is abundantly clear that CARB's complex Consumer Products Regulation applies to "household products," there is some potential ambiguity as to whether products sold to industrial facilities are subject to statewide VOC standards. Therefore, HCPA believes that CARB should revise the current definition for the "Industrial and Institutional (I&I) Product" category to provide a clear "bright line" regulatory delineation between: (1) consumer and commercial product categories that are subject to these statewide VOC limits; and (2) industrial products that are used only in the manufacturing process, which are outside of the scope of CARB's comprehensive statewide regulation.

CARB Advisory Number 307 provides some clarity in determining whether "industrial" products are regulated by the stringent statewide VOC limit. In pertinent part, the Advisory states that the current regulatory definition for the term "Institutional Product" or Industrial and Institutional (I&I) Product" excludes "... products that are incorporated into or used exclusively in the manufacture or construction of the goods or commodities at the site of the establishment ...".⁴³ However, as a practical matter, it is often difficult for both CARB and product manufacturers to determine whether products sold to industrial facilities throughout the state fit into this narrowly-drawn exclusion.

To remove potential ambiguity about the applicability of CARB's statewide VOC standards to products that are sold to industrial facilities, HCPA respectfully recommends that CARB consider the following revision to the current definition of "Institutional Products" or "Institutional and Industrial (I&I) Products,"

specific decision review periods. These PRIA fees have been reauthorized four times, most recently by the Pesticide Registration Improvement Extension Act of 2018 ("PRIA 4").

⁴³ 17 CCR § 94508 (a)(77).

§ 94508. Definitions.

(a) For the purpose of this article, the following definitions apply:

* * * *

- (77) “Institutional Product” or “Industrial and Institutional (I&I) Product” means a consumer product that is designed for use in the maintenance or operation of an establishment that: (A) manufactures, transports, or sells goods or commodities, or provides services for profit; or (B) is engaged in the nonprofit promotion of a particular public, educational, or charitable cause. “Establishments” include, but are not limited to, government agencies, factories, schools, hospitals, sanitariums, prisons, restaurants, hotels, stores, automobile service and parts centers, health clubs, theaters, or transportation companies. “Institutional Product” does not include household products and products that are: ~~incorporated into or used exclusively in the manufacture or construction of the goods or commodities at the site of the establishment~~ (A) exclusively sold directly or through distributors to establishments which manufacture or construct goods or commodities; and (B) labeled exclusively for "use in the manufacturing process only."

This recommended revision is identical to the narrowly-tailored exemption provision in the current definition for the General Purpose Degreaser, Lubricant and Single Purpose Degreaser product categories.⁴⁴

HCPA believes that this revision will eliminate potential ambiguity as to the applicability of the CARB’s statewide regulatory standards. Moreover, HCPA believes that this revision will promote efforts by the CARB Staff to restrict the sale of unregulated products to consumers.

Conclusion

As a result of this open and transparent rulemaking process, CARB staff developed and proposed challenging new VOC and GWP limits that will provide significant emission reductions. The proposed new and revised VOC limits and related enforcement provisions present very serious and costly reformulating and marketing challenges. Notwithstanding these significant challenges, HCPA member companies believe that the proposed VOC standards may prove to be feasible in the time frames allowed for compliance. HCPA members commit to initiate action necessary to reformulate products to meet these new VOC standards with the understanding that CARB staff will address several issues in the 15-day notice period subsequent to Board’s adoption of this proposed regulation.

HCPA expresses our appreciation for CARB staff’s concerted efforts in working through the significant logistical challenges posed by the COVID-19 pandemic to ensure that all stakeholders

⁴⁴ 17 CCR §§ 94508 (a)(59)(C); (a)(82)(B); and (a)(123).

March 12, 2021

Page 22 of 22

had an opportunity to participate in the development of this complex proposed rulemaking process.

Please contact me if you have questions regarding any of the issues raised in HCPA's comments.

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