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Volatile Chemical Emissions from 134 Common Consumer Products

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Volatile Chemical Emissions from 134 Common Consumer Products

Emissions from everyday consumer products have been associated with adverse effects on air quality and health. This study investigates volatile organic compounds (VOCs) emitted from 134 common consumer products, both fragranced and fragrance-free, including those with claims of green. Product types include personal care products, air fresheners, cleaning supplies, laundry products, and sunscreens. Using GC/MS headspace analysis, this study found 1,538 VOC occurrences (individual ingredients), representing 338 VOC identities (different compounds), emitted from the 134 consumer products. Among the 1,538 VOCs, 517 VOCs are classified as potentially hazardous. The most common VOC emitted from the 104 fragranced products was limonene, which was absent in fragrance-free versions. Comparing the green and regular fragranced products, no significant difference was found between the most prevalent potentially hazardous VOCs. Among all volatile ingredients emitted, fewer than 4% were listed on product labels. This study provides extensive findings on volatile emissions from consumer products, which can improve awareness of potential exposures and effects on air quality and health.

Keywords: consumer products, volatile organic compounds, fragrance, cleaning products, air fresheners, emissions, ingredients

Introduction

Volatile organic compounds (VOCs) are a main category of pollutant associated with adverse effects on air quality and human health. An important source of VOC pollutants within indoor environments is fragranced consumer products, such as air fresheners, cleaning supplies, laundry detergents, and personal care products (Steinemann 2015, 2019 a,b). In addition to concerns for indoor air quality, fragranced products also generate pollutants that impair outdoor air quality (McDonald et al. 2018). Further, fragranced product use and exposure is widespread. For instance, according to recent surveys, over 98.5% of the population in the United States, Australia, United Kingdom, and Sweden are exposed to a variety of fragranced products at least once a week from their own use, others' use, or both (Steinemann 2019b).

However, ingredients in fragranced consumer products are largely undisclosed (Steinemann 2019b). No law in any country requires that consumer products (other than foods, drugs, and cosmetics) disclose all specific ingredients (Steinemann 2009). Further, the fragrance formulation in any product is exempt from full ingredient disclosure (Steinemann 2015, Lunny et al. 2017). Thus, chemical analysis of products can provide important and new information on product emissions and potential exposures.

Relatively few prior studies have investigated the range of VOCs emitted from different types of fragranced consumer products. Steinemann (2015) analyzed VOC emissions from 37 fragranced consumer products, including air fresheners, laundry products, cleaning supplies, and personal care products, both green and regular versions, as well as fragrance-free products. Uhde and Schulz (2015) analyzed VOC emissions from 14 air fresheners such as diffusers and evaporators, spray odorizers, and scented candles. Zarogianni et al. (2017)

tested fragrance ingredients in 14 detergents including green and regular versions. Nematollahi et al. (2018a) analyzed VOC emissions from 42 baby products, such as baby hair shampoos, body washes, lotions, and creams, both green and regular versions. Nematollahi et al. (2018b) analyzed VOC emissions from 24 essential oils, both natural and regular versions. Jo et al. (2008) analyzed VOCs from 26 air fresheners, and Kwon et al. (2007) and Kwon and Jo (2007) analyzed respectively 59 and 42 household products, such as cleaning supplies and air fresheners.

This present study analyzes VOC emissions from 134 common consumer products of five different types: personal care products, air fresheners, cleaning supplies, laundry products, and sunscreens. Product categories include fragranced and fragrance-free, and regular and green versions. The study pursued four main objectives: (1) to analyze VOC emissions from individual products and determine the most prevalent compounds among different product types and categories, (2) to ascertain the VOCs classified as potentially hazardous, (3) to compare emissions between green and regular versions, and (4) to assess differences between the VOCs emitted and the ingredients listed on product labels. This study is unique in the large number of fragranced products analyzed (more than 100), including both green and regular versions. Results can contribute to improved awareness of product emissions and exposures, and potential effects on air quality and health.

Materials and methods

Headspace GC/MS was used to analyze VOCs emitted from 134 consumer products (Table 1). The 134 products included 104 fragranced products, 15 sunscreens, and 15 fragrance-free products, in two categories: 68 regular and 66 green. The 104 fragranced products represented four types: personal care products (50), air fresheners (12), cleaning supplies

(22), and laundry products (20). The 15 fragrance-free products represented three types: personal care products (10), cleaning supply (1), and laundry products (4). The 15 sunscreens were considered separately because they are regulated differently than the other consumer products (Lunny et al. 2017). All products were purchased from stores in Australia, including groceries, pharmacies, and organic or natural products stores.

"Fragranced products" are identified in this study as products that contain "fragrance," "parfum," "perfume," "essential oils," or an aromatic scent. "Fragrance-free products" are identified as products with the claim of "fragrance-free," "scent free," or "no fragrance." "Green products" are identified as products with the claim of "green," "certified green," "organic," "certified organic," "natural," "no petrochemicals," "non-toxic," "plant-based," or "essential oils" for the entire product or specific ingredients. "Regular products" are the products not in the "green" category.

Headspace GC/MS analysis of the products was performed using a Shimadzu GC/MS equipped with a BPX-VOL capillary column. The volatile compound emissions from products were identified based on the mass spectral library of the National Institute of Standards and Technology NIST Version 2.0 (Stein 2008). The top 20 peaks for each sample were reported, even though chromatograms of some products showed more than 70 peaks. Additional details about the analytical method are described in Nematollahi et al. (2018a).

A regulatory analysis identified VOCs classified as (i) potentially hazardous under Australian regulations or (ii) carcinogenic under the World Health Organization. For (i), Safe Work Australia (SWA) contains a Hazardous Chemical Information System ("HCIS") with a database of chemicals and hazard classifications (SWA 2019). For (ii), the World Health Organization, International Agency for Research on Cancer (IARC) (WHO 2019), provides

classifications of chemicals according to potential carcinogenic risk. Note that this analysis does not determine whether products that contain these VOCs pose potential hazards when used. This analysis also does not imply that these compounds, either individually or in mixtures, are the only ones that may pose potential hazards.

Results and Discussion

A summary of VOCs emitted according to product type and category is provided in Table 2. The term "VOC occurrences" refers to the number of individual VOCs peaks detected by GC/MS, where each peak represents an ingredient in the product. The term "VOC identities" refers to the number of different VOCs, where each VOC may be present in one or more of the products. Complete data on VOC occurrences, identities, and prevalences, according to product types and categories, are presented in Supplementary Tables 1-18.

VOCs emitted and most prevalent compounds

Among the 104 fragranced products, the analysis found the following VOC occurrences and identities for each product type (Table 2): for 50 personal care products, 617 VOC occurrences representing 172 VOC identities; for 12 air fresheners, 222 VOC occurrences representing 105 VOC identities; for 22 cleaning supplies, 285 VOC occurrences representing 145 VOC identities; and for 20 laundry products, 330 VOC occurrences representing 130 VOC identities. Complete data on VOC identities and VOC occurrences for all fragranced products are provided, respectively, in Supplementary Tables 3-6 and 9-16.

Prevalent compounds were determined for different fragranced product types and categories (Table 3 and Supplementary Tables 3-6). Among the 50 personal care products, the most

prevalent VOCs (in at least 60% of products) were limonene and linalool. Among the 12 air fresheners, the most prevalent were ethanol, limonene, and alpha-pinene. Among the 22 cleaning supplies, the most prevalent was limonene. Among the 20 laundry products, the most prevalent were limonene, beta-trans-ocimene, eucalyptol, alpha-pinene, beta-myrcene, and acetaldehyde. Across all fragranced product types and categories, and all identified VOCs, the most commonly identified compound was limonene.

Among the 15 sunscreens, the analysis detected a total of 53 VOC occurrences representing 23 VOC identities (Table 2). For the 15 sunscreens, the most prevalent compound (in at least 60% of products) was acetaldehyde (Table 3). Among the 15 fragrance-free products, the analysis detected a total of 31 VOC occurrences representing 20 VOC identities (Table 2). For the 15 fragrance-free products, the most prevalent compound (in 40% of products) was ethanol (Table 3).

Potentially hazardous compounds

A regulatory analysis identified potentially hazardous compounds according to classifications by Safe Work Australia (SWA 2019).

For the VOCs emitted from all 134 products, 69 VOC identities are classified as potentially hazardous (Supplementary Table 19). The most prevalent of these VOCs (in at least four products) are presented in Table 4. Nearly all products (98%) emitted at least one VOC classified as potentially hazardous (Supplementary Tables 9-18), with the most prevalent being limonene (Table 4).

Collectively, among the 1,538 VOC occurrences emitted from the products, 517 VOC occurrences (34%) are classified as potentially hazardous (see Supplementary Tables 1 and 19). Among the 338 VOC identities emitted from the products, 69 VOC identities (20%) are classified as potentially hazardous (see Supplementary Tables 1 and 19).

For the VOCs emitted from the 104 fragranced products, 68 VOC identities are classified as potentially hazardous (Supplementary Tables 2 and 20). The most prevalent of these VOCs (in at least four products) are presented in Table 5. Nearly all fragranced products (98%) emitted at least one VOC classified as potentially hazardous (Supplementary Tables 9-16), with the most prevalent being limonene (Table 5).

Collectively, among the 1,454 VOC occurrences and 331 VOC identities emitted from the fragranced products, 458 VOC occurrences (32%) and 68 VOC identities (21%) are classified as potentially hazardous (see Supplementary Tables 2 and 20).

The regulatory analysis also investigated VOCs with classifications of potential carcinogenic risk according to the World Health Organization, IARC (WHO 2019). Among all VOCs emitted from all 134 products, 65 VOC occurrences, representing 10 VOC identities, are classified as Group 2B and 3 under the World Health Organisation (Table 6).

A primary difference between the fragranced and fragrance-free products is that terpenes (such as limonene, linalool, alpha-pinene, and beta-pinene) are present and prevalent in fragranced products but absent in fragrance-free products (Supplementary Tables 2 and 8). While some terpenes may lack classification as potentially hazardous, they can nonetheless react with ozone to generate hazardous pollutants, such as formaldehyde and acetaldehyde.

Comparison of VOCs emitted from regular and green products

Among the prevalent VOCs in fragranced products (Table 3), no significant difference was found in VOC occurrences between regular and green products (p=0.25, t-test). In addition, among the most prevalent potentially hazardous VOCs in fragranced products (Table 5), no significant difference was found in VOC occurrences between regular and green products (p=0.09, t-test). Further, among the most prevalent VOCs classified as potentially hazardous in all products (Table 4), approximately 75% of VOC identities are the same among regular and green products.

Listing of ingredients

Among the 1,538 VOC occurrences, 59 were listed on any product label. Thus, fewer than 4% of all volatile chemicals identified were listed on product labels. Further, among the 517 VOC occurrences classified as potentially hazardous, 47 were listed on any product label. Thus, fewer than 10% of all potentially hazardous volatile chemicals identified were listed on product labels.

Key results from this study are consistent with previous studies. First, in prior work that examined a full suite of VOC emissions from fragranced consumer products (e.g., Steinemann 2015, Kwon et al. 2007, Kwon and Jo 2007, Nematollahi et al. 2018a; Uhde and Schultz 2015), limonene was also the most commonly identified compound. Second, among VOCs emitted (occurrences) that are classified as potentially hazardous, this study found 34%, and previous studies (Steinemann 2015, Nematollahi 2018a, b) found 41%, 30%, and 21% respectively. Third, in comparisons of green and regular fragranced products, other studies (Steinemann 2015, Nematollahi 2018a, b) also found no significant difference

between the most prevalent potentially hazardous VOCs. Fourth, in comparisons of ingredients emitted with ingredients listed, other studies (e.g., Steinemann 2015, Nematollahi 2018a, b, Uhde and Schultz 2015) also found that fewer than 10% of volatile ingredients in fragranced consumer products were disclosed.

To note, this study focused on identifying the primary VOC emissions in the headspace analysis, even though reaction products and secondary pollutants could also be examined. In addition, this study focused on analyzing VOCs, even though other chemical classes such as semi-volatile or non-volatile organic compounds could also be emitted from the products. The approach of assessing and comparing VOC occurrences and prevalences is intended as a straightforward metric, rather than as an analysis of relative risk. Finally, this study focused on the identification of individual VOCs emitted from the products, and makes no claims about VOC exposures or product safety.

Conclusions

This study provides findings on the VOCs emitted by 134 common consumer products. The analysis found 1,538 VOC occurrences, with 517 VOC occurrences classified as potentially hazardous, emitted from the consumer products. Limonene was the most commonly emitted compound, found in 77% of fragranced products. Emissions of the most prevalent potentially hazardous VOCs from regular and green fragranced products were not significantly different. Fewer than 4% of all VOCs and fewer than 10% of potentially hazardous VOCs were listed on any product label. Results of this study can improve public awareness about emissions and exposures from common products in society.

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Table 1: Types of tested products

	Personal care products	Air fresheners	Cleaning supplies	Laundry products	Sunscreens	Fragrance-free products
Regular	25	6	11	10	11	5
Green	25	6	11	10	4	10
Total	50	12	22	20	15	15

Table 2: VOCs emitted from products compared with VOCs listed on product labels

		Emitted		Listed	
Type	Number of products	All VOCs	Potentially Hazardous VOCs	All VOCs	Potentially Hazardous VOCs
Regular personal care products	25	353 occurrences 118 identities	117 occurrences 25 identities	24 occurrences 8 identities	18 occurrences 5 identities
Green personal care products	25	263 occurrences 95 identities	82 occurrences 25 identities	20 occurrences 4 identities	14 occurrences 3 identities
Regular air fresheners	6	111 occurrences 69 identities	51 occurrences 23 identities	1 occurrences 1 identities	1 occurrences 1 identities
Green air fresheners	6	111 occurrences 60 identities	39 occurrences 13 identities	0 occurrences 0 identities	0 occurrences 0 identities
Regular cleaning supplies	11	143 occurrences 95 identities	43 occurrences 29 identities	0 occurrences 0 identities	0 occurrences 0 identities
Green cleaning supplies	11	142 occurrences 77 identities	38 occurrences 16 identities	1 occurrences 1 identities	1 occurrences 1 identities
Regular laundry products	10	167 occurrences 86 identities	47 occurrences 23 identities	0 occurrences 0 identities	0 occurrences 0 identities
Green laundry products	10	163 occurrences 73 identities	41 occurrences 21 identities	3 occurrences 2 identities	3 occurrences 2 identities
Sunscreens	15	53 occurrences 23 identities	38 occurrences 13 identities	8 occurrences 3 identities	8 occurrences 3 identities
Fragrance-free products	15	31 occurrences 20 identities	21 occurrences 10 identities	2 occurrences 1 identities	2 occurrences 1 identities

Table 3: Prevalent compounds emitted from the products

Compound	CAS #	Prevalence (# of products)		
		Total	Regular	Green
Personal care products (n=50)				
Limonene*	138-86-3	37	17	20
Linalool	78-70-6	31	22	9
Ethanol*	64-17-5	20	14	6
Benzyl acetate	140-11-4	18	16	2
beta-Pinene	127-91-3	17	5	12
Eucalyptol	470-82-6	17	4	13
Acetaldehyde*	75-07-0	16	4	12
beta-trans-Ocimene	3779-61-1	16	5	11
gamma-Terpinene	99-85-4	15	4	11
Air fresheners (n=12)				
Ethanol*	64-17-5	10	5	5
Limonene*	138-86-3	10	5	5
alpha-Pinene	80-56-8	7	2	5
beta-Myrcene	123-35-3	6	1	5
Linalool	78-70-6	6	3	3
2-Methyl-2-propanol*	75-65-0	5	3	2
Acetaldehyde*	75-07-0	4	1	3
Acetone*	67-64-1	4	1	3
beta-Pinene	127-91-3	4	2	2
Camphene	79-92-5	4	0	4
beta-Phellandrene	555-10-2	4	1	3
Ethyl acetate*	141-78-6	4	1	3
gamma-Terpinene	99-85-4	4	2	2
Butane*	106-97-8	4	4	0
Isopentane*	78-78-4	4	4	0
Pentane*	109-66-0	4	4	0
Methanol*	67-56-1	4	0	4
(E)-citral*	141-27-5	4	0	4
beta-Citral*	106-26-3	4	0	4
Methylcyclopentane	96-37-7	4	3	1

Cleaning supplies (n=22)

Limonene*	138-86-3	15	7	8
beta-trans-Ocimene	3779-61-1	11	4	7
beta-Myrcene	123-35-3	10	3	7
Ethanol*	64-17-5	9	2	7
Eucalyptol	470-82-6	9	6	3
gamma-Terpinene	99-85-4	8	3	5
Sabinene	3387-41-5	7	1	6
Terpinolene	586-62-9	7	4	3
Camphene	79-92-5	7	4	3

Laundry products (n=20)

Limonene*	138-86-3	18	9	9
beta-trans-Ocimene	3779-61-1	16	1	15
Eucalyptol	470-82-6	14	7	7
alpha-Pinene	80-56-8	13	7	6
beta-Myrcene	123-35-3	12	4	8
Acetaldehyde*	75-07-0	12	7	5
Camphene	79-92-5	9	5	4
Dihydromyrcenol	18479-58-8	9	8	1
Terpinolene	586-62-9	8	3	5
gamma-Terpinene	99-85-4	8	2	6
Ethanol*	64-17-5	7	4	3
beta-Phellandrene	555-10-2	6	1	5
4-tert-Butylcyclohexyl acetate	32210-23-4	6	6	0

Sunscreens (n=15)

Acetaldehyde*	75-07-0	9

Phenoxyethanol*	122-99-6	6
Isopropyl alcohol*	67-63-0	5
Fragrance-free products (n=15)		
Ethanol*	64-17-5	6

*Classified as potentially hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2019)

Table 4: Most prevalent compounds classified as potentially hazardous* among all 134 products

Compound	CAS #	Prevalence (# of products)		
		Total	Regular (n=68)	Green (n=66)
Limonene	138-86-3	82	40	42
Ethanol	64-17-5	56	27	29
Acetaldehyde	75-07-0	50	23	27
Ethyl acetate	141-78-6	25	12	13
Butane	106-97-8	22	19	3
Acetone	67-64-1	21	6	15
Benzyl alcohol	100-51-6	19	7	12
Isopropyl alcohol	67-63-0	18	12	6
Pentane	109-66-0	17	12	5
Methanol	67-56-1	17	9	8
Phenoxyethanol	122-99-6	14	9	5
Isopentane	78-78-4	12	12	0
Octamethylcyclotetrasiloxane	556-67-2	10	8	2
Isoamyl acetate	123-92-2	10	7	3
3-Methylhexane	589-34-4	9	9	0
1-Octanol	111-87-5	9	1	8
Heptane	142-82-5	8	8	0
2-Methyl-2-propanol	75-65-0	8	5	3
2-Methylhexane	591-76-4	7	7	0
Toluene	108-88-3	7	4	3
Cyclohexane	110-82-7	6	6	0
beta-Citral	106-26-3	6	1	5
(E)-citral	141-27-5	5	1	4
Ethyl formate	109-94-4	5	0	5
2-Butene	107-01-7	4	4	0
Carbon monoxide	630-08-0	4	4	0

Table 5: Most prevalent compounds classified as potentially hazardous* among 104 fragranced products

Compound	CAS #	Prevalence (# of products)		
		Total	Regular (n=52)	Green (n=52)
Limonene	138-86-3	80	38	42
Ethanol	64-17-5	46	25	21
Acetaldehyde	75-07-0	38	14	24
Ethyl acetate	141-78-6	22	9	13
Butane	106-97-8	20	18	2
Acetone	67-64-1	18	5	13
Methanol	67-56-1	16	8	8
Benzyl alcohol	100-51-6	15	5	10
Pentane	109-66-0	13	12	1
Isopentane	78-78-4	12	12	0
Isopropyl alcohol	67-63-0	12	8	4
Octamethylcyclotetrasiloxane	556-67-2	10	8	2
Isoamyl acetate	123-92-2	10	7	3
3-Methylhexane	589-34-4	9	8	1
Heptane	142-82-5	8	8	0
Phenoxyethanol	122-99-6	8	4	4
1-Octanol	111-87-5	8	1	7
2-Methylhexane	591-76-4	7	7	0
2-Methyl-2-propanol	75-65-0	7	5	2
Toluene	108-88-3	6	4	2
beta-Citral	106-26-3	6	1	5
Cyclohexane	110-82-7	5	5	0
2-Butene	107-01-7	4	4	0
Carbon monoxide	630-08-0	4	4	0

*Classified as potentially hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2019)

Table 6: Compounds with classifications of carcinogenic risk* among all 134 products

Compound	CAS #	Classification group*	Prevalence (# of products)		
			Total	Regular	Green
Acetaldehyde	75-07-0	2B	50	23	27
Isopropyl alcohol	67-63-0	3	18	12	6
Toluene	108-88-3	3	7	4	3
1,4-Dioxane	123-91-1	2B	2	1	1
Methyl isobutyl ketone	108-10-1	2B	2	0	2
1,1-dichloroethylene	75-35-4	2B	1	1	0
Amitrole (ISO)	61-82-5	3	1	1	0
Carbon tetrachloride	56-23-5	2B	2	1	1
Chloroform	67-66-3	2B	1	1	0
Chloromethane	74-87-3	3	1	0	1

* Group 2B: Possibly carcinogenic to humans, Group 3: Not classifiable as to its carcinogenicity to humans (WHO 2019).

List of all 20 supplementary tables

Supplementary Table 1: VOC identities and prevalences among all products (n=134)

Supplementary Table 2: VOC identities and prevalences among all fragranced products (n=104)

Supplementary Table 3: VOC identities and prevalences among all regular and green personal care products (n=50)

Supplementary Table 4: VOC identities and prevalences among all regular and green air fresheners (n=12)

Supplementary Table 5: VOC identities and prevalences among all regular and green cleaning supplies (n=22)

Supplementary Table 6: VOC identities and prevalences among all regular and green laundry products (n=20)

Supplementary Table 7: VOC identities and prevalences among all regular and green sunscreens (n=15)

Supplementary Table 8: VOC identities and prevalences among all regular and green fragrance-free products (n=15)

Supplementary Table 9: VOC occurrences among regular personal care products

Supplementary Table 10: VOC occurrences among green personal care products

Supplementary Table 11: VOC occurrences among regular air fresheners

Supplementary Table 12: VOC occurrences among green air fresheners

Supplementary Table 13: VOC occurrences among regular cleaning supplies

Supplementary Table 14: VOC occurrences among green cleaning supplies

Supplementary Table 15: VOC occurrences among regular laundry products

Supplementary Table 16: VOC occurrences among green laundry products

Supplementary Table 17: VOC occurrences among regular and green sunscreens

Supplementary Table 18: VOC occurrences among regular and green fragrance-free products

Supplementary Table 19: Potentially hazardous compounds among all 134 products

Supplementary Table 20: Potentially hazardous compounds among all 104 fragranced products

Supplementary Table 1: VOC identities and prevalences among all products (n=134)

Compound	CAS #	Prevalence (# of products)
Limonene*	138-86-3	82
Ethanol*	64-17-5	56
Acetaldehyde*	75-07-0	50
beta-trans-Ocimene	3779-61-1	49
Linalool	78-70-6	45
beta-Myrcene	123-35-3	42
Eucalyptol	470-82-6	42
gamma-Terpinene	99-85-4	35
beta-Pinene	127-91-3	32
alpha-Pinene	80-56-8	29
Dihydromyrcenol	18479-58-8	27
4-tert-Butylcyclohexyl acetate	32210-23-4	25
Ethyl acetate*	141-78-6	25
Benzyl acetate	140-11-4	22
Butane*	106-97-8	22
Terpinolene	586-62-9	22
Acetone*	67-64-1	21
Camphene	79-92-5	20
Benzyl alcohol*	100-51-6	19
beta-Phellandrene	555-10-2	18
Isopropyl alcohol*	67-63-0	18
Methanol*	67-56-1	17
Pentane*	109-66-0	17
alpha-Phellandrene	99-83-2	15
Hexyl acetate	142-92-7	15
Phenoxyethanol*	122-99-6	14
Sabinene	3387-41-5	14

Decamethylcyclopentasiloxane	541-02-6	12
Ethyl 2-methylbutyrate	7452-79-1	12
Isopentane*	78-78-4	12
2-tert-Butylcyclohexanol	13491-79-7	11
Linalyl anthranilate	7149-26-0	11
Octanal	124-13-0	11
6-Methyl-5-hepten-2-one	110-93-0	10
Isoamyl acetate*	123-92-2	10
Linalyl acetate	115-95-7	10
Octamethylcyclotetrasiloxane*	556-67-2	10
o-Cymene	527-84-4	10
Tetrahydrolinalool	57706-88-4	10
1-Octanol*	111-87-5	9
Ethyl 2-methylpentanoate	39255-32-8	9
Ethyl butyrate	105-54-4	9
2-Methyl-2-propanol*	75-65-0	8
2-Methylpentane*	107-83-5	8
Caryophyllene	87-44-5	8
Hexane*	110-54-3	8
Undecane	1120-21-4	8
(Z)-7-tetradecene	41446-60-0	7
1,4-Cineole	470-67-7	7
2-Carene	554-61-0	7
3-Methylpentane*	96-14-0	7
alpha-Terpineol	98-55-5	7
Methylcyclopentane	96-37-7	7
Toluene*	108-88-3	7
(−)-Camphor	464-48-2	6
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7	6
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1	6

beta-Citral*	106-26-3	6
Cyclohexane*	110-82-7	6
Terpinyl acetate	80-26-2	6
Tridecane	629-50-5	6
(E)-citral*	141-27-5	5
(Z)-beta-ocimene	3338-55-4	5
3-Carene	13466-78-9	5
3-Methylhexane*	589-34-4	5
4-Terpineol	562-74-3	5
6-Methyl-1,6-heptadiene	13643-06-6	5
Allyl heptanoate	142-19-8	5
Dodecane	112-40-3	5
Ethyl formate*	109-94-4	5
Hexamethyldisiloxane	107-46-0	5
Hexanal	66-25-1	5
m-Cymene	535-77-3	5
(+)-Camphor	464-49-3	4
(R)-(+)-β-Citronellol	1117-61-9	4
2-Butene*	107-01-7	4
4-Hexen-1-ol, acetate	72237-36-6	4
Carbon monoxide*	630-08-0	4
D,l-isobornyl acetate	92618-89-8	4
Decanal	112-31-2	4
Dl-menthyl acetate	16409-45-3	4
Menthone	10458-14-7	4
Methyl isopropyl ether	598-53-8	4
(1R)-(+)-alpha-Pinene	7785-70-8	3
1,1-Dimethylallyl alcohol	115-18-4	3
2,2-Dimethyloxetane	6245-99-4	3
2,4-Dimethylpentane*	108-08-7	3
2,6-Di-tert-butyl-4-methylphenol	128-37-0	3

2-Methylfuran	534-22-5	3
3-Ethyl-2-methyl-1,3-heptadiene	61142-35-6	3
4-tert-Butylcyclohexanol	98-52-2	3
alpha-Thujene	2867-05-2	3
cis-3,7-Dimethyl-2,6-octadien-1-ol	106-25-2	3
Cyclopropane, 1,1-dimethyl-2-(3-methyl-1,3-butadienyl)-	68998-21-0	3
D,l-Menthol	15356-70-4	3
Diethyl phthalate	84-66-2	3
Heptane*	142-82-5	3
Hexamethylcyclotrisiloxane	541-05-9	3
Methyl phenylcarbinyl acetate	93-92-5	3
Neryl acetate	141-12-8	3
Nonadecane	629-92-5	3
Nonylcyclopropane	74663-85-7	3
p-Cymene	99-87-6	3
Phenylethyl alcohol	60-12-8	3
Tetracarbonylnickel*	13463-39-3	3
(−)-Isopulegol	89-79-2	2
(E)-2-dodecene	7206-13-5	2
(E)-3-Tetradecene	41446-68-8	2
1,4-Dioxane*	123-91-1	2
1-Hexanol*	111-27-3	2
1-Pentanol*	71-41-0	2
2-(1,1-Dimethyl-2-propenyl)-1,1-dimethylcyclopropane	81051-15-2	2
2-(2-Hydroxypropoxy)-1-propanol	106-62-7	2
2-(4-tert-Butylbenzyl)propionaldehyde*	80-54-6	2
2,2,3,3,5,6,6-Heptamethylheptane	7225-67-4	2
2,2,4,4-Tetramethyloctane	62183-79-3	2
2,2,4,6,6-Pentamethylheptane	13475-82-6	2
2,2-Dimethylbutane*	75-83-2	2

2,3,4-Trimethylhexane	921-47-1	2
2-Methyl-1-butene	563-46-2	2
2-Methylhexane*	591-76-4	2
2-methylundecanal	110-41-8	2
2-Phenoxyethyl isobutyrate	103-60-6	2
3,5,5-Trimethylhexyl acetate	58430-94-7	2
3-Methoxy-3-methylbutanol	56539-66-3	2
3-Octanone	106-68-3	2
4-Carene	29050-33-7	2
4-Dodecene	2030-84-4	2
5-Methylheptan-3-one*	541-85-5	2
6-Ethyl-2-methyl-6-hepten-2-ol	18479-59-9	2
6-Methyltridecane	13287-21-3	2
Acetaldehyde diethyl acetal*	105-57-7	2
Allyl hexanoate	123-68-2	2
Benzaldehyde*	100-52-7	2
Carbon tetrachloride*	56-23-5	2
cis-6-Nonenyl acetate	76238-22-7	2
Cyclofenchene	488-97-1	2
Cyclopropane, 1-methyl-2-(1-methylethyl)-3-(1-methylethylidene)-, cis-	24524-52-5	2
D-carvone*	2244-16-8	2
Decyl trifluoroacetate	333-88-0	2
Dodecamethylcyclohexasiloxane	540-97-6	2
Ethinamate	126-52-3	2
Ethyl 2,3-dimethylbutanoate	54004-42-1	2
Ethyl linalool	10339-55-6	2
Ethyl methyl ether*	540-67-0	2
Isoamyl butylate	106-27-4	2
Methyl isobutyl ketone*	108-10-1	2
Methylcyclohexane*	108-87-2	2

Myrtanyl acetate	29021-36-1	2
n-Butyl ether*	142-96-1	2
p-Anisaldehyde	123-11-5	2
Piperonal	120-57-0	2
Prenyl acetate	1191-16-8	2
Propyl 2-methyl butyrate	37064-20-3	2
trans-2,2-Dimethyl-4-heptenal	91296-58-1	2
Trimethylsilanol	1066-40-6	2
Tris(trimethylsilyl) borate	4325-85-3	2
(−)-Camphene	5794-04-7	1
(+)-Camphene	5794-03-6	1
(±)-2-Methyl-1-butanol	137-32-6	1
(E)-2,5-Dimethyl-1,6-octadiene	68702-25-0	1
(E)-5-Tetradecene	41446-66-6	1
(E)-sabinene hydrate	17699-16-0	1
(Z)-linalool oxide (furanoid)	5989-33-3	1
(Z)-rose oxide	16409-43-1	1
(Z)-sabinene hydrate	15537-55-0	1
1-(1,2-Dimethyl-cyclopent-2-enyl)-ethanone	70987-82-5	1
1-(2-Methoxy-1-methylethoxy)propan-2-ol	20324-32-7	1
1-(2-Methoxypropoxy)propan-2-ol	13429-07-7	1
1,1-dichloroethylene*	75-35-4	1
1,1'-Oxydi-2-propanol	110-98-5	1
1,3,6-Trioxocane	1779-19-7	1
1,3-Dimethyl-2-(1-methylethyl)cyclopentene	61142-32-3	1
1-[2-(Allyloxy)-1-methylethoxy]-2-propanol	55956-25-7	1
1-Acetyl-2-methyl-1-cyclopentene	3168-90-9	1
1-Chloro-2-methylpropane	513-36-0	1
1-Decanol	112-30-1	1

1-Decene	872-05-9	1
1-Dodecene	112-41-4	1
1-Heptene	592-76-7	1
1-Isopropyl-2,3-dimethyl-1-cyclopentene	7712-73-4	1
1-Isopropyl-2-methyl-3-(1-methylethylidene)cyclopropane	24524-51-4	1
1-Methyl-2-(3-methylpentyl)cyclopropane	62238-07-7	1
1-Methyl-3-isopropylcyclopentane	53771-88-3	1
1-Methylcyclopentene	693-89-0	1
1-Octene	111-66-0	1
1-Octyl trifluoroacetate	2561-21-9	1
1-Phenylethanol	98-85-1	1
1-Propanol*	71-23-8	1
1-Undecanol	112-42-5	1
2,2,4,4,6,8,8-Heptamethylnonane	4390-04-9	1
2,2,4-Trimethylhexane	16747-26-5	1
2,2,6-Trimethyl-6-vinyltetrahydropyran	7392-19-0	1
2,2,6-Trimethyloctane	62016-28-8	1
2,2'-Oxydipropanol	108-61-2	1
2,3,3-Trimethylhexane	16747-28-7	1
2,3,4-Trimethyldecane	62238-15-7	1
2,3,4-Trimethylpentane*	565-75-3	1
2,3-Dimethyloctane	7146-60-3	1
2,3-Dimethylpentane	565-59-3	1
2,4,4-Trimethyl-2-pentene	107-40-4	1
2,4,4-Trimethylpent-1-ene*	107-39-1	1
2,4-Dimethyldodecane	6117-99-3	1
2,4-Dimethylhexane*	589-43-5	1
2,4-Dimethylpentan-3-one*	565-80-0	1
2,5-Dimethyldodecane	56292-65-0	1
2,5-Dimethylundecane	17301-22-3	1

2,6,10-Trimethyldodecane	3891-98-3	1
2,6,11-Trimethyldodecane	31295-56-4	1
2,6-Dimethyl-2-heptanol	13254-34-7	1
2,6-Dimethyl-2-octanol	18479-57-7	1
2,7-Dimethyl-1,7-octadiene	59840-10-7	1
2,8-Dimethyl-5-nonanol	19780-96-2	1
2-chlorotoluene*	95-49-8	1
2-Hexyloxyethanol*	112-25-4	1
2-Isopropenyltoluene	7399-49-7	1
2-Methoxyethyl acetate	110-49-6	1
2-Methyl-1-butanol	34713-94-5	1
2-Methyl-1-phenyl-2-propanol	100-86-7	1
2-Methyl-4-penten-2-ol	624-97-5	1
2-Methylbutyraldehyde	96-17-3	1
2-methylenehexanal	1070-66-2	1
2-Methylpropan-1-ol*	78-83-1	1
2-Octanone	111-13-7	1
2-Pentyl butyrate	60415-61-4	1
2-Pentylfuran	3777-69-3	1
2-Propylheptanol	10042-59-8	1
3-(Neopentyloxy)-2-butanol	74793-66-1	1
3,5-Dimethyloctane	15869-93-9	1
3,6-Dimethylundecane	17301-28-9	1
3,7-Dimethyl-7-octenal	141-26-4	1
3-[2-(2-Methoxyethoxy)ethoxy]-1-propene	13752-97-1	1
3′-Methylacetophenone	585-74-0	1
3-Ethyl-3-methyl-1-pentene	6196-60-7	1
3-Isopropenyl-5-methyl-1-cyclohexene	56816-08-1	1
3-Methyl-1-cyclopentene	1120-62-3	1
3-Methyl-1-hexene	3404-61-3	1
3-Methyldecane	13151-34-3	1

3-Methylene-1,7-octadiene	68695-13-6	1
3-Octanol	589-98-0	1
3-Octyl acetate	4864-61-3	1
3-Phenyl-2-butanone	769-59-5	1
4,4′-Isopropylidenebis(2,6-dimethylphenol)	5613-46-7	1
4,5,6,7-Tetrahydro-3,6-dimethylbenzofuran	494-90-6	1
4-Decyne	2384-86-3	1
5,5-Dimethylcyclopentadiene	4125-18-2	1
5-Butylnonane	17312-63-9	1
5-Isopropenyl-1-methyl-1-cyclohexene	13898-73-2	1
5-Methylundecane	1632-70-8	1
6-Methylundecane	17302-33-9	1
Acetic acid*	109-60-4	1
Acetylpentacarbonylmanganese	13963-91-2	1
Allyl alcohol*	107-18-6	1
alpha-Fenchene	471-84-1	1
alpha-Ionone	127-41-3	1
alpha-Isomethyl ionone	127-51-5	1
alpha-Terpinene	99-86-5	1
amitrole (ISO)*	61-82-5	1
Amyl butyrate	540-18-1	1
Artemesia triene	29548-02-5	1
Benzenepropanol	122-97-4	1
Benzyl propionate	122-63-4	1
beta-Ionone	79-77-6	1
Bornyl acetate	76-49-3	1
Butyl acetate*	123-86-4	1
Butyric acid, 2-tridecyl ester	55193-07-2	1
Carane	554-59-6	1
Chloroform*	67-66-3	1

Chloromethane*	74-87-3	1
cis-1,2-dimethylcyclopentane	1192-18-3	1
cis-3-Hexenyl acetate	3681-71-8	1
cis-4-tert-Butylcyclohexanol	937-05-3	1
Citronellyl acetate	150-84-5	1
Cyclododecane	294-62-2	1
Cyclopentane*	287-92-3	1
Decane	124-18-5	1
delta-Undecalactone	710-04-3	1
Dibutyl phthalate*	84-74-2	1
Dicyclopentenyl alcohol	37275-49-3	1
Dihydroterpineol	21129-27-1	1
Diisopropyl adipate	6938-94-9	1
Diisopropyl ether*	108-20-3	1
Dimethoxymethane	109-87-5	1
Diphenyl ether	101-84-8	1
Di-sec-butyl ether	6863-58-7	1
d-Verbenol	473-67-6	1
Ethyl isobutyrate	97-62-1	1
gamma-Nonanolactone	104-61-0	1
Hexyl methyl ether	4747-07-3	1
Hexyl propionate	2445-76-3	1
Hexyl salicylate	6259-76-3	1
Isoamyl alcohol	123-51-3	1
Isobutyl isobutyrate	97-85-8	1
Isobutyraldehyde	78-84-2	1
Isocitronellene	85006-04-8	1
Isomenthone	491-07-6	1
Isopulegol	7786-67-6	1
Isovaleraldehyde	590-86-3	1
Lavandulyl acetate	25905-14-0	1

l-Menthol	2216-51-5	1
Menthyl acetate	89-48-5	1
Methoxyacetic acid*	625-45-6	1
Methyl (S)-2-methylbutanoate	53955-81-0	1
Methyl 2-ethylhexanoate	816-19-3	1
Methyl acetate*	79-20-9	1
Methyl butyrate	623-42-7	1
Methyl hexanoate	106-70-7	1
Methyl laurate	111-82-0	1
Methyl propionate	554-12-1	1
Methyl valerate	624-24-8	1
n-Butylbenzenesulfonamide	3622-84-2	1
n-Chlorodimethylamine	1585-74-6	1
n-Octanal diethyl acetal	54889-48-4	1
Nonane	111-84-2	1
Nopyl acetate	128-51-8	1
Octanal dimethyl acetal	10022-28-3	1
Octane*	111-65-9	1
Octyl acetate	112-14-1	1
Octylcyclopropane	1472-09-9	1
p,α,α-Trimethylbenzyl alcohol	1197-01-9	1
Propanal*	123-38-6	1
Propylcyclopropane	2415-72-7	1
Propylene glycol	57-55-6	1
Propylene glycol butyl ether*	5131-66-8	1
p-tert-Butyl cyclohexyl-acetate cis	10411-92-4	1
Pulegone	89-82-7	1
trans-1-Methyl-1,2-cyclohexanediol	19534-08-8	1
trans-2-Pentene	646-04-8	1
trans-3-Hexenyl acetate	3681-82-1	1
trans-3-Isopropyl-6-methylcyclohexene	1124-26-1	1

trans-4-Tetradecene	41446-78-0	1
trans-7-Tetradecene	41446-63-3	1
trans-Rose oxide	876-18-6	1
Verdyl acetate	5413-60-5	1
Vinyl formate	692-45-5	1
α,α-Dimethylphenethyl acetate	151-05-3	1
α,α-Dimethylphenethyl butyrate	10094-34-5	1
γ-Decalactone	706-14-9	1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 2: VOC identities and prevalences among all fragranced products (n=104)

Compound	CAS #	Prevalence (# of products)
Limonene*	138-86-3	80
beta-trans-Ocimene	3779-61-1	49
Ethanol*	64-17-5	46
Linalool	78-70-6	45
beta-Myrcene	123-35-3	42
Eucalyptol	470-82-6	42
Acetaldehyde*	75-07-0	38
gamma-Terpinene	99-85-4	35
beta-Pinene	127-91-3	31
alpha-Pinene	80-56-8	29
Dihydromyrcenol	18479-58-8	27
4-tert-Butylcyclohexyl acetate	32210-23-4	25
Benzyl acetate	140-11-4	22
Ethyl acetate*	141-78-6	22
Terpinolene	586-62-9	22
Butane*	106-97-8	20
Camphene	79-92-5	20
Acetone*	67-64-1	18
beta-Phellandrene	555-10-2	18
Methanol*	67-56-1	16
alpha-Phellandrene	99-83-2	15
Benzyl alcohol*	100-51-6	15
Hexyl acetate	142-92-7	15
Sabinene	3387-41-5	14
Pentane*	109-66-0	13
Ethyl 2-methylbutyrate	7452-79-1	12
Isopentane*	78-78-4	12

Isopropyl alcohol*	67-63-0	12
2-tert-Butylcyclohexanol	13491-79-7	11
Linalyl anthranilate	7149-26-0	11
Octanal	124-13-0	11
6-Methyl-5-hepten-2-one	110-93-0	10
Decamethylcyclopentasiloxane	541-02-6	10
Isoamyl acetate*	123-92-2	10
Linalyl acetate	115-95-7	10
Octamethylcyclotetrasiloxane*	556-67-2	10
o-Cymene	527-84-4	10
Tetrahydrolinalool	57706-88-4	10
Ethyl 2-methylpentanoate	39255-32-8	9
1-Octanol*	111-87-5	8
2-Methylpentane*	107-83-5	8
Caryophyllene	87-44-5	8
Ethyl butyrate	105-54-4	8
Hexane*	110-54-3	8
Phenoxyethanol*	122-99-6	8
Undecane	1120-21-4	8
1,4-Cineole	470-67-7	7
2-Carene	554-61-0	7
2-Methyl-2-propanol*	75-65-0	7
3-Methylpentane*	96-14-0	7
alpha-Terpineol	98-55-5	7
Methylcyclopentane	96-37-7	7
(−)-Camphor	464-48-2	6
(Z)-7-tetradecene	41446-60-0	6
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7	6
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1	6
beta-Citral*	106-26-3	6

Terpinyl acetate	80-26-2	6
Toluene*	108-88-3	6
Tridecane	629-50-5	6
(E)-citral*	141-27-5	5
(Z)-beta-ocimene	3338-55-4	5
3-Carene	13466-78-9	5
4-Terpineol	562-74-3	5
6-Methyl-1,6-heptadiene	13643-06-6	5
Allyl heptanoate	142-19-8	5
Cyclohexane*	110-82-7	5
Dodecane	112-40-3	5
Ethyl formate*	109-94-4	5
m-Cymene	535-77-3	5
(+)-Camphor	464-49-3	4
(R)-(+)-β-Citronellol	1117-61-9	4
2-Butene*	107-01-7	4
3-Methylhexane*	589-34-4	4
4-Hexen-1-ol, acetate	72237-36-6	4
Carbon monoxide*	630-08-0	4
D,l-isobornyl acetate	92618-89-8	4
Decanal	112-31-2	4
Dl-menthyl acetate	16409-45-3	4
Menthone	10458-14-7	4
Methyl isopropyl ether	598-53-8	4
(1R)-(+)-alpha-Pinene	7785-70-8	3
1,1-Dimethylallyl alcohol	115-18-4	3
2,2-Dimethyloxetane	6245-99-4	3
2,4-Dimethylpentane*	108-08-7	3
2,6-Di-tert-butyl-4-methylphenol	128-37-0	3
2-Methylfuran	534-22-5	3
3-Ethyl-2-methyl-1,3-heptadiene	61142-35-6	3

4-tert-Butylcyclohexanol	98-52-2	3
alpha-Thujene	2867-05-2	3
cis-3,7-Dimethyl-2,6-octadien-1-ol	106-25-2	3
Cyclopropane, 1,1-dimethyl-2-(3-methyl-1,3-butadienyl)-	68998-21-0	3
D,l-Menthol	15356-70-4	3
Diethyl phthalate	84-66-2	3
Heptane*	142-82-5	3
Methyl phenylcarbinyl acetate	93-92-5	3
Neryl acetate	141-12-8	3
Nonadecane	629-92-5	3
Nonylcyclopropane	74663-85-7	3
p-Cymene	99-87-6	3
Phenylethyl alcohol	60-12-8	3
Tetracarbonylnickel*	13463-39-3	3
(−)-Isopulegol	89-79-2	2
(E)-2-dodecene	7206-13-5	2
1,4-Dioxane*	123-91-1	2
1-Hexanol*	111-27-3	2
1-Pentanol*	71-41-0	2
2-(1,1-Dimethyl-2-propenyl)-1,1-dimethylcyclopropane	81051-15-2	2
2-(2-Hydroxypropoxy)-1-propanol	106-62-7	2
2-(4-tert-Butylbenzyl)propionaldehyde*	80-54-6	2
2,2,3,3,5,6,6-Heptamethylheptane	7225-67-4	2
2,2,4,4-Tetramethyloctane	62183-79-3	2
2,2,4,6,6-Pentamethylheptane	13475-82-6	2
2,2-Dimethylbutane*	75-83-2	2
2,3,4-Trimethylhexane	921-47-1	2
2-Methyl-1-butene	563-46-2	2
2-Methylhexane*	591-76-4	2
2-methylundecanal	110-41-8	2

2-Phenoxyethyl isobutyrate	103-60-6	2
3,5,5-Trimethylhexyl acetate	58430-94-7	2
3-Octanone	106-68-3	2
4-Carene	29050-33-7	2
4-Dodecene	2030-84-4	2
5-Methylheptan-3-one*	541-85-5	2
6-Ethyl-2-methyl-6-hepten-2-ol	18479-59-9	2
6-Methyltridecane	13287-21-3	2
Acetaldehyde diethyl acetal*	105-57-7	2
Allyl hexanoate	123-68-2	2
Benzaldehyde*	100-52-7	2
cis-6-Nonenyl acetate	76238-22-7	2
Cyclofenchene	488-97-1	2
Cyclopropane, 1-methyl-2-(1-methylethyl)-3-(1-methylethylidene)-, cis-	24524-52-5	2
D-carvone*	2244-16-8	2
Decyl trifluoroacetate	333-88-0	2
Ethinamate	126-52-3	2
Ethyl 2,3-dimethylbutanoate	54004-42-1	2
Ethyl linalool	10339-55-6	2
Ethyl methyl ether*	540-67-0	2
Hexamethylcyclotrisiloxane	541-05-9	2
Hexanal	66-25-1	2
Isoamyl butylate	106-27-4	2
Methyl isobutyl ketone*	108-10-1	2
Methylcyclohexane*	108-87-2	2
Myrtanyl acetate	29021-36-1	2
n-Butyl ether*	142-96-1	2
p-Anisaldehyde	123-11-5	2
Piperonal	120-57-0	2
Prenyl acetate	1191-16-8	2

Propyl 2-methyl butyrate	37064-20-3	2
trans-2,2-Dimethyl-4-heptenal	91296-58-1	2
(−)-Camphene	5794-04-7	1
(+)-Camphene	5794-03-6	1
(±)-2-Methyl-1-butanol	137-32-6	1
(E)-2,5-Dimethyl-1,6-octadiene	68702-25-0	1
(E)-3-Tetradecene	41446-68-8	1
(E)-5-Tetradecene	41446-66-6	1
(E)-sabinene hydrate	17699-16-0	1
(Z)-linalool oxide (furanoid)	5989-33-3	1
(Z)-rose oxide	16409-43-1	1
(Z)-sabinene hydrate	15537-55-0	1
1-(1,2-Dimethyl-cyclopent-2-enyl)-ethanone	70987-82-5	1
1-(2-Methoxy-1-methylethoxy)propan-2-ol	20324-32-7	1
1-(2-Methoxypropoxy)propan-2-ol	13429-07-7	1
1,1-dichloroethylene*	75-35-4	1
1,1'-Oxydi-2-propanol	110-98-5	1
1,3,6-Trioxocane	1779-19-7	1
1,3-Dimethyl-2-(1-methylethyl)cyclopentene	61142-32-3	1
1-[2-(Allyloxy)-1-methylethoxy]-2-propanol	55956-25-7	1
1-Acetyl-2-methyl-1-cyclopentene	3168-90-9	1
1-Chloro-2-methylpropane	513-36-0	1
1-Decanol	112-30-1	1
1-Decene	872-05-9	1
1-Dodecene	112-41-4	1
1-Heptene	592-76-7	1
1-Isopropyl-2,3-dimethyl-1-cyclopentene	7712-73-4	1
1-Isopropyl-2-methyl-3-(1-methylethylidene)cyclopropane	24524-51-4	1

1-Methyl-2-(3-methylpentyl)cyclopropane	62238-07-7	1
1-Methyl-3-isopropylcyclopentane	53771-88-3	1
1-Methylcyclopentene	693-89-0	1
1-Octene	111-66-0	1
1-Octyl trifluoroacetate	2561-21-9	1
1-Phenylethanol	98-85-1	1
1-Propanol*	71-23-8	1
1-Undecanol	112-42-5	1
2,2,4,4,6,8,8-Heptamethylnonane	4390-04-9	1
2,2,4-Trimethylhexane	16747-26-5	1
2,2,6-Trimethyl-6-vinyltetrahydropyran	7392-19-0	1
2,2,6-Trimethyloctane	62016-28-8	1
2,2'-Oxydipropanol	108-61-2	1
2,3,3-Trimethylhexane	16747-28-7	1
2,3,4-Trimethyldecane	62238-15-7	1
2,3,4-Trimethylpentane*	565-75-3	1
2,3-Dimethyloctane	7146-60-3	1
2,3-Dimethylpentane	565-59-3	1
2,4,4-Trimethyl-2-pentene	107-40-4	1
2,4,4-Trimethylpent-1-ene*	107-39-1	1
2,4-Dimethyldodecane	6117-99-3	1
2,4-Dimethylhexane*	589-43-5	1
2,4-Dimethylpentan-3-one*	565-80-0	1
2,5-Dimethyldodecane	56292-65-0	1
2,5-Dimethylundecane	17301-22-3	1
2,6,10-Trimethyldodecane	3891-98-3	1
2,6,11-Trimethyldodecane	31295-56-4	1
2,6-Dimethyl-2-heptanol	13254-34-7	1
2,6-Dimethyl-2-octanol	18479-57-7	1
2,7-Dimethyl-1,7-octadiene	59840-10-7	1
2,8-Dimethyl-5-nonanol	19780-96-2	1

2-chlorotoluene*	95-49-8	1
2-Hexyloxyethanol*	112-25-4	1
2-Isopropenyltoluene	7399-49-7	1
2-Methoxyethyl acetate	110-49-6	1
2-Methyl-1-butanol	34713-94-5	1
2-Methyl-1-phenyl-2-propanol	100-86-7	1
2-Methyl-4-penten-2-ol	624-97-5	1
2-Methylbutyraldehyde	96-17-3	1
2-methylenehexanal	1070-66-2	1
2-Methylpropan-1-ol*	78-83-1	1
2-Octanone	111-13-7	1
2-Pentyl butyrate	60415-61-4	1
2-Pentylfuran	3777-69-3	1
3-(Neopentyloxy)-2-butanol	74793-66-1	1
3,5-Dimethyloctane	15869-93-9	1
3,6-Dimethylundecane	17301-28-9	1
3,7-Dimethyl-7-octenal	141-26-4	1
3-[2-(2-Methoxyethoxy)ethoxy]-1-propene	13752-97-1	1
3′-Methylacetophenone	585-74-0	1
3-Ethyl-3-methyl-1-pentene	6196-60-7	1
3-Isopropenyl-5-methyl-1-cyclohexene	56816-08-1	1
3-Methoxy-3-methylbutanol	56539-66-3	1
3-Methyl-1-cyclopentene	1120-62-3	1
3-Methyl-1-hexene	3404-61-3	1
3-Methyldecane	13151-34-3	1
3-Methylene-1,7-octadiene	68695-13-6	1
3-Octanol	589-98-0	1
3-Octyl acetate	4864-61-3	1
3-Phenyl-2-butanone	769-59-5	1
4,4′-Isopropylidenebis(2,6-dimethylphenol)	5613-46-7	1

4,5,6,7-Tetrahydro-3,6-dimethylbenzofuran	494-90-6	1
4-Decyne	2384-86-3	1
5,5-Dimethylcyclopentadiene	4125-18-2	1
5-Butylnonane	17312-63-9	1
5-Isopropenyl-1-methyl-1-cyclohexene	13898-73-2	1
5-Methylundecane	1632-70-8	1
6-Methylundecane	17302-33-9	1
Acetic acid*	109-60-4	1
Acetylpentacarbonylmanganese	13963-91-2	1
Allyl alcohol*	107-18-6	1
alpha-Fenchene	471-84-1	1
alpha-Ionone	127-41-3	1
alpha-Isomethyl ionone	127-51-5	1
alpha-Terpinene	99-86-5	1
amitrole (ISO)*	61-82-5	1
Amyl butyrate	540-18-1	1
Artemesia triene	29548-02-5	1
Benzenepropanol	122-97-4	1
Benzyl propionate	122-63-4	1
beta-Ionone	79-77-6	1
Bornyl acetate	76-49-3	1
Butyl acetate*	123-86-4	1
Butyric acid, 2-tridecyl ester	55193-07-2	1
Carane	554-59-6	1
Carbon tetrachloride*	56-23-5	1
Chloroform*	67-66-3	1
Chloromethane*	74-87-3	1
cis-1,2-dimethylcyclopentane	1192-18-3	1
cis-3-Hexenyl acetate	3681-71-8	1
cis-4-tert-Butylcyclohexanol	937-05-3	1
Citronellyl acetate	150-84-5	1

Cyclododecane	294-62-2	1
Cyclopentane*	287-92-3	1
Decane	124-18-5	1
delta-Undecalactone	710-04-3	1
Dibutyl phthalate*	84-74-2	1
Dicyclopentenyl alcohol	37275-49-3	1
Dihydroterpineol	21129-27-1	1
Diisopropyl ether*	108-20-3	1
Diphenyl ether	101-84-8	1
Di-sec-butyl ether	6863-58-7	1
Dodecamethylcyclohexasiloxane	540-97-6	1
d-Verbenol	473-67-6	1
Ethyl isobutyrate	97-62-1	1
gamma-Nonanolactone	104-61-0	1
Hexamethyldisiloxane	107-46-0	1
Hexyl methyl ether	4747-07-3	1
Hexyl propionate	2445-76-3	1
Hexyl salicylate	6259-76-3	1
Isoamyl alcohol	123-51-3	1
Isobutyl isobutyrate	97-85-8	1
Isobutyraldehyde	78-84-2	1
Isocitronellene	85006-04-8	1
Isomenthone	491-07-6	1
Isopulegol	7786-67-6	1
Isovaleraldehyde	590-86-3	1
Lavandulyl acetate	25905-14-0	1
l-Menthol	2216-51-5	1
Menthyl acetate	89-48-5	1
Methoxyacetic acid*	625-45-6	1
Methyl (S)-2-methylbutanoate	53955-81-0	1
Methyl 2-ethylhexanoate	816-19-3	1

Methyl acetate*	79-20-9	1
Methyl butyrate	623-42-7	1
Methyl hexanoate	106-70-7	1
Methyl laurate	111-82-0	1
Methyl propionate	554-12-1	1
Methyl valerate	624-24-8	1
n-Butylbenzenesulfonamide	3622-84-2	1
n-Chlorodimethylamine	1585-74-6	1
n-Octanal diethyl acetal	54889-48-4	1
Nopyl acetate	128-51-8	1
Octanal dimethyl acetal	10022-28-3	1
Octane*	111-65-9	1
Octyl acetate	112-14-1	1
Octylcyclopropane	1472-09-9	1
p,α,α-Trimethylbenzyl alcohol	1197-01-9	1
Propanal*	123-38-6	1
Propylene glycol	57-55-6	1
Propylene glycol butyl ether*	5131-66-8	1
p-tert-Butyl cyclohexyl-acetate cis	10411-92-4	1
Pulegone	89-82-7	1
trans-1-Methyl-1,2-cyclohexanediol	19534-08-8	1
trans-2-Pentene	646-04-8	1
trans-3-Hexenyl acetate	3681-82-1	1
trans-3-Isopropyl-6-methylcyclohexene	1124-26-1	1
trans-Rose oxide	876-18-6	1
Trimethylsilanol	1066-40-6	1
Tris(trimethylsilyl) borate	4325-85-3	1
Verdyl acetate	5413-60-5	1
Vinyl formate	692-45-5	1
α,α-Dimethylphenethyl acetate	151-05-3	1
α,α-Dimethylphenethyl butyrate	10094-34-5	1

γ-Decalactone	706-14-9	1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 3: VOC identities and prevalences among all regular and green personal care products (n=50)

Compound	CAS #	Prevalence (# of products)
Limonene*	138-86-3	37
Linalool	78-70-6	31
Ethanol*	64-17-5	20
Benzyl acetate	140-11-4	18
beta-Pinene	127-91-3	17
Eucalyptol	470-82-6	17
Acetaldehyde*	75-07-0	16
beta-trans-Ocimene	3779-61-1	16
gamma-Terpinene	99-85-4	15
Ethyl acetate*	141-78-6	14
Butane*	106-97-8	14
beta-Myrcene	123-35-3	14
4-tert-Butylcyclohexyl acetate	32210-23-4	13
Benzyl alcohol*	100-51-6	12
Dihydromyrcenol	18479-58-8	10
Ethyl 2-methylbutyrate	7452-79-1	9
Hexyl acetate	142-92-7	9
Decamethylcyclopentasiloxane	541-02-6	8
Linalyl anthranilate	7149-26-0	8
Octamethylcyclotetrasiloxane*	556-67-2	8
alpha-Pinene	80-56-8	8
Phenoxyethanol*	122-99-6	8
alpha-Phellandrene	99-83-2	8
Isoamyl acetate*	123-92-2	7
Pentane*	109-66-0	7
Camphene	79-92-5	7
beta-Phellandrene	555-10-2	7

Ethyl 2-methylpentanoate	39255-32-8	6
Acetone*	67-64-1	6
Isopentane*	78-78-4	6
Isopropyl alcohol*	67-63-0	5
Sabinene	3387-41-5	5
2-tert-Butylcyclohexanol	13491-79-7	5
Methanol*	67-56-1	5
Tetrahydrolinalool	57706-88-4	5
Cyclohexane*	110-82-7	4
Allyl heptanoate	142-19-8	4
Linalyl acetate	115-95-7	4
Ethyl butyrate	105-54-4	4
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7	4
Terpinolene	586-62-9	4
2,2-Dimethyloxetane	6245-99-4	3
Phenylethyl alcohol	60-12-8	3
2-Methylpentane*	107-83-5	3
Hexane*	110-54-3	3
(Z)-beta-ocimene	3338-55-4	3
Diethyl phthalate	84-66-2	3
4-Hexen-1-ol, acetate	72237-36-6	3
Undecane	1120-21-4	3
(Z)-7-tetradecene	41446-60-0	3
Toluene*	108-88-3	3
Nonadecane	629-92-5	3
4-Terpineol	562-74-3	3
2-Carene	554-61-0	3
o-Cymene	527-84-4	3
6-Ethyl-2-methyl-6-hepten-2-ol	18479-59-9	2
Tridecane	629-50-5	2
2-Methyl-2-propanol*	75-65-0	2

3-Methylpentane*	96-14-0	2
cis-6-Nonenyl acetate	76238-22-7	2
6-Methyl-1,6-heptadiene	13643-06-6	2
Nonylcyclopropane	74663-85-7	2
Ethyl linalool	10339-55-6	2
2-Phenoxyethyl isobutyrate	103-60-6	2
Methyl phenylcarbinyl acetate	93-92-5	2
Ethinamate	126-52-3	2
Prenyl acetate	1191-16-8	2
5-Methylheptan-3-one*	541-85-5	2
2,2,4,4-Tetramethyloctane	62183-79-3	2
Hexamethylcyclotrisiloxane	541-05-9	2
Dodecane	112-40-3	2
1,1-Dimethylallyl alcohol	115-18-4	2
Allyl hexanoate	123-68-2	2
Decyl trifluoroacetate	333-88-0	2
4-tert-Butylcyclohexanol	98-52-2	2
Benzaldehyde*	100-52-7	2
alpha-Terpineol	98-55-5	2
m-Cymene	535-77-3	2
Dl-menthyl acetate	16409-45-3	2
(R)-(+)-β-Citronellol	1117-61-9	2
cis-3,7-Dimethyl-2,6-octadien-1-ol	106-25-2	2
1-Octanol*	111-87-5	2
Piperonal	120-57-0	2
Ethyl formate*	109-94-4	2
Caryophyllene	87-44-5	2
2,3,4-Trimethylhexane	921-47-1	2
(−)-Camphor	464-48-2	2
alpha-Thujene	2867-05-2	2
1-Decene	872-05-9	1

2,6-Dimethyl-2-heptanol	13254-34-7	1
Cyclopentane*	287-92-3	1
p-Anisaldehyde	123-11-5	1
(Z)-sabinene hydrate	15537-55-0	1
1-Dodecene	112-41-4	1
2-Methyl-1-phenyl-2-propanol	100-86-7	1
1,1'-Oxydi-2-propanol	110-98-5	1
2-(2-Hydroxypropoxy)-1-propanol	106-62-7	1
2,2'-Oxydipropanol	108-61-2	1
Butyl acetate*	123-86-4	1
Isobutyl isobutyrate	97-85-8	1
2-(4-tert-Butylbenzyl)propionaldehyde*	80-54-6	1
2-Butene*	107-01-7	1
1-Chloro-2-methylpropane	513-36-0	1
Butyric acid, 2-tridecyl ester	55193-07-2	1
trans-1-Methyl-1,2-cyclohexanediol	19534-08-8	1
trans-2,2-Dimethyl-4-heptenal	91296-58-1	1
Dicyclopentenyl alcohol	37275-49-3	1
2-(1,1-Dimethyl-2-propenyl)-1,1-dimethylcyclopropane	81051-15-2	1
2,2,4,4,6,8,8-Heptamethylnonane	4390-04-9	1
2,6,10-Trimethyldodecane	3891-98-3	1
6-Methyltridecane	13287-21-3	1
2,2,4-Trimethylhexane	16747-26-5	1
2,2,3,3,5,6,6-Heptamethylheptane	7225-67-4	1
2,5-Dimethylundecane	17301-22-3	1
3-(Neopentyloxy)-2-butanol	74793-66-1	1
Methyl 2-ethylhexanoate	816-19-3	1
α,α-Dimethylphenethyl acetate	151-05-3	1
α,α-Dimethylphenethyl butyrate	10094-34-5	1
Hexyl salicylate	6259-76-3	1
D,l-isobornyl acetate	92618-89-8	1

gamma-Nonanolactone	104-61-0	1
Propyl 2-methyl butyrate	37064-20-3	1
cis-3-Hexenyl acetate	3681-71-8	1
Cyclododecane	294-62-2	1
Methyl isopropyl ether	598-53-8	1
cis-4-tert-Butylcyclohexanol	937-05-3	1
2,2,6-Trimethyl-6-vinyltetrahydropyran	7392-19-0	1
D,l-Menthol	15356-70-4	1
Isoamyl butylate	106-27-4	1
Menthone	10458-14-7	1
2-Pentyl butyrate	60415-61-4	1
trans-3-Hexenyl acetate	3681-82-1	1
Nopyl acetate	128-51-8	1
Menthyl acetate	89-48-5	1
Carane	554-59-6	1
3-Isopropenyl-5-methyl-1-cyclohexene	56816-08-1	1
Neryl acetate	141-12-8	1
p-Cymene	99-87-6	1
(+)-Camphor	464-49-3	1
Hexamethyldisiloxane	107-46-0	1
2,2,4,6,6-Pentamethylheptane	13475-82-6	1
2,8-Dimethyl-5-nonanol	19780-96-2	1
Propanal*	123-38-6	1
Tris(trimethylsilyl) borate	4325-85-3	1
Trimethylsilanol	1066-40-6	1
Chloromethane*	74-87-3	1
(1R)-(+)-alpha-Pinene	7785-70-8	1
2,4-Dimethylpentan-3-one*	565-80-0	1
Isovaleraldehyde	590-86-3	1
Methyl isobutyl ketone*	108-10-1	1
Cyclofenchene	488-97-1	1

Isomenthone	491-07-6	1
6-Methyl-5-hepten-2-one	110-93-0	1
(−)-Isopulegol	89-79-2	1
2-Methylfuran	534-22-5	1
Isoamyl alcohol	123-51-3	1
trans-2-Pentene	646-04-8	1
3-Methylhexane*	589-34-4	1
1-Heptene	592-76-7	1
1-Octene	111-66-0	1
Benzenepropanol	122-97-4	1
Dodecamethylcyclohexasiloxane	540-97-6	1
Hexanal	66-25-1	1
D-carvone*	2244-16-8	1
3-Octanone	106-68-3	1
Artemesia triene	29548-02-5	1
2-Methyl-1-butene	563-46-2	1
Hexyl methyl ether	4747-07-3	1
2,3,3-Trimethylhexane	16747-28-7	1
Methylcyclopentane	96-37-7	1
Isobutyraldehyde	78-84-2	1
2-Methylbutyraldehyde	96-17-3	1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 4: VOC identities and prevalences among all regular and green air fresheners (n=12)

Compound	CAS #	Prevalence (# of products)
Ethanol*	64-17-5	10
Limonene*	138-86-3	10
alpha-Pinene	80-56-8	7
beta-Myrcene	123-35-3	6
Linalool	78-70-6	6
beta-Pinene	127-91-3	6
2-Methyl-2-propanol*	75-65-0	5
beta-trans-Ocimene	3779-61-1	5
Acetaldehyde*	75-07-0	4
Acetone*	67-64-1	4
Camphene	79-92-5	4
beta-Phellandrene	555-10-2	4
Ethyl acetate*	141-78-6	4
gamma-Terpinene	99-85-4	4
Butane*	106-97-8	4
Isopentane*	78-78-4	4
Pentane*	109-66-0	4
Methanol*	67-56-1	4
(E)-citral*	141-27-5	4
beta-Citral*	106-26-3	4
Methylcyclopentane	96-37-7	4
Linalyl acetate	115-95-7	3
Terpinolene	586-62-9	3
Octanal	124-13-0	3
Dihydromyrcenol	18479-58-8	3
2-Methylpentane*	107-83-5	3
Hexane*	110-54-3	3

3-Methylpentane*	96-14-0	3
Eucalyptol	470-82-6	2
Caryophyllene	87-44-5	2
Linalyl anthranilate	7149-26-0	2
alpha-Terpineol	98-55-5	2
Benzyl acetate	140-11-4	2
2-tert-Butylcyclohexanol	13491-79-7	2
Ethyl butyrate	105-54-4	2
Methylcyclohexane*	108-87-2	2
3-Methylhexane*	589-34-4	2
2-Butene*	107-01-7	2
Ethyl 2-methylpentanoate	39255-32-8	2
Acetaldehyde diethyl acetal*	105-57-7	2
Ethyl formate*	109-94-4	2
6-Methyl-5-hepten-2-one	110-93-0	2
m-Cymene	535-77-3	2
Decanal	112-31-2	2
cis-3,7-Dimethyl-2,6-octadien-1-ol	106-25-2	1
1,1-Dimethylallyl alcohol	115-18-4	1
Bornyl acetate	76-49-3	1
Citronellyl acetate	150-84-5	1
Undecane	1120-21-4	1
Methyl (S)-2-methylbutanoate	53955-81-0	1
Dodecane	112-40-3	1
2-chlorotoluene*	95-49-8	1
Terpinyl acetate	80-26-2	1
(E)-sabinene hydrate	17699-16-0	1
Hexyl acetate	142-92-7	1
trans-2,2-Dimethyl-4-heptenal	91296-58-1	1
Isoamyl acetate*	123-92-2	1
Menthone	10458-14-7	1

D,l-Menthol	15356-70-4	1
Neryl acetate	141-12-8	1
Propylene glycol	57-55-6	1
Ethyl isobutyrate	97-62-1	1
Cyclohexane*	110-82-7	1
2,2-Dimethylbutane*	75-83-2	1
Heptane*	142-82-5	1
2-Methylhexane*	591-76-4	1
cis-1,2-dimethylcyclopentane	1192-18-3	1
Acetic acid*	109-60-4	1
2,4-Dimethylpentane*	108-08-7	1
Propyl 2-methyl butyrate	37064-20-3	1
o-Cymene	527-84-4	1
2-Methyl-1-butene	563-46-2	1
Sabinene	3387-41-5	1
n-Octanal diethyl acetal	54889-48-4	1
3-Methyl-1-cyclopentene	1120-62-3	1
Isopulegol	7786-67-6	1
(−)-Isopulegol	89-79-2	1
1-Methyl-3-isopropylcyclopentane	53771-88-3	1
1-Methylcyclopentene	693-89-0	1
3-Ethyl-2-methyl-1,3-heptadiene	61142-35-6	1
Dl-menthyl acetate	16409-45-3	1
2,4,4-Trimethylpent-1-ene*	107-39-1	1
Ethyl 2-methylbutyrate	7452-79-1	1
6-Methyl-1,6-heptadiene	13643-06-6	1
alpha-Terpinene	99-86-5	1
2,4,4-Trimethyl-2-pentene	107-40-4	1
3-Carene	13466-78-9	1
alpha-Phellandrene	99-83-2	1
3,5,5-Trimethylhexyl acetate	58430-94-7	1

1-Phenylethanol	98-85-1	1
2,6-Di-tert-butyl-4-methylphenol	128-37-0	1
γ-Decalactone	706-14-9	1
D,l-isobornyl acetate	92618-89-8	1
2,6-Di-tert-butyl-4-methylphenol	128-37-0	1
Toluene*	108-88-3	1
4-Decyne	2384-86-3	1
3-[2-(2-Methoxyethoxy)ethoxy]-1-propene	13752-97-1	1
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7	1
Octanal dimethyl acetal	10022-28-3	1
1-(2-Methoxy-1-methylethoxy)propan-2-ol	20324-32-7	1
4-Hexen-1-ol, acetate	72237-36-6	1
1-(2-Methoxypropoxy)propan-2-ol	13429-07-7	1
beta-Ionone	79-77-6	1
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1	1
alpha-Ionone	127-41-3	1

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Supplementary Table 5: VOC identities and prevalences among all regular and green cleaning supplies (n=22)

Compound	CAS #	Prevalence (# of products)
Limonene*	138-86-3	15
beta-trans-Ocimene	3779-61-1	12
beta-Myrcene	123-35-3	10
Ethanol*	64-17-5	9
Eucalyptol	470-82-6	9
gamma-Terpinene	99-85-4	8
Sabinene	3387-41-5	7
Terpinolene	586-62-9	7
Camphene	79-92-5	7
4-tert-Butylcyclohexyl acetate	32210-23-4	6
Acetaldehyde*	75-07-0	6
Dihydromyrcenol	18479-58-8	5
beta-Pinene	127-91-3	4
Octanal	124-13-0	4
Carbon monoxide*	630-08-0	4
Methanol*	67-56-1	4
6-Methyl-5-hepten-2-one	110-93-0	4
1,4-Cineole	470-67-7	4
o-Cymene	527-84-4	4
Ethyl acetate*	141-78-6	4
Undecane	1120-21-4	3
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1	3
Linalool	78-70-6	3
Tetracarbonylnickel*	13463-39-3	3
1-Octanol*	111-87-5	3
Tridecane	629-50-5	3

(−)-Camphor	464-48-2	3
Acetone*	67-64-1	3
6-Methyl-1,6-heptadiene	13643-06-6	2
Terpinyl acetate	80-26-2	2
Hexyl acetate	142-92-7	2
alpha-Phellandrene	99-83-2	2
1,4-Dioxane*	123-91-1	2
4-Dodecene	2030-84-4	2
(E)-2-dodecene	7206-13-5	2
Isopropyl alcohol*	67-63-0	2
Menthone	10458-14-7	2
4-Carene	29050-33-7	2
Cyclopropane, 1-methyl-2-(1-methylethyl)-3-(1-methylethylidene)-, cis-	24524-52-5	2
3-Carene	13466-78-9	2
1-Isopropyl-2-methyl-3-(1-methylethylidene)cyclopropane	24524-51-4	1
Ethyl butyrate	105-54-4	1
(Z)-beta-ocimene	3338-55-4	1
beta-Phellandrene	555-10-2	1
alpha-Pinene	80-56-8	1
D,l-Menthol	15356-70-4	1
Dl-menthyl acetate	16409-45-3	1
Dihydroterpineol	21129-27-1	1
4,5,6,7-Tetrahydro-3,6-dimethylbenzofuran	494-90-6	1
Caryophyllene	87-44-5	1
Pulegone	89-82-7	1
3-Octanol	589-98-0	1
(E)-2,5-Dimethyl-1,6-octadiene	68702-25-0	1
1-(1,2-Dimethyl-cyclopent-2-enyl)-ethanone	70987-82-5	1

1-[2-(Allyloxy)-1-methylethoxy]-2-propanol	55956-25-7	1
2-(2-Hydroxypropoxy)-1-propanol	106-62-7	1
1,3-Dimethyl-2-(1-methylethyl)cyclopentene	61142-32-3	1
2,7-Dimethyl-1,7-octadiene	59840-10-7	1
1-Isopropyl-2,3-dimethyl-1-cyclopentene	7712-73-4	1
(E)-citral*	141-27-5	1
trans-3-Isopropyl-6-methylcyclohexene	1124-26-1	1
beta-Citral*	106-26-3	1
Isocitronellene	85006-04-8	1
(Z)-linalool oxide (furanoid)	5989-33-3	1
1-Methyl-2-(3-methylpentyl)cyclopropane	62238-07-7	1
Octylcyclopropane	1472-09-9	1
1-Undecanol	112-42-5	1
Octyl acetate	112-14-1	1
Benzyl alcohol*	100-51-6	1
3-Methylpentane*	96-14-0	1
Methylcyclopentane	96-37-7	1
Hexane*	110-54-3	1
Octane*	111-65-9	1
2-Methylpentane*	107-83-5	1
Methyl hexanoate	106-70-7	1
Methyl valerate	624-24-8	1
Methyl laurate	111-82-0	1
Methyl butyrate	623-42-7	1
Hexyl propionate	2445-76-3	1
Methyl propionate	554-12-1	1
Allyl heptanoate	142-19-8	1
Methyl acetate*	79-20-9	1
3-Methoxy-3-methylbutanol	56539-66-3	1

L-menthol	2216-51-5	1
alpha-Fenchene	471-84-1	1
1-Decanol	112-30-1	1
2-Isopropenyltoluene	7399-49-7	1
4-Terpineol	562-74-3	1
5,5-Dimethylcyclopentadiene	4125-18-2	1
3′-Methylacetophenone	585-74-0	1
1-Acetyl-2-methyl-1-cyclopentene	3168-90-9	1
p,α,α-Trimethylbenzyl alcohol	1197-01-9	1
Methyl isobutyl ketone*	108-10-1	1
(E)-5-Tetradecene	41446-66-6	1
(E)-3-Tetradecene	41446-68-8	1
(Z)-7-tetradecene	41446-60-0	1
2-Methyl-4-penten-2-ol	624-97-5	1
3-Methyl-1-hexene	3404-61-3	1
Butane*	106-97-8	1
Isopentane*	78-78-4	1
5-Butylnonane	17312-63-9	1
6-Methylundecane	17302-33-9	1
2,3-Dimethyloctane	7146-60-3	1
2,4-Dimethyldodecane	6117-99-3	1
2,3,4-Trimethyldecane	62238-15-7	1
6-Methyltridecane	13287-21-3	1
2,6,11-Trimethyldodecane	31295-56-4	1
2,2,3,3,5,6,6-Heptamethylheptane	7225-67-4	1
5-Methylundecane	1632-70-8	1
2,5-Dimethyldodecane	56292-65-0	1
3,6-Dimethylundecane	17301-28-9	1
2,3,4-Trimethylpentane*	565-75-3	1
Pentane*	109-66-0	1
Dodecane	112-40-3	1

2,2,4,6,6-Pentamethylheptane	13475-82-6	1
2-Butene*	107-01-7	1
Propylene glycol butyl ether*	5131-66-8	1
D,l-isobornyl acetate	92618-89-8	1
Di-sec-butyl ether	6863-58-7	1
Decanal	112-31-2	1
2-methylundecanal	110-41-8	1
(R)-(+)-β-Citronellol	1117-61-9	1
3-Ethyl-3-methyl-1-pentene	6196-60-7	1
Acetylpentacarbonylmanganese	13963-91-2	1
2-Hexyloxyethanol*	112-25-4	1
3-Methylhexane*	589-34-4	1
2-Methylhexane*	591-76-4	1
2,3-Dimethylpentane	565-59-3	1
Heptane*	142-82-5	1
Isoamyl acetate*	123-92-2	1
3,5-Dimethyloctane	15869-93-9	1
p-Cymene	99-87-6	1
2-methylenehexanal	1070-66-2	1
2,2-Dimethylbutane*	75-83-2	1
2,2,6-Trimethyloctane	62016-28-8	1
2-Pentylfuran	3777-69-3	1
Hexanal	66-25-1	1
amitrole (ISO)*	61-82-5	1
Vinyl formate	692-45-5	1
Carbon tetrachloride*	56-23-5	1
Chloroform*	67-66-3	1
1,1-dichloroethylene*	75-35-4	1
Decane	124-18-5	1
N-Chlorodimethylamine	1585-74-6	1
Diphenyl ether	101-84-8	1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 6: VOC identities and prevalences among all regular and green laundry products (n=20)

Compound	CAS #	Prevalence (# of products)
Limonene*	138-86-3	18
beta-trans-Ocimene	3779-61-1	16
Eucalyptol	470-82-6	14
alpha-Pinene	80-56-8	13
beta-Myrcene	123-35-3	12
Acetaldehyde*	75-07-0	12
Camphene	79-92-5	9
Dihydromyrcenol	18479-58-8	9
Terpinolene	586-62-9	8
gamma-Terpinene	99-85-4	8
Ethanol*	64-17-5	7
beta-Phellandrene	555-10-2	6
4-tert-Butylcyclohexyl acetate	32210-23-4	6
Linalool	78-70-6	5
Acetone*	67-64-1	5
Isopropyl alcohol*	67-63-0	5
Tetrahydrolinalool	57706-88-4	5
alpha-Phellandrene	99-83-2	4
Octanal	124-13-0	4
2-Carene	554-61-0	4
2-tert-Butylcyclohexanol	13491-79-7	4
beta-Pinene	127-91-3	4
(+)-Camphor	464-49-3	3
Caryophyllene	87-44-5	3
alpha-Terpineol	98-55-5	3
1-Octanol*	111-87-5	3
Linalyl acetate	115-95-7	3

Hexyl acetate	142-92-7	3
Cyclopropane, 1,1-dimethyl-2-(3-methyl-1,3-butadienyl)-	68998-21-0	3
Terpinyl acetate	80-26-2	3
Methyl isopropyl ether	598-53-8	3
Methanol*	67-56-1	3
6-Methyl-5-hepten-2-one	110-93-0	3
1,4-Cineole	470-67-7	3
2-Methylfuran	534-22-5	2
3-Ethyl-2-methyl-1,3-heptadiene	61142-35-6	2
3-Carene	13466-78-9	2
Benzyl alcohol*	100-51-6	2
Ethyl methyl ether*	540-67-0	2
Ethyl 2,3-dimethylbutanoate	54004-42-1	2
Myrtanyl acetate	29021-36-1	2
1-Pentanol*	71-41-0	2
Ethyl 2-methylbutyrate	7452-79-1	2
2,4-Dimethylpentane*	108-08-7	2
Benzyl acetate	140-11-4	2
Toluene*	108-88-3	2
Octamethylcyclotetrasiloxane*	556-67-2	2
Decamethylcyclopentasiloxane	541-02-6	2
(1R)-(+)-alpha-Pinene	7785-70-8	2
o-Cymene	527-84-4	2
(Z)-7-tetradecene	41446-60-0	2
1-Hexanol*	111-27-3	2
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1	2
n-Butyl ether*	142-96-1	2
Heptane*	142-82-5	1
m-Cymene	535-77-3	1
Neryl acetate	141-12-8	1

Lavandulyl acetate	25905-14-0	1
4-Terpineol	562-74-3	1
Linalyl anthranilate	7149-26-0	1
Hexane*	110-54-3	1
Methylcyclopentane	96-37-7	1
3-Methylpentane*	96-14-0	1
2,4-Dimethylhexane*	589-43-5	1
2-Methylpentane*	107-83-5	1
Undecane	1120-21-4	1
Ethyl formate*	109-94-4	1
2-(1,1-Dimethyl-2-propenyl)-1,1-dimethylcyclopropane	81051-15-2	1
2-Methyl-1-butanol	34713-94-5	1
Ethyl 2-methylpentanoate	39255-32-8	1
2,6-Dimethyl-2-octanol	18479-57-7	1
(Z)-rose oxide	16409-43-1	1
Methyl phenylcarbinyl acetate	93-92-5	1
Benzyl propionate	122-63-4	1
(Z)-beta-ocimene	3338-55-4	1
Diisopropyl ether*	108-20-3	1
alpha-Isomethyl ionone	127-51-5	1
(−)-Camphor	464-48-2	1
p-Anisaldehyde	123-11-5	1
2-Methoxyethyl acetate	110-49-6	1
Butane*	106-97-8	1
Isopentane*	78-78-4	1
Pentane*	109-66-0	1
(R)-(+)-β-Citronellol	1117-61-9	1
3,5,5-Trimethylhexyl acetate	58430-94-7	1
p-tert-Butyl cyclohexyl-acetate cis	10411-92-4	1
4-tert-Butylcyclohexanol	98-52-2	1
trans-Rose oxide	876-18-6	1

2-(4-tert-Butylbenzyl)propionaldehyde*	80-54-6	1
alpha-Thujene	2867-05-2	1
Amyl butyrate	540-18-1	1
Ethyl butyrate	105-54-4	1
Isoamyl butylate	106-27-4	1
Isoamyl acetate*	123-92-2	1
2-Methylpropan-1-ol*	78-83-1	1
d-Verbenol	473-67-6	1
beta-Citral*	106-26-3	1
5-Isopropenyl-1-methyl-1-cyclohexene	13898-73-2	1
3-Octanone	106-68-3	1
3-Octyl acetate	4864-61-3	1
Dodecane	112-40-3	1
Nonylcyclopropane	74663-85-7	1
2,6-Di-tert-butyl-4-methylphenol	128-37-0	1
Methoxyacetic acid*	625-45-6	1
(±)-2-Methyl-1-butanol	137-32-6	1
Sabinene	3387-41-5	1
2-Octanone	111-13-7	1
1-Octyl trifluoroacetate	2561-21-9	1
1,3,6-Trioxocane	1779-19-7	1
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7	1
(+)-Camphene	5794-03-6	1
Decanal	112-31-2	1
Cyclofenchene	488-97-1	1
3,7-Dimethyl-7-octenal	141-26-4	1
p-Cymene	99-87-6	1
1-Propanol*	71-23-8	1
Dibutyl phthalate*	84-74-2	1
3-Phenyl-2-butanone	769-59-5	1

4,4′-Isopropylidenebis(2,6-dimethylphenol)	5613-46-7	1
Verdyl acetate	5413-60-5	1
N-butylbenzenesulfonamide	3622-84-2	1
Allyl alcohol*	107-18-6	1
D,l-isobornyl acetate	92618-89-8	1
Tridecane	629-50-5	1
(−)-Camphene	5794-04-7	1
3-Methylene-1,7-octadiene	68695-13-6	1
3-Methyldecane	13151-34-3	1
delta-Undecalactone	710-04-3	1
D-carvone*	2244-16-8	1
2-methylundecanal	110-41-8	1

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Supplementary Table 7: VOC identities and prevalences among all regular and green sunscreens (n=15)

Compound	CAS #	Prevalence (# of products)
Acetaldehyde*	75-07-0	9
Phenoxyethanol*	122-99-6	6
Isopropyl alcohol*	67-63-0	5
Ethanol*	64-17-5	4
Pentane*	109-66-0	4
Hexamethyldisiloxane	107-46-0	3
Hexanal	66-25-1	3
Decamethylcyclopentasiloxane	541-02-6	2
Butane*	106-97-8	2
Limonene*	138-86-3	2
Diisopropyl adipate	6938-94-9	1
Ethyl butyrate	105-54-4	1
beta-Pinene	127-91-3	1
Ethyl acetate*	141-78-6	1
Benzyl alcohol*	100-51-6	1
Tris(trimethylsilyl) borate	4325-85-3	1
3-Methylhexane*	589-34-4	1
Cyclohexane*	110-82-7	1
Dodecamethylcyclohexasiloxane	540-97-6	1
Hexamethylcyclotrisiloxane	541-05-9	1
Acetone*	67-64-1	1
Methanol*	67-56-1	1
Dimethoxymethane	109-87-5	1

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Supplementary Table 8: VOC identities and prevalences among all regular and green fragrance-free products (n=15)

Compound	CAS #	Prevalence (# of products)
Ethanol*	64-17-5	6
Acetaldehyde*	75-07-0	3
Benzyl alcohol*	100-51-6	3
Ethyl acetate*	141-78-6	2
Acetone*	67-64-1	2
1-Octanol*	111-87-5	1
3-Methoxy-3-methylbutanol	56539-66-3	1
2-Propylheptanol	10042-59-8	1
Nonane	111-84-2	1
Carbon tetrachloride*	56-23-5	1
(E)-3-Tetradecene	41446-68-8	1
trans-4-Tetradecene	41446-78-0	1
(Z)-7-tetradecene	41446-60-0	1
trans-7-Tetradecene	41446-63-3	1
Toluene*	108-88-3	1
Trimethylsilanol	1066-40-6	1
Hexamethyldisiloxane	107-46-0	1
Isopropyl alcohol*	67-63-0	1
Propylcyclopropane	2415-72-7	1
2-Methyl-2-propanol*	75-65-0	1

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Supplementary Table: VOC occurrences among regular personal care products (n=25)

1. PC#1 shampoo

Compounds	**CAS#**
Limonene*	138-86-3
Benzyl alcohol*	100-51-6
Ethyl 2-methylbutyrate	7452-79-1
beta-Pinene	127-91-3
Linalool	78-70-6
Isopropyl alcohol*	67-63-0
4-tert-Butylcyclohexyl acetate	32210-23-4
Dihydromyrcenol	18479-58-8
beta-trans-Ocimene	3779-61-1
Ethyl acetate*	141-78-6
Hexyl acetate	142-92-7
Isoamyl acetate*	123-92-2
Benzyl acetate	140-11-4

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2. PC#2 antiperspirant

Compounds	**CAS#**
Isopentane*	78-78-4
Butane*	106-97-8
Pentane*	109-66-0
Decamethylcyclopentasiloxane	541-02-6
2,2-Dimethyloxetane	6245-99-4
Ethanol*	64-17-5
Phenylethyl alcohol	60-12-8
Linalool	78-70-6
2,6-Dimethyl-2-heptanol	13254-34-7
Cyclopentane*	287-92-3
Tetrahydrolinalool	57706-88-4
Linalyl anthranilate	7149-26-0
p-Anisaldehyde	123-11-5
Eucalyptol	470-82-6
6-Ethyl-2-methyl-6-hepten-2-ol	18479-59-9

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3. PC#3 shampoo

Compounds	**CAS#**
Limonene*	138-86-3
Ethyl 2-methylpentanoate	39255-32-8
Octamethylcyclotetrasiloxane*	556-67-2
Ethyl 2-methylbutyrate	7452-79-1
Hexyl acetate	142-92-7
Butane*	106-97-8
beta-Pinene	127-91-3
Isoamyl acetate*	123-92-2
4-tert-Butylcyclohexyl acetate	32210-23-4
beta-trans-Ocimene	3779-61-1
Ethyl acetate*	141-78-6
Linalool	78-70-6
gamma-Terpinene	99-85-4
Cyclohexane*	110-82-7
Tridecane	629-50-5
beta-Myrcene	123-35-3
(Z)-sabinene hydrate	15537-55-0
Allyl heptanoate	142-19-8
Linalyl anthranilate	7149-26-0
Acetaldehyde*	75-07-0

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4. PC#4 body spray

Compounds	CAS#
Ethanol*	64-17-5
Isopentane*	78-78-4
Pentane*	109-66-0
Butane*	106-97-8
2-Methyl-2-propanol*	75-65-0
2,2-Dimethyloxetane	6245-99-4
2-Methylpentane*	107-83-5
Hexane*	110-54-3
3-Methylpentane*	96-14-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

5. PC#5 shower gel

Compounds	**CAS#**
Limonene*	138-86-3
beta-Pinene	127-91-3
alpha-Pinene	80-56-8
Linalool	78-70-6
cis-6-Nonenyl acetate	76238-22-7
Ethyl acetate*	141-78-6
Cyclohexane*	110-82-7
Linalyl acetate	115-95-7
6-Methyl-1,6-heptadiene	13643-06-6
gamma-Terpinene	99-85-4
Dihydromyrcenol	18479-58-8
Camphene	79-92-5
Nonylcyclopropane	74663-85-7
(Z)-beta-ocimene	3338-55-4
Ethyl 2-methylpentanoate	39255-32-8
Sabinene	3387-41-5
Ethyl linalool	10339-55-6
beta-trans-Ocimene	3779-61-1
1-Dodecene	112-41-4
Benzyl acetate	140-11-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

6. PC#6 hand cream

Compounds	**CAS#**
Limonene*	138-86-3
Diethyl phthalate	84-66-2
Ethanol*	64-17-5
Butane*	106-97-8
Phenoxyethanol*	122-99-6
Eucalyptol	470-82-6
4-tert-Butylcyclohexyl acetate	32210-23-4
2-Methyl-1-phenyl-2-propanol	100-86-7

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

7. PC#7 ointment

Compounds	CAS#
Butane*	106-97-8
Phenoxyethanol*	122-99-6
1,1'-Oxydi-2-propanol	110-98-5
Limonene*	138-86-3
2-(2-Hydroxypropoxy)-1-propanol	106-62-7
2,2'-Oxydipropanol	108-61-2

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

8. PC#8 conditioner

Compounds	CAS#
Limonene*	138-86-3
Dihydromyrcenol	18479-58-8
Ethyl 2-methylbutyrate	7452-79-1
4-tert-Butylcyclohexyl acetate	32210-23-4
Octamethylcyclotetrasiloxane*	556-67-2
Ethyl acetate*	141-78-6
Linalool	78-70-6
Benzyl acetate	140-11-4
Ethyl butyrate	105-54-4
Hexyl acetate	142-92-7
Pentane*	123-92-2
Butyl acetate*	123-86-4
2-tert-Butylcyclohexanol	13491-79-7
Isobutyl isobutyrate	97-85-8
Ethyl linalool	10339-55-6
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7
4-Hexen-1-ol, acetate	72237-36-6
Linalyl anthranilate	7149-26-0
2-(4-tert-Butylbenzyl)propionaldehyde*	80-54-6
2-Phenoxyethyl isobutyrate	103-60-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

9. PC#9 antiperspirant

Compounds	**CAS#**
Isopentane*	78-78-4
Butane*	106-97-8
Decamethylcyclopentasiloxane	541-02-6
Pentane*	109-66-0
2-Butene*	107-01-7
Ethanol*	64-17-5
Dihydromyrcenol	18479-58-8
Limonene*	138-86-3
2-Methyl-2-propanol*	75-65-0
Linalool	78-70-6
2-Methylpentane*	107-83-5
Hexane*	110-54-3
beta-Pinene	127-91-3
Phenylethyl alcohol	60-12-8
3-Methylpentane*	96-14-0
gamma-Terpinene	99-85-4
Isopentane*	78-78-4

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10. PC#10 moist cream

Compounds	**CAS#**
Butane*	106-97-8
Isopentane*	78-78-4
Decamethylcyclopentasiloxane	541-02-6
Pentane*	109-66-0
1-Chloro-2-methylpropane	513-36-0
Phenylethyl alcohol	60-12-8
Tetrahydrolinalool	57706-88-4
Benzyl acetate	140-11-4

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11. PC#11 antiperspirant

Compounds	**CAS#**
Isopentane*	78-78-4
Butane*	106-97-8
Decamethylcyclopentasiloxane	541-02-6
Pentane*	109-66-0
Methanol*	67-56-1
2,2-Dimethyloxetane	6245-99-4
Tetrahydrolinalool	57706-88-4
Limonene*	138-86-3
Butyric acid, 2-tridecyl ester	55193-07-2
Hexyl acetate	142-92-7
Benzyl acetate	140-11-4
trans-1-Methyl-1,2-cyclohexanediol	19534-08-8
trans-2,2-Dimethyl-4-heptenal	91296-58-1

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12. PC#12 shampoo

Compounds	**CAS#**
Hexyl acetate	142-92-7
Limonene*	138-86-3
4-tert-Butylcyclohexyl acetate	32210-23-4
Linalool	78-70-6
Ethyl 2-methylbutyrate	7452-79-1
Butane*	106-97-8
Dihydromyrcenol	18479-58-8
Benzyl acetate	140-11-4
Dicyclopentenyl alcohol	37275-49-3
Octamethylcyclotetrasiloxane*	556-67-2
Methyl phenylcarbinyl acetate	93-92-5
Ethinamate	126-52-3
Prenyl acetate	1191-16-8
gamma-Terpinene	99-85-4
5-Methylheptan-3-one*	541-85-5
2-(1,1-Dimethyl-2-propenyl)-1,1-dimethylcyclopropane	81051-15-2
Isoamyl acetate*	123-92-2

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13. PC#13 body lotion

Compounds	CAS#
2,2,4,4,6,8,8-Heptamethylnonane	4390-04-9
2,6,10-Trimethyldodecane	3891-98-3
Limonene*	138-86-3
Butane*	106-97-8
6-Methyltridecane	13287-21-3
2,2,4-Trimethylhexane	16747-26-5
2,2,4,4-Tetramethyloctane	62183-79-3
Acetaldehyde*	75-07-0
Linalool	78-70-6
2,2,3,3,5,6,6-Heptamethylheptane	7225-67-4
2,5-Dimethylundecane	17301-22-3
Benzyl acetate	140-11-4
6-Ethyl-2-methyl-6-hepten-2-ol	18479-59-9

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14. PC#14 ointment

Compounds	CAS#
Butane*	106-97-8

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15. PC#26 conditioner

Compounds	CAS#
D,L-Menthol	15356-70-4
Benzyl alcohol*	100-51-6
2-tert-Butylcyclohexanol	13491-79-7
Dihydromyrcenol	18479-58-8
Ethyl 2-methylbutyrate	7452-79-1
Isoamyl butylate	106-27-4
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7
Menthone	10458-14-7
1,1-Dimethylallyl alcohol	115-18-4
Prenyl acetate	1191-16-8
Allyl heptanoate	142-19-8
Ethyl 2-methylpentanoate	39255-32-8
Eucalyptol	470-82-6
Linalool	78-70-6
4-tert-Butylcyclohexyl acetate	32210-23-4
Phenoxyethanol*	122-99-6
Hexyl acetate	142-92-7
5-Methylheptan-3-one*	541-85-5
2-Pentyl butyrate	60415-61-4
trans-3-Hexenyl acetate	3681-82-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

16. PC#27 facial gel

Compounds	**CAS#**
Tetrahydrolinalool	57706-88-4
4-tert-Butylcyclohexanol	98-52-2
cis-6-Nonenyl acetate	76238-22-7
Acetaldehyde*	75-07-0
Nopyl acetate	128-51-8
4-tert-Butylcyclohexyl acetate	32210-23-4
Menthyl acetate	89-48-5
Dihydromyrcenol	18479-58-8
Dl-menthyl acetate	16409-45-3
Carane	554-59-6
4-Hexen-1-ol, acetate	72237-36-6
Undecane	1120-21-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

17. PC#17 hand cream

Compounds	**CAS#**
Butane*	106-97-8
Ethanol*	64-17-5
Benzyl acetate	140-11-4
Phenoxyethanol*	122-99-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

18. PC#18 shampoo

Compounds	**CAS#**
Octamethylcyclotetrasiloxane*	556-67-2
Limonene*	138-86-3
Hexamethylcyclotrisiloxane	541-05-9
Isopropyl alcohol*	67-63-0
Dodecane	112-40-3
Decamethylcyclopentasiloxane	541-02-6
Linalool	78-70-6
Methanol*	67-56-1
Benzyl acetate	140-11-4
Acetaldehyde*	75-07-0
Tridecane	629-50-5
4-tert-Butylcyclohexyl acetate	32210-23-4
Ethinamate	126-52-3

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19. PC#19 conditioner

Compounds	CAS#
Ethyl 2-methylbutyrate	7452-79-1
Benzyl alcohol*	100-51-6
Dihydromyrcenol	18479-58-8
Ethyl 2-methylpentanoate	39255-32-8
4-tert-Butylcyclohexyl acetate	32210-23-4
Allyl heptanoate	142-19-8
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7
α,α-Dimethylphenethyl acetate	151-05-3
4-Hexen-1-ol, acetate	72237-36-6
Limonene*	138-86-3
Ethyl butyrate	105-54-4
Benzyl acetate	140-11-4
Isopropyl alcohol*	67-63-0
1,1-Dimethylallyl alcohol	115-18-4
Allyl hexanoate	123-68-2
Hexyl acetate	142-92-7
2-tert-Butylcyclohexanol	13491-79-7
α,α-Dimethylphenethyl butyrate	10094-34-5
Hexyl salicylate	6259-76-3
Isoamyl acetate*	123-92-2

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20. PC#20 body wash

Compounds	CAS#
Limonene*	138-86-3
Benzyl acetate	140-11-4
Ethanol*	64-17-5
Linalool	78-70-6
Benzyl alcohol*	100-51-6
Acetone*	67-64-1
D,l-isobornyl acetate	92618-89-8
gamma-Nonanolactone	104-61-0
beta-trans-Ocimene	3779-61-1
Decyl trifluoroacetate	333-88-0
beta-Myrcene	123-35-3
1-Decene	872-05-9

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

21. PC#21 shampoo

Compounds	**CAS#**
Octamethylcyclotetrasiloxane*	556-67-2
Cyclohexane*	110-82-7
4-tert-Butylcyclohexyl acetate	32210-23-4
Limonene*	138-86-3
Propyl 2-methyl butyrate	37064-20-3
Ethyl 2-methylpentanoate	39255-32-8
Benzyl acetate	140-11-4
Ethyl acetate*	141-78-6
(Z)-7-tetradecene	41446-60-0
Isoamyl acetate*	123-92-2
Linalool	78-70-6
cis-3-Hexenyl acetate	3681-71-8
beta-Pinene	127-91-3
Cyclododecane	294-62-2
Ethyl 2-methylbutyrate	7452-79-1

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22. PC#22 conditioner

Compounds	**CAS#**
Isopropyl alcohol*	67-63-0
Limonene*	138-86-3
Linalool	78-70-6
Dihydromyrcenol	18479-58-8
Benzyl alcohol*	100-51-6
4-tert-Butylcyclohexyl acetate	32210-23-4
Ethyl 2-methylbutyrate	7452-79-1
Hexyl acetate	142-92-7
Ethyl butyrate	105-54-4
2-tert-Butylcyclohexanol	13491-79-7
4-tert-Butylcyclohexanol	98-52-2
Ethyl acetate*	141-78-6
Benzaldehyde*	100-52-7
alpha-Terpineol	98-55-5
Methyl isopropyl ether	598-53-8
Acetone*	67-64-1
Methyl phenylcarbinyl acetate	93-92-5
Benzyl acetate	140-11-4
cis-4-tert-Butylcyclohexanol	937-05-3
2,2,6-Trimethyl-6-vinyltetrahydropyran	7392-19-0

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23. PC#23 shampoo

Compounds	CAS#
Limonene*	138-86-3
Octamethylcyclotetrasiloxane*	556-67-2
Ethyl 2-methylbutyrate	7452-79-1
Hexyl acetate	142-92-7
Ethyl 2-methylpentanoate	39255-32-8
Linalool	78-70-6
Allyl heptanoate	142-19-8
Ethyl acetate*	141-78-6
4-tert-Butylcyclohexyl acetate	32210-23-4
Decamethylcyclopentasiloxane	541-02-6
Cyclohexane*	110-82-7
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7
Dihydromyrcenol	18479-58-8
2-Phenoxyethyl isobutyrate	103-60-6
Undecane	1120-21-4
Nonylcyclopropane	74663-85-7
Toluene*	108-88-3
Benzyl acetate	140-11-4
Allyl hexanoate	123-68-2
Nonadecane	629-92-5

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24. PC#24 liquid soap

Compounds	**CAS#**
Diethyl phthalate	84-66-2
Benzyl acetate	140-11-4
Methanol*	67-56-1
(Z)-7-tetradecene	41446-60-0
2-tert-Butylcyclohexanol	13491-79-7
Ethyl butyrate	105-54-4
Linalool	78-70-6
Nonadecane	629-92-5
Dodecane	112-40-3
Decyl trifluoroacetate	333-88-0

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25. PC#25 liquid soap

Compounds	**CAS#**
Limonene*	138-86-3
Eucalyptol	470-82-6
Benzyl acetate	140-11-4
Linalool	78-70-6
beta-trans-Ocimene	3779-61-1
Methanol*	67-56-1
beta-Myrcene	123-35-3
Toluene*	108-88-3
Nonadecane	629-92-5
(Z)-7-tetradecene	41446-60-0
m-Cymene	535-77-3
Linalyl anthranilate	7149-26-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 10: VOC occurrences among green personal care products (n=25)

1. PC#15 facial wash gel

Compounds	CAS#
Butane*	106-97-8
Undecane	1120-21-4
Acetaldehyde*	75-07-0

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2. PC#28 makeup remover

Compounds	**CAS#**
Benzyl alcohol*	100-51-6
Limonene*	138-86-3
Ethanol*	64-17-5

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3. PC#29 hand and body wash

Compounds	**CAS#**
Limonene*	138-86-3
beta-Myrcene	123-35-3
alpha-Pinene	80-56-8
gamma-Terpinene	99-85-4
Linalool	78-70-6
Ethanol*	64-17-5
(R)-(+)-β-Citronellol	1117-61-9
beta-trans-Ocimene	3779-61-1
cis-3,7-Dimethyl-2,6-octadien-1-ol	106-25-2
Acetaldehyde*	75-07-0
beta-Phellandrene	555-10-2
1-Octanol*	111-87-5
3-Isopropenyl-5-methyl-1-cyclohexene	56816-08-1
Neryl acetate	141-12-8
beta-trans-Ocimene	3779-61-1
alpha-Phellandrene	99-83-2
Piperonal	120-57-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

4. PC#30 shampoo [Ci]

Compounds	**CAS#**
Ethanol*	64-17-5
alpha-Pinene	80-56-8
p-Cymene	99-87-6
Eucalyptol	470-82-6
gamma-Terpinene	99-85-4
beta-Pinene	127-91-3
Camphene	79-92-5
4-Terpineol	562-74-3
alpha-Phellandrene	99-83-2
Limonene*	138-86-3
6-Methyl-1,6-heptadiene	13643-06-6
(+)-Camphor	464-49-3
Linalool	78-70-6
2-Carene	554-61-0
Ethyl formate*	109-94-4
beta-Phellandrene	555-10-2
Linalyl anthranilate	7149-26-0
Ethyl acetate*	141-78-6
Terpinolene	586-62-9
Acetone*	67-64-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

5. PC#31 shampoo [Ci]

Compounds	**CAS#**
Limonene*	138-86-3
beta-Pinene	127-91-3
beta-trans-Ocimene	3779-61-1
beta-Myrcene	123-35-3
gamma-Terpinene	99-85-4
Benzyl alcohol*	100-51-6
Linalool	78-70-6
Eucalyptol	470-82-6
Phenoxyethanol*	122-99-6
Sabinene	3387-41-5
Linalyl acetate	115-95-7
Ethanol*	64-17-5
beta-Phellandrene	555-10-2
alpha-Phellandrene	99-83-2

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

6. PC#32 shampoo [Ci]

Compounds	**CAS#**
Octamethylcyclotetrasiloxane*	556-67-2
Hexamethyldisiloxane	107-46-0
2,2,4,6,6-Pentamethylheptane	13475-82-6
2,8-Dimethyl-5-nonanol	19780-96-2
Propanal*	123-38-6
Tris(trimethylsilyl) borate	4325-85-3
Trimethylsilanol	1066-40-6
Decamethylcyclopentasiloxane	541-02-6
Hexamethylcyclotrisiloxane	541-05-9
Diethyl phthalate	84-66-2
2,2,4,4-Tetramethyloctane	62183-79-3
Chloromethane*	74-87-3
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

[Ci]Certified organic ingredients

7. PC#33 body lotion [Ci]

Compounds	CAS#
(1R)-(+)-alpha-Pinene	7785-70-8
Benzyl alcohol*	100-51-6
Eucalyptol	470-82-6
m-Cymene	535-77-3
alpha-Phellandrene	99-83-2
beta-Pinene	127-91-3
Limonene*	138-86-3
Isoamyl acetate*	123-92-2
2,4-Dimethylpentan-3-one*	565-80-0
Acetone*	67-64-1
Isovaleraldehyde	590-86-3
gamma-Terpinene	99-85-4
Linalool	78-70-6
Methyl isobutyl ketone*	108-10-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

8. PC#34 conditioner [Ci]

Compounds	**CAS#**
Linalool	78-70-6
Eucalyptol	470-82-6
beta-trans-Ocimene	3779-61-1
Limonene*	138-86-3
(R)-(+)-β-Citronellol	1117-61-9
alpha-Terpineol	98-55-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

9. PC#35 cleansing foam [Ci]

Compounds	**CAS#**
Limonene*	138-86-3
Camphene	79-92-5
Eucalyptol	470-82-6
Cyclofenchene	488-97-1
Benzyl alcohol*	100-51-6
beta-Myrcene	123-35-3
alpha-Pinene	80-56-8
Isomenthone	491-07-6
6-Methyl-5-hepten-2-one	110-93-0
(−)-Isopulegol	89-79-2
3-Carene	13466-78-9
Benzaldehyde*	100-52-7
Acetaldehyde*	75-07-0
Linalool	78-70-6
1-Octanol*	111-87-5
Caryophyllene	87-44-5
Sabinene	3387-41-5
DL-menthyl acetate	16409-45-3
2-Methylfuran	534-22-5
Isoamyl alcohol	123-51-3

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

10. PC#36 liquid soap [Cp]

Compounds	CAS#
Ethanol*	64-17-5
Pentane*	109-66-0
alpha-Pinene	80-56-8
Limonene*	138-86-3
beta-Pinene	127-91-3
Eucalyptol	470-82-6
Linalool	78-70-6
beta-Myrcene	123-35-3
Linalyl anthranilate	7149-26-0
Camphene	79-92-5
trans-2-Pentene	646-04-8
Butane*	106-97-8
3-Methylhexane*	589-34-4
Acetaldehyde*	75-07-0
1-Heptene	592-76-7
2,3,4-Trimethylhexane	921-47-1
1-Octene	111-66-0
Terpinolene	586-62-9
beta-trans-Ocimene	3779-61-1
Caryophyllene	87-44-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Cp]Certified organic product

11. PC#37 hand cream

Compounds	**CAS#**
Ethanol*	64-17-5
Linalool	78-70-6
Eucalyptol	470-82-6
Linalyl anthranilate	7149-26-0
Limonene*	138-86-3
Toluene*	108-88-3
Benzenepropanol	122-97-4
Acetaldehyde*	75-07-0
(−)-Camphor	464-48-2

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

12. PC#38 deodorant

Compounds	CAS#
Piperonal	120-57-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

13. PC#39 conditioner

Compounds	**CAS#**
Decamethylcyclopentasiloxane	541-02-6
Limonene*	138-86-3
Dodecamethylcyclohexasiloxane	540-97-6
Methanol*	67-56-1
Octamethylcyclotetrasiloxane*	556-67-2
Hexanal	66-25-1
Phenoxyethanol*	122-99-6
Acetone*	67-64-1
D-carvone*	2244-16-8

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

14. PC#40 hand cream

Compounds	**CAS#**
Ethanol*	64-17-5
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

15. PC#41 hand and body lotion [Ci]

Compounds	CAS#
Ethanol*	64-17-5
Limonene*	138-86-3
Eucalyptol	470-82-6
Linalool	78-70-6
Ethyl acetate*	141-78-6
beta-trans-Ocimene	3779-61-1
beta-Myrcene	123-35-3
Linalyl acetate	115-95-7
(−)-Camphor	464-48-2
beta-Phellandrene	555-10-2
Acetone*	67-64-1
3-Octanone	106-68-3
Acetaldehyde*	75-07-0
Artemesia triene	29548-02-5
Sabinene	3387-41-5
2-Methyl-1-butene	563-46-2
Hexyl methyl ether	4747-07-3
Ethanol*	64-17-5
Limonene*	138-86-3
Eucalyptol	470-82-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

16. PC#42 daily control head lice spray

Compounds	**CAS#**
Ethanol*	64-17-5
Ethyl acetate*	141-78-6
Acetaldehyde*	75-07-0
Phenoxyethanol*	122-99-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

17. PC#43 deodorant [Ci]

Compounds	**CAS#**
Ethanol*	64-17-5
Limonene*	138-86-3
alpha-Pinene	80-56-8
beta-Myrcene	123-35-3
beta-Pinene	127-91-3
gamma-Terpinene	99-85-4
2,3,3-Trimethylhexane	16747-28-7
alpha-Phellandrene	99-83-2
(Z)-beta-ocimene	3338-55-4
2-Methylpentane*	107-83-5
Ethyl acetate*	141-78-6
2,3,4-Trimethylhexane	921-47-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

18. PC#44 liquid soap [Ci]

Compounds	CAS#
Eucalyptol	470-82-6
Limonene*	138-86-3
alpha-Pinene	80-56-8
o-Cymene	527-84-4
3-Carene	13466-78-9
beta-Pinene	127-91-3
alpha-Phellandrene	99-83-2
beta-Myrcene	123-35-3
beta-Phellandrene	555-10-2
gamma-Terpinene	99-85-4
Pentane*	109-66-0
Camphene	79-92-5
(Z)-beta-ocimene	3338-55-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

[Ci]Certified organic ingredients

19. PC#45 body lotion [Ci]

Compounds	CAS#
Limonene*	138-86-3
Benzyl alcohol*	100-51-6
Ethanol*	64-17-5
beta-Myrcene	123-35-3
beta-trans-Ocimene	3779-61-1
Acetaldehyde*	75-07-0
Benzyl acetate	140-11-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

20. PC#46 facial moisturizer

Compounds	**CAS#**
Limonene*	138-86-3
Benzyl alcohol*	100-51-6
Phenoxyethanol*	122-99-6
gamma-Terpinene	99-85-4
Linalool	78-70-6
beta-Myrcene	123-35-3
beta-trans-Ocimene	3779-61-1
beta-Pinene	127-91-3
Eucalyptol	470-82-6
Linalyl anthranilate	7149-26-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

21. PC#47 hand cream [Ci]

Compounds	**CAS#**
Ethanol*	64-17-5
Limonene*	138-86-3
beta-Pinene	127-91-3
Linalool	78-70-6
beta-trans-Ocimene	3779-61-1
Ethyl acetate*	141-78-6
Acetaldehyde*	75-07-0
o-Cymene	527-84-4
gamma-Terpinene	99-85-4
beta-Myrcene	123-35-3

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

[Ci]Certified organic ingredients

22. PC#48 deodorant

Compounds	**CAS#**
Ethanol*	64-17-5
Limonene*	138-86-3
beta-Pinene	127-91-3
gamma-Terpinene	99-85-4
alpha-Pinene	80-56-8
Eucalyptol	470-82-6
alpha-Phellandrene	99-83-2
beta-Phellandrene	555-10-2
Linalool	78-70-6
Linalyl acetate	115-95-7
Terpinolene	586-62-9
Camphene	79-92-5
2-Carene	554-61-0
Ethyl acetate*	141-78-6
Sabinene	3387-41-5
cis-3,7-Dimethyl-2,6-octadien-1-ol	106-25-2
alpha-Thujene	2867-05-2
4-Terpineol	562-74-3
3-Carene	13466-78-9
Decanal	

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

23. PC#49 body wash

Compounds	CAS#
Tetrahydrolinalool	57706-88-4
Limonene*	138-86-3
beta-Pinene	127-91-3
Isopropyl alcohol*	67-63-0
Benzyl acetate	140-11-4
Linalool	78-70-6
Hexane*	110-54-3
gamma-Terpinene	99-85-4
Methylcyclopentane	96-37-7

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

24. PC#50 shampoo

Compounds	**CAS#**
Ethanol*	64-17-5
gamma-Terpinene	99-85-4
beta-trans-Ocimene	3779-61-1
2-Carene	554-61-0
o-Cymene	527-84-4
Limonene*	138-86-3
Eucalyptol	470-82-6
4-Terpineol	562-74-3
alpha-Phellandrene	99-83-2
Terpinolene	586-62-9
beta-Pinene	127-91-3
beta-Myrcene	123-35-3
beta-Phellandrene	555-10-2
Isobutyraldehyde	78-84-2
alpha-Thujene	2867-05-2
Ethyl formate*	109-94-4
Ethyl acetate*	141-78-6
Camphene	79-92-5
Linalool	78-70-6
2-Methylbutyraldehyde	96-17-3

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

25. PC#16 facial scrub

Compounds	**CAS#**
Limonene*	138-86-3
Benzyl alcohol*	100-51-6
3-(Neopentyloxy)-2-butanol	74793-66-1
Eucalyptol	470-82-6
Methyl 2-ethylhexanoate	816-19-3
beta-trans-Ocimene	3779-61-1
Acetaldehyde*	75-07-0
Linalool	78-70-6
beta-Pinene	127-91-3
4-tert-Butylcyclohexyl acetate	32210-23-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 11: VOC occurrences among regular air fresheners (n=6)

1. AF#7 citrus

Compounds	CAS#
Ethanol*	64-17-5
Butane*	106-97-8
Isopentane*	78-78-4
Pentane*	109-66-0
Limonene*	138-86-3
2-Methyl-2-propanol*	75-65-0
Propylene glycol	57-55-6
2-Methylpentane*	107-83-5
Hexane*	110-54-3
3-Methylpentane*	96-14-0
beta-trans-Ocimene	3779-61-1
beta-Pinene	127-91-3
Acetone*	67-64-1
Methylcyclopentane	96-37-7
Ethyl isobutyrate	97-62-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Cp]Certified organic product

2. AF#8 citrus grove

Compounds	**CAS#**
Ethanol*	64-17-5
Butane*	106-97-8
Isopentane*	78-78-4
Pentane*	109-66-0
Limonene*	138-86-3
2-Methyl-2-propanol*	75-65-0
2-Methylpentane*	107-83-5
Hexane*	110-54-3
3-Methylpentane*	96-14-0
Cyclohexane*	110-82-7
2,2-Dimethylbutane*	75-83-2
Methylcyclopentane	96-37-7
Heptane*	142-82-5
2-Methylhexane*	591-76-4
Methylcyclohexane*	108-87-2
3-Methylhexane*	589-34-4
cis-1,2-dimethylcyclopentane	1192-18-3
Acetic acid*	109-60-4
2,4-Dimethylpentane*	108-08-7

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

3. AF#9 sparkling citrus

Compounds	**CAS#**
Limonene*	138-86-3
Isopentane*	78-78-4
2-Butene*	107-01-7
Butane*	106-97-8
beta-Pinene	127-91-3
gamma-Terpinene	99-85-4
Propyl 2-methyl butyrate	37064-20-3
Ethyl 2-methylpentanoate	39255-32-8
o-Cymene	527-84-4
alpha-Pinene	80-56-8
2,4,4-Trimethylpent-1-ene*	107-39-1
Pentane*	109-66-0
Ethyl 2-methylbutyrate	7452-79-1
Linalool	78-70-6
Linalyl acetate	115-95-7
Terpinolene	586-62-9
6-Methyl-1,6-heptadiene	13643-06-6
Octanal	124-13-0
alpha-Terpinene	99-86-5
2,4,4-Trimethyl-2-pentene	107-40-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

4. AF#10 citrus sunburst

Compounds	**CAS#**
Limonene*	138-86-3
Ethanol*	64-17-5
beta-Myrcene	123-35-3
alpha-Pinene	80-56-8
beta-Phellandrene	555-10-2
m-Cymene	535-77-3
3-Carene	13466-78-9
Dihydromyrcenol	18479-58-8
Octanal	124-13-0
2-Methyl-2-propanol*	75-65-0
Linalool	78-70-6
Decanal	112-31-2
alpha-Phellandrene	99-83-2
2-tert-Butylcyclohexanol	13491-79-7
Ethyl 2-methylpentanoate	39255-32-8
beta-trans-Ocimene	3779-61-1
3,5,5-Trimethylhexyl acetate	58430-94-7
gamma-Terpinene	99-85-4
Terpinolene	586-62-9
1-Phenylethanol	98-85-1

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5. AF#11 French vanilla

Compounds	**CAS#**
Ethanol*	64-17-5
Butane*	106-97-8
Isopentane*	78-78-4
2,6-Di-tert-butyl-4-methylphenol	128-37-0
Pentane*	109-66-0
Ethyl butyrate	105-54-4
Limonene*	138-86-3
2-Butene*	107-01-7
Hexane*	110-54-3
2-Methylpentane*	107-83-5
γ-Decalactone	706-14-9
3-Methylpentane*	96-14-0
Methylcyclohexane*	108-87-2
D,l-isobornyl acetate	92618-89-8
Methylcyclopentane	96-37-7
3-Methylhexane*	589-34-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

6. AF#12 rose & grapefruit

Compounds	**CAS#**
Ethanol*	64-17-5
Dihydromyrcenol	18479-58-8
Toluene*	108-88-3
4-Decyne	2384-86-3
Ethyl acetate*	141-78-6
Linalool	78-70-6
Benzyl acetate	140-11-4
3-[2-(2-Methoxyethoxy)ethoxy]-1-propene	13752-97-1
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7
Octanal dimethyl acetal	10022-28-3
cis-3,7-Dimethyl-2,6-octadien-1-ol	106-25-2
1-(2-Methoxy-1-methylethoxy)propan-2-ol	20324-32-7
4-Hexen-1-ol, acetate	72237-36-6
1-(2-Methoxypropoxy)propan-2-ol	13429-07-7
beta-Ionone	79-77-6
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1
alpha-Ionone	127-41-3
Decanal	112-31-2
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 12: VOC occurrences among green air fresheners (n=6)

1. AF#1 orange

Compounds	CAS#
Ethanol*	64-17-5
Limonene*	138-86-3
beta-Myrcene	123-35-3
alpha-Pinene	80-56-8
2-Methyl-2-propanol*	75-65-0
Sabinene	3387-41-5
Acetaldehyde diethyl acetal*	105-57-7
beta-Phellandrene	555-10-2
Ethyl formate*	109-94-4
beta-trans-Ocimene	3779-61-1
Acetone*	67-64-1
Acetaldehyde*	75-07-0
(E)-citral*	141-27-5
beta-Citral*	106-26-3
Methanol*	67-56-1
2-Methyl-1-butene	563-46-2
n-Octanal diethyl acetal	54889-48-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Cp]Certified organic product

2. AF#2 lemon tea tree and eucalyptus

Compounds	**CAS#**
alpha-Pinene	80-56-8
(±)-Citronellal	106-23-0
Limonene*	138-86-3
Methylcyclopentane	96-37-7
beta-Pinene	127-91-3
3-Methyl-1-cyclopentene	1120-62-3
Isopulegol	7786-67-6
1-Methyl-3-isopropylcyclopentane	53771-88-3
Eucalyptol	470-82-6
(−)-Isopulegol	89-79-2
(E)-citral*	141-27-5
1-Methylcyclopentene	693-89-0
beta-Citral*	106-26-3
6-Methyl-5-hepten-2-one	110-93-0
Bornyl acetate	76-49-3
Acetaldehyde*	75-07-0
Camphene	79-92-5
Acetone*	67-64-1
6-Octen-1-ol, 3,7-dimethyl-	150-84-5
Caryophyllene	87-44-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

3. AF#3 lemon myrtle

Compounds	**CAS#**
Ethanol*	64-17-5
Methanol*	67-56-1
(E)-citral*	141-27-5
beta-Citral*	106-26-3
6-Methyl-5-hepten-2-one	110-93-0
beta-Myrcene	123-35-3
Acetone*	67-64-1
Acetaldehyde*	75-07-0
Ethyl formate*	109-94-4
Acetaldehyde diethyl acetal*	105-57-7
Undecane	1120-21-4
Methyl (S)-2-methylbutanoate	53955-81-0
Dodecane	112-40-3
3-Buten-2-ol, 2-methyl-	115-18-4
2-chlorotoluene*	95-49-8

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

4. AF#4 lemon grass & cedarwood [Ci]

Compounds	CAS#
Ethanol*	64-17-5
Limonene*	138-86-3
Linalool	78-70-6
beta-Myrcene	123-35-3
alpha-Pinene	80-56-8
beta-Pinene	127-91-3
Methanol*	67-56-1
Terpinyl acetate	80-26-2
(E)-sabinene hydrate	17699-16-0
Ethyl acetate*	141-78-6
Camphene	79-92-5
gamma-Terpinene	99-85-4
alpha-Terpineol	98-55-5
Octanal	124-13-0
(E)-citral*	141-27-5
beta-trans-Ocimene	3779-61-1
Linalyl anthranilate	7149-26-0
Linalyl acetate	115-95-7
beta-Citral*	106-26-3
beta-Phellandrene	555-10-2

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

5. AF#5 grapefruit & pomegranate [Ci]

Compounds	CAS#
Ethanol*	64-17-5
Limonene*	138-86-3
Methanol*	67-56-1
Linalool	78-70-6
Hexyl acetate	142-92-7
beta-Pinene	127-91-3
alpha-Pinene	80-56-8
trans-2,2-Dimethyl-4-heptenal	91296-58-1
Benzyl acetate	140-11-4
beta-Myrcene	123-35-3
2-tert-Butylcyclohexanol	13491-79-7
gamma-Terpinene	99-85-4
Dihydromyrcenol	18479-58-8
beta-trans-Ocimene	3779-61-1
Ethyl butyrate	105-54-4
Isoamyl acetate*	123-92-2
2-Methyl-2-propanol*	75-65-0
Ethyl acetate*	141-78-6
Camphene	79-92-5
Terpinolene	586-62-9

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

6. AF#6 mix

Compounds	**CAS#**
Ethanol*	64-17-5
Linalool	78-70-6
Limonene*	138-86-3
Ethyl acetate*	141-78-6
Linalyl acetate	115-95-7
Menthone	10458-14-7
Eucalyptol	470-82-6
D,l-Menthol	15356-70-4
alpha-Pinene	80-56-8
beta-Myrcene	123-35-3
Camphene	79-92-5
alpha-Terpineol	98-55-5
Caryophyllene	87-44-5
Linalyl anthranilate	7149-26-0
beta-Pinene	127-91-3
m-Cymene	535-77-3
beta-Phellandrene	555-10-2
3-Ethyl-2-methyl-1,3-heptadiene	61142-35-6
Dl-menthyl acetate	16409-45-3
Neryl acetate	141-12-8

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 13: VOC occurrences among regular cleaning supplies (n=10)

1. CS#12 dust, shine and protects

Compounds	**CAS#**
Butane*	106-97-8
Isopentane*	78-78-4
5-Butylnonane	17312-63-9
Tridecane	629-50-5
6-Methylundecane	17302-33-9
2,3-Dimethyloctane	7146-60-3
2,4-Dimethyldodecane	6117-99-3
2,3,4-Trimethyldecane	62238-15-7
6-Methyltridecane	13287-21-3
2,6,11-Trimethyldodecane	31295-56-4
2,2,3,3,5,6,6-Heptamethylheptane	7225-67-4
5-Methylundecane	1632-70-8
Limonene*	138-86-3
2,5-Dimethyldodecane	56292-65-0
3,6-Dimethylundecane	17301-28-9
2,3,4-Trimethylpentane*	565-75-3
Pentane*	109-66-0
Dodecane	112-40-3
2,2,4,6,6-Pentamethylheptane	13475-82-6
2-Butene*	107-01-7

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

2. CS#13 glass spray

Compounds	**CAS#**
Propylene glycol butyl ether*	5131-66-8
Ethanol*	64-17-5
D,l-isobornyl acetate	92618-89-8
Dihydromyrcenol	18479-58-8
Di-sec-butyl ether	6863-58-7
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1
Methanol*	67-56-1
Eucalyptol	470-82-6
Ethyl acetate*	141-78-6
Decanal	112-31-2
Cyclopropane, 1-methyl-2-(1-methylethyl)-3-(1-methylethylidene)-, cis-	24524-52-5
4-tert-Butylcyclohexyl acetate	32210-23-4
2-methylundecanal	110-41-8
(R)-(+)-β-Citronellol	1117-61-9
(−)-Camphor	464-48-2
o-Cymene	527-84-4
Hexyl acetate	142-92-7
3-Ethyl-3-methyl-1-pentene	6196-60-7
Octanal	124-13-0
Acetylpentacarbonylmanganese	13963-91-2

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

3. CS#14 glass Spray

Compounds	**CAS#**
2-Hexyloxyethanol*	112-25-4
Limonene*	138-86-3
Linalool	78-70-6
1-Octanol*	111-87-5
4-tert-Butylcyclohexyl acetate	32210-23-4
Tridecane	629-50-5
Tetracarbonylnickel*	13463-39-3

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

4. CS#15 hand dishwashing liquid

Compounds	**CAS#**
Limonene*	138-86-3
beta-trans-Ocimene	3779-61-1
beta-Pinene	127-91-3
Eucalyptol	470-82-6
1,4-Cineole	470-67-7
Terpinolene	586-62-9
3-Methylhexane*	589-34-4
Dihydromyrcenol	18479-58-8
2-Methylhexane*	591-76-4
gamma-Terpinene	99-85-4
Camphene	79-92-5
6-Methyl-1,6-heptadiene	13643-06-6
2,3-Dimethylpentane	565-59-3
Heptane*	142-82-5
(−)-Camphor	464-48-2
Isoamyl acetate*	123-92-2
3,5-Dimethyloctane	15869-93-9
o-Cymene	527-84-4
Carbon monoxide*	630-08-0
Tridecane	629-50-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

5. CS#16 oven and bbq cleaner

Compounds	**CAS#**
Limonene*	138-86-3
1,4-Cineole	470-67-7
Eucalyptol	470-82-6
p-Cymene	99-87-6
Acetone*	67-64-1
beta-trans-Ocimene	3779-61-1
Dihydromyrcenol	18479-58-8
Terpinolene	586-62-9
Camphene	79-92-5
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1
beta-Myrcene	123-35-3
Carbon monoxide*	630-08-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

6. CS#18 wooden furniture cleaner

Compounds	**CAS#**
Methanol*	67-56-1
4-Dodecene	2030-84-4
1,4-Dioxane*	123-91-1
(E)-2-dodecene	7206-13-5
2-methylenehexanal	1070-66-2
Undecane	1120-21-4
Carbon monoxide*	630-08-0
2,2-Dimethylbutane*	75-83-2
2,2,6-Trimethyloctane	62016-28-8
2-Pentylfuran	3777-69-3
Hexanal	66-25-1
amitrole (ISO)*	61-82-5
Vinyl formate	692-45-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

7. CS#19 bathroom power gel

Compounds	**CAS#**
Carbon tetrachloride*	56-23-5
Chloroform*	67-66-3
1,1-dichloroethylene*	75-35-4
Tetracarbonylnickel*	13463-39-3
Decane	124-18-5
N-Chlorodimethylamine	1585-74-6
4-tert-Butylcyclohexyl acetate	32210-23-4
6-Methyl-5-hepten-2-one	110-93-0
Diphenyl ether	101-84-8

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

8. CS#20 dishwashing liquid

Compounds	**CAS#**
Limonene*	138-86-3
beta-trans-Ocimene	3779-61-1
Terpinolene	586-62-9
Eucalyptol	470-82-6
1,4-Cineole	470-67-7
Octanal	124-13-0
1-Methyl-2-(3-methylpentyl)cyclopropane	62238-07-7
beta-Myrcene	123-35-3
Camphene	79-92-5
1-Isopropyl-2-methyl-3-(1-methylethylidene)cyclopropane	24524-51-4
gamma-Terpinene	99-85-4
Carbon monoxide*	630-08-0
Acetaldehyde*	75-07-0
Octylcyclopropane	1472-09-9
o-Cymene	527-84-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

9. CS#21 multi-purpose kitchen spray

Compounds	**CAS#**
Ethanol*	64-17-5
Limonene*	138-86-3
(E)-2,5-Dimethyl-1,6-octadiene	68702-25-0
Eucalyptol	470-82-6
4-tert-Butylcyclohexyl acetate	32210-23-4
1-(1,2-Dimethyl-cyclopent-2-enyl)-ethanone	70987-82-5
2-(2-Hydroxypropoxy)-1-propanol	106-62-7
1,3-Dimethyl-2-(1-methylethyl)cyclopentene	61142-32-3
1-[2-(Allyloxy)-1-methylethoxy]-2-propanol	55956-25-7
2,7-Dimethyl-1,7-octadiene	59840-10-7
1-Isopropyl-2,3-dimethyl-1-cyclopentene	7712-73-4
Cyclopropane, 1-methyl-2-(1-methylethyl)-3-(1-methylethylidene)-, cis-	24524-52-5
(E)-citral*	141-27-5
6-Methyl-5-hepten-2-one	110-93-0
Terpinyl acetate	80-26-2
trans-3-Isopropyl-6-methylcyclohexene	1124-26-1
Acetaldehyde*	75-07-0
Dihydromyrcenol	18479-58-8
beta-Citral*	106-26-3
Isocitronellene	85006-04-8

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

10. CS#22 dishwasher liquid

Compounds	**CAS#**
Limonene*	138-86-3
Eucalyptol	470-82-6
1,4-Cineole	470-67-7
beta-Myrcene	123-35-3
Terpinolene	586-62-9
(Z)-linalool oxide (furanoid)	5989-33-3
beta-trans-Ocimene	3779-61-1
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1
Dihydromyrcenol	18479-58-8
4-tert-Butylcyclohexyl acetate	32210-23-4
6-Methyl-5-hepten-2-one	110-93-0
gamma-Terpinene	99-85-4
Sabinene	3387-41-5
beta-Pinene	127-91-3
Linalool	78-70-6
Camphene	79-92-5
Tetracarbonylnickel*	13463-39-3

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 14: VOC occurrences among green cleaning supplies (n=10)

1. CS#1 dishwash liquid

Compounds	CAS#
Limonene*	138-86-3
gamma-Terpinene	99-85-4
beta-Myrcene	123-35-3
beta-trans-Ocimene	3779-61-1
(Z)-beta-ocimene	3338-55-4
Sabinene	3387-41-5
alpha-Phellandrene	99-83-2
1,4-Dioxane*	123-91-1
beta-Phellandrene	555-10-2
Undecane	1120-21-4
Terpinolene	586-62-9
4-Dodecene	2030-84-4
(E)-2-dodecene	7206-13-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

2. CS#2 glass cleaner

Compounds	**CAS#**
Isopropyl alcohol*	67-63-0
Limonene*	138-86-3
Menthone	10458-14-7
alpha-Pinene	80-56-8
D,L-Menthol	15356-70-4
beta-Pinene	127-91-3
Sabinene	3387-41-5
Eucalyptol	470-82-6
DL-menthyl acetate	16409-45-3
6-Methyl-1,6-heptadiene	13643-06-6
Dihydroterpineol	21129-27-1
4,5,6,7-Tetrahydro-3,6-dimethylbenzofuran	494-90-6
Camphene	79-92-5
gamma-Terpinene	99-85-4
Caryophyllene	87-44-5
4-Carene	29050-33-7
alpha-Phellandrene	99-83-2
Pulegone	89-82-7
3-Octanol	589-98-0
Terpinolene	586-62-9

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

3. CS#3 rinse aid

Compounds	**CAS#**
Ethanol*	64-17-5
Ethyl acetate*	141-78-6
Isopropyl alcohol*	67-63-0
1-Octanol*	111-87-5
Ethyl butyrate	105-54-4
1-Undecanol	112-42-5
Octyl acetate	112-14-1
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

4. CS#4 dish liquid

Compounds	**CAS#**
Limonene*	138-86-3
beta-Myrcene	123-35-3
beta-trans-Ocimene	3779-61-1
Benzyl alcohol*	100-51-6
3-Methylpentane*	96-14-0
Methylcyclopentane	96-37-7
Hexane*	110-54-3
Octane*	111-65-9
Undecane	1120-21-4
3-Carene	13466-78-9
Sabinene	3387-41-5
beta-trans-Ocimene	3779-61-1
2-Methylpentane*	107-83-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

5. CS#5 multipurpose

Compounds	**CAS#**
Ethanol*	64-17-5
Limonene*	138-86-3
Methanol*	67-56-1
Ethyl acetate*	141-78-6
4-tert-Butylcyclohexyl acetate	32210-23-4
Methyl hexanoate	106-70-7
Hexyl acetate	142-92-7
Methyl valerate	624-24-8
Methyl laurate	111-82-0
Methyl butyrate	623-42-7
Hexyl propionate	2445-76-3
beta-Myrcene	123-35-3
Methyl propionate	554-12-1
Allyl heptanoate	142-19-8
Methyl acetate*	79-20-9

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

6. CS#6 multipurpose cleaning

Compounds	**CAS#**
Limonene*	138-86-3
Ethanol*	64-17-5
beta-Myrcene	123-35-3
3-Methoxy-3-methylbutanol	56539-66-3
beta-Pinene	127-91-3
beta-trans-Ocimene	3779-61-1
Linalool	78-70-6
Methanol*	67-56-1
gamma-Terpinene	99-85-4
L-menthol	2216-51-5
Sabinene	3387-41-5
1-Octanol*	111-87-5
alpha-Fenchene	471-84-1
Camphene	79-92-5
3-Carene	13466-78-9
Octanal	124-13-0
Menthone	10458-14-7
Terpinyl acetate	80-26-2
beta-trans-Ocimene	3779-61-1
1-Decanol	112-30-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

7. CS#7 Bathroom cleaner

Compounds	**CAS#**
Limonene*	138-86-3
Eucalyptol	470-82-6
Ethanol*	64-17-5
o-Cymene	527-84-4
Acetaldehyde*	75-07-0
gamma-Terpinene	99-85-4
4-Carene	29050-33-7
Camphene	79-92-5
beta-trans-Ocimene	3779-61-1
2-Isopropenyltoluene	7399-49-7
4-Terpineol	562-74-3
5,5-Dimethylcyclopentadiene	4125-18-2
(−)-Camphor	464-48-2
Terpinolene	586-62-9
3′-Methylacetophenone	585-74-0
beta-Myrcene	123-35-3
1-Acetyl-2-methyl-1-cyclopentene	3168-90-9
p,α,α-Trimethylbenzyl alcohol	1197-01-9
Ethyl acetate*	141-78-6
Acetone*	67-64-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

8. CS#8 everyday cleaner

Compounds	**CAS#**
Limonene*	138-86-3
Ethanol*	64-17-5
beta-trans-Ocimene	3779-61-1
beta-Myrcene	123-35-3
Sabinene	3387-41-5
Octanal	124-13-0
Eucalyptol	470-82-6
gamma-Terpinene	99-85-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

9. CS#9 bathroom & shower cleaner

Compounds	**CAS#**
Ethanol*	64-17-5
Methyl isobutyl ketone*	108-10-1
(E)-5-Tetradecene	41446-66-6
Acetone*	67-64-1
Acetaldehyde*	75-07-0
(E)-3-Tetradecene	41446-68-8
(Z)-7-tetradecene	41446-60-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

10. CS#10 dishwashing liquid

Compounds	**CAS#**
(S)-p-mentha-1,8-diene*	5989-54-8
beta-Myrcene	123-35-3
beta-trans-Ocimene	3779-61-1
6-Methyl-5-hepten-2-one	110-93-0
Acetaldehyde*	75-07-0
2-Methyl-4-penten-2-ol	624-97-5
Ethanol*	64-17-5
3-Methyl-1-hexene	3404-61-3
Sabinene	3387-41-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 15: VOC occurrences among regular laundry products (n=10)

1. LL#11 lemon fresh

Compounds	**CAS#**
Limonene*	138-86-3
1,4-Cineole	470-67-7
Terpinolene	586-62-9
Camphene	79-92-5
Eucalyptol	470-82-6
gamma-Terpinene	99-85-4
Octanal	124-13-0
alpha-Pinene	80-56-8
2,4,6-Trimethyl-3-cyclohexene-1-carboxaldehyde	1423-46-7
Dihydromyrcenol	18479-58-8
(+)-Camphene	5794-03-6
beta-Myrcene	123-35-3
Decanal	112-31-2
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1
Cyclofenchene	488-97-1
3,7-Dimethyl-7-octenal	141-26-4
p-Cymene	99-87-6
beta-trans-Ocimene	3779-61-1
alpha-Phellandrene	99-83-2
n-Butyl ether*	142-96-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

2. LL#12 almond milk

Compounds	**CAS#**
Tetrahydrolinalool	57706-88-4
Dihydromyrcenol	18479-58-8
4-tert-Butylcyclohexyl acetate	32210-23-4
2,4-Dimethylpentane*	108-08-7
1-Propanol*	71-23-8
Dibutyl phthalate*	84-74-2
2-tert-Butylcyclohexanol	13491-79-7
3-Phenyl-2-butanone	769-59-5
4,4′-Isopropylidenebis(2,6-dimethylphenol)	5613-46-7
Verdyl acetate	5413-60-5
n-Butyl ether*	142-96-1
N-butylbenzenesulfonamide	3622-84-2
1-Hexanol*	111-27-3
Allyl alcohol*	107-18-6
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

3. LL#13 mix

Compounds	**CAS#**
D,l-isobornyl acetate	92618-89-8
4-tert-Butylcyclohexyl acetate	32210-23-4
Tridecane	629-50-5
alpha-Pinene	80-56-8
Benzyl acetate	140-11-4
1,4-Cineole	470-67-7
(−)-Camphene	5794-04-7
Acetaldehyde*	75-07-0
3-Methylene-1,7-octadiene	68695-13-6
3-Methyldecane	13151-34-3
Eucalyptol	470-82-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

4. LL#14 mix

Compounds	**CAS#**
Limonene*	138-86-3
4-tert-Butylcyclohexyl acetate	32210-23-4
Eucalyptol	470-82-6
Tetrahydrolinalool	57706-88-4
1,4-Cineole	470-67-7
delta-Undecalactone	710-04-3
Dihydromyrcenol	18479-58-8
alpha-Pinene	80-56-8
Ethanol*	64-17-5
2-tert-Butylcyclohexanol	13491-79-7
Terpinolene	586-62-9
Acetaldehyde*	75-07-0
D-carvone*	2244-16-8
Camphene	79-92-5
6-Methyl-5-hepten-2-one	110-93-0
2-methyl-2-(4-methylpent-3-enyl)cyclopropane-1-carbaldehyde	97231-35-1
2-methylundecanal	110-41-8

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

5. LL#15 fabric softener, oriental blossom

Compounds	**CAS#**
Ethanol*	64-17-5
Ethyl methyl ether*	540-67-0
Octamethylcyclotetrasiloxane*	556-67-2
Isopropyl alcohol*	67-63-0
Limonene*	138-86-3
Tetrahydrolinalool	57706-88-4
3,5,5-Trimethylhexyl acetate	58430-94-7
2-tert-Butylcyclohexanol	13491-79-7
Decamethylcyclopentasiloxane	541-02-6
p-tert-Butyl cyclohexyl-acetate cis	10411-92-4
4-tert-Butylcyclohexanol	98-52-2
trans-Rose oxide	876-18-6
Acetaldehyde*	75-07-0
4-tert-Butylcyclohexyl acetate	32210-23-4
2-(4-tert-Butylbenzyl)propionaldehyde*	80-54-6
Hexyl acetate	142-92-7

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

6. LL#16 ironing spray, citrus fresh

Compounds	**CAS#**
Butane*	106-97-8
Isopentane*	78-78-4
Limonene*	138-86-3
Octamethylcyclotetrasiloxane*	556-67-2
Pentane*	109-66-0
Decamethylcyclopentasiloxane	541-02-6
Tetrahydrolinalool	57706-88-4
beta-Myrcene	123-35-3
Linalool	78-70-6
Dihydromyrcenol	18479-58-8
(R)-(+)-β-Citronellol	1117-61-9
2-Carene	554-61-0
Terpinolene	586-62-9
Linalyl acetate	115-95-7
beta-Phellandrene	555-10-2
Eucalyptol	470-82-6
alpha-Pinene	80-56-8
Cyclopropane, 1,1-dimethyl-2-(3-methyl-1,3-butadienyl)-	68998-21-0
6-Methyl-5-hepten-2-one	110-93-0
gamma-Terpinene	99-85-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

7. LL#17 fabric conditioner, mix

Compounds	**CAS#**
Isopropyl alcohol*	67-63-0
Methanol*	67-56-1
Methyl isopropyl ether	598-53-8
Tetrahydrolinalool	57706-88-4
Dihydromyrcenol	18479-58-8
Eucalyptol	470-82-6
Terpinyl acetate	80-26-2
Linalool	78-70-6
Diisopropyl ether*	108-20-3
Limonene*	138-86-3
Limonene*	138-86-3
alpha-Isomethyl ionone	127-51-5
(−)-Camphor	464-48-2
beta-Pinene	127-91-3
p-Anisaldehyde	123-11-5
2-Methoxyethyl acetate	110-49-6
Toluene*	108-88-3
Camphene	79-92-5
Acetaldehyde*	75-07-0
beta-Myrcene	123-35-3

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

8. LL#18 fabric softener, mix

Compounds	**CAS#**
Isopropyl alcohol*	67-63-0
Limonene*	138-86-3
Ethyl 2-methylbutyrate	7452-79-1
Myrtanyl acetate	29021-36-1
Ethyl 2-methylpentanoate	39255-32-8
Methyl isopropyl ether	598-53-8
Methanol*	67-56-1
Dihydromyrcenol	18479-58-8
2,6-Dimethyl-2-octanol	18479-57-7
alpha-Pinene	80-56-8
(Z)-rose oxide	16409-43-1
Eucalyptol	470-82-6
Methyl phenylcarbinyl acetate	93-92-5
Terpinyl acetate	80-26-2
Benzyl acetate	140-11-4
Camphene	79-92-5
4-tert-Butylcyclohexyl acetate	32210-23-4
2-tert-Butylcyclohexanol	13491-79-7
Benzyl propionate	122-63-4
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

9. LL#19 mix

Compounds	**CAS#**
Limonene*	138-86-3
Myrtanyl acetate	29021-36-1
alpha-Pinene	80-56-8
Ethyl 2,3-dimethylbutanoate	54004-42-1
Isopropyl alcohol*	67-63-0
Eucalyptol	470-82-6
beta-Pinene	127-91-3
Dihydromyrcenol	18479-58-8
Camphene	79-92-5
1-Pentanol*	71-41-0
2-Methyl-1-butanol	34713-94-5
Ethyl 2-methylbutyrate	7452-79-1
2,4-Dimethylpentane*	108-08-7
Ethanol*	64-17-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

10. LL#20 mix

Compounds	**CAS#**
Limonene*	138-86-3
Dihydromyrcenol	18479-58-8
beta-Myrcene	123-35-3
alpha-Pinene	80-56-8
4-tert-Butylcyclohexyl acetate	32210-23-4
Ethanol*	64-17-5
Hexyl acetate	142-92-7
Ethyl 2,3-dimethylbutanoate	54004-42-1
2-(1,1-Dimethyl-2-propenyl)-1,1-dimethylcyclopropane	81051-15-2
Cyclopropane, 1,1-dimethyl-2-(3-methyl-1,3-butadienyl)-	68998-21-0
Terpinyl acetate	80-26-2
Acetone*	67-64-1
Acetaldehyde*	75-07-0
Heptane*	142-82-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 16: VOC occurrences among green laundry products (n=10)

1. LL#1 lavender

Compounds	**CAS#**
Linalool	78-70-6
Limonene*	138-86-3
Eucalyptol	470-82-6
beta-Myrcene	123-35-3
Acetaldehyde*	75-07-0
(+)-Camphor	464-49-3
Caryophyllene	87-44-5
alpha-Pinene	80-56-8
alpha-Terpineol	98-55-5
m-Cymene	535-77-3
2-Methylfuran	534-22-5
Terpinolene	586-62-9
Neryl acetate	141-12-8
Lavandulyl acetate	25905-14-0
4-Terpineol	562-74-3
3-Ethyl-2-methyl-1,3-heptadiene	61142-35-6
1-Octanol*	111-87-5
Camphene	79-92-5
Linalyl anthranilate	7149-26-0
3-Carene	13466-78-9

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

2. LL#2 fabric conditioner, citrus

Compounds	**CAS#**
Limonene*	138-86-3
Ethanol*	64-17-5
Eucalyptol	470-82-6
alpha-Pinene	80-56-8
beta-Myrcene	123-35-3
Hexane*	110-54-3
Benzyl alcohol*	100-51-6
beta-Phellandrene	555-10-2
Methylcyclopentane	96-37-7
3-Methylpentane*	96-14-0
gamma-Terpinene	99-85-4
2,4-Dimethylhexane*	589-43-5
beta-trans-Ocimene	3779-61-1
Ethyl methyl ether*	540-67-0
2-Methylpentane*	107-83-5
alpha-Phellandrene	99-83-2
Octanal	124-13-0
Undecane	1120-21-4
Ethyl formate*	109-94-4
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

3. LL#3 sweet orange & lavender scent

Compounds	**CAS#**
Limonene*	138-86-3
alpha-Pinene	80-56-8
beta-Myrcene	123-35-3
Benzyl alcohol*	100-51-6
Linalool	78-70-6
Eucalyptol	470-82-6
beta-trans-Ocimene	3779-61-1
Linalyl acetate	115-95-7
beta-Phellandrene	555-10-2
gamma-Terpinene	99-85-4
(+)-Camphor	464-49-3
3-Carene	13466-78-9
Camphene	79-92-5
2-Carene	554-61-0
Caryophyllene	87-44-5
Terpinolene	586-62-9
Octanal	124-13-0
alpha-Terpineol	98-55-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

4. LL#4 eucalyptus and cherry

Compounds	**CAS#**
Eucalyptol	470-82-6
Limonene*	138-86-3
(1R)-(+)-alpha-Pinene	7785-70-8
gamma-Terpinene	99-85-4
o-Cymene	527-84-4
alpha-Thujene	2867-05-2
beta-Myrcene	123-35-3
beta-Pinene	127-91-3
beta-Phellandrene	555-10-2
2-Carene	554-61-0
Terpinolene	586-62-9
Toluene*	108-88-3
Amyl butyrate	540-18-1
Ethanol*	64-17-5
Ethyl butyrate	105-54-4
Isoamyl butylate	106-27-4
Isoamyl acetate*	123-92-2
2-Methylpropan-1-ol*	78-83-1
alpha-Phellandrene	99-83-2
Camphene	79-92-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

5. LL#5 lemon myrtle

Compounds	**CAS#**
6-Methyl-5-hepten-2-one	110-93-0
Acetaldehyde*	75-07-0
Limonene*	138-86-3
d-Verbenol	473-67-6
beta-Citral*	106-26-3
1-Octanol*	111-87-5
Acetone*	67-64-1
beta-Myrcene	123-35-3

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

6. LL#6 lavender and ylang ylang

Compounds	**CAS#**
Linalyl acetate	115-95-7
5-Isopropenyl-1-methyl-1-cyclohexene	13898-73-2
Linalool	78-70-6
Eucalyptol	470-82-6
3-Octanone	106-68-3
Hexyl acetate	142-92-7
beta-Myrcene	123-35-3
(+)-Camphor	464-49-3
3-Octyl acetate	4864-61-3
alpha-Pinene	80-56-8
Caryophyllene	87-44-5
Dodecane	112-40-3
alpha-Terpineol	98-55-5
Camphene	79-92-5
(Z)-7-tetradecene	41446-60-0
Terpinolene	586-62-9
Nonylcyclopropane	74663-85-7
Cyclopropane, 1,1-dimethyl-2-(3-methyl-1,3-butadienyl)-	68998-21-0
3-Ethyl-2-methyl-1,3-heptadiene	61142-35-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

7. LL#7 fabric conditioner, mix

Compounds	**CAS#**
Isopropyl alcohol*	67-63-0
Limonene*	138-86-3
Acetone*	67-64-1
Methyl isopropyl ether	598-53-8
Eucalyptol	470-82-6
2,6-Di-tert-butyl-4-methylphenol	128-37-0
Methoxyacetic acid*	625-45-6
Methanol*	67-56-1
Dihydromyrcenol	18479-58-8
gamma-Terpinene	99-85-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

8. LL#8 wool & delicates, eucalyptus

Compounds	**CAS#**
Eucalyptol	470-82-6
Limonene*	138-86-3
o-Cymene	527-84-4
(1R)-(+)-alpha-Pinene	7785-70-8
gamma-Terpinene	99-85-4
alpha-Phellandrene	99-83-2
beta-Pinene	127-91-3
beta-Myrcene	123-35-3
beta-Phellandrene	555-10-2
2-Carene	554-61-0
Acetone*	67-64-1
beta-trans-Ocimene	3779-61-1
Ethanol*	64-17-5
Terpinolene	586-62-9

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

9. LL#9 mix

Compounds	**CAS#**
Limonene*	138-86-3
1-Pentanol*	71-41-0
Acetone*	67-64-1
(Z)-7-tetradecene	41446-60-0
alpha-Pinene	80-56-8
(±)-2-Methyl-1-butanol	137-32-6
Sabinene	3387-41-5
2-Octanone	111-13-7
1-Octyl trifluoroacetate	2561-21-9
Acetaldehyde*	75-07-0
1-Hexanol*	111-27-3
1,3,6-Trioxocane	1779-19-7

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

10. LL#10 citrus fusion

Compounds	**CAS#**
Limonene*	138-86-3
alpha-Pinene	80-56-8
beta-Myrcene	123-35-3
Acetaldehyde*	75-07-0
beta-Phellandrene	555-10-2
(Z)-beta-ocimene	3338-55-4
gamma-Terpinene	99-85-4
2-Methylfuran	534-22-5
Octanal	124-13-0
1-Octanol*	111-87-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 17: VOC occurrences among sunscreens (n=15)
G: green products, R: regular products

1. SS#1 baby (R)

Compounds	CAS#
Decamethylcyclopentasiloxane	541-02-6
Diisopropyl adipate	6938-94-9
Isopropyl alcohol*	67-63-0
Phenoxyethanol*	122-99-6
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

2. SS#2 baby (R)

Compounds	**CAS#**
Ethyl butyrate	105-54-4
Ethanol*	64-17-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

3. SS#3 baby (R)

Compounds	**CAS#**
Acetaldehyde*	75-07-0
Hexamethyldisiloxane	107-46-0
Phenoxyethanol*	122-99-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

4. SS#4 baby (G) [Ci]

Compounds	CAS#
Pentane*	109-66-0
Butane*	106-97-8

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

[Ci]Certified organic ingredients

5. SS#5 baby (R)

Compounds	CAS#
Ethanol*	64-17-5
Limonene*	138-86-3
beta-Pinene	127-91-3
Ethyl acetate*	141-78-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

6. SS#6 baby (R)

Compounds	CAS#
Benzyl alcohol*	100-51-6
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

7. SS#7 baby (G)

Compounds	**CAS#**
Ethanol*	64-17-5
Hexanal	66-25-1
Pentane*	109-66-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

8. SS#8 baby (R)

Compounds	CAS#
Isopropyl alcohol*	67-63-0
Hexamethyldisiloxane	107-46-0
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

9. SS#9 baby (R)

Compounds	**CAS#**
Acetaldehyde*	75-07-0
Hexamethyldisiloxane	107-46-0
Tris(trimethylsilyl) borate	4325-85-3
3-Methylhexane*	589-34-4

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

10. SS#10 adult (R)

Compounds	CAS#
Phenoxyethanol*	122-99-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

11. SS#11 adult (R)

Compounds	CAS#
Acetaldehyde*	75-07-0
Phenoxyethanol*	122-99-6
Butane*	106-97-8

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

12. SS#12 adult (R)

Compounds	**CAS#**
Isopropyl alcohol*	67-63-0
Acetaldehyde*	75-07-0
Phenoxyethanol*	122-99-6
Cyclohexane*	110-82-7

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

13. SS#13 adult (G)

Compounds	**CAS#**
Decamethylcyclopentasiloxane	541-02-6
Isopropyl alcohol*	67-63-0
Ethanol*	64-17-5
Dodecamethylcyclohexasiloxane	540-97-6
Phenoxyethanol*	122-99-6
Hexanal	66-25-1
Hexamethylcyclotrisiloxane	541-05-9
Pentane*	109-66-0
Acetone*	67-64-1
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

14. SS#14 adult (G)

Compounds	**CAS#**
Pentane*	109-66-0
Hexanal	66-25-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

15. SS#15 adult (R)

Compounds	**CAS#**
Methanol*	67-56-1
Isopropyl alcohol*	67-63-0
Dimethoxymethane	109-87-5
Limonene*	138-86-3
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 18: VOC occurrences among fragrance-free products (n=15) G: green products, R: regular products

1. FF#1 laundry liquid (G)

Compounds	CAS#
Ethanol*	64-17-5
1-Octanol*	111-87-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

2. FF#2 laundry liquid (G)

Compounds	**CAS#**
3-Methoxy-3-methylbutanol	56539-66-3
2-Propylheptanol	10042-59-8
Nonane	111-84-2
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

3. FF#3 dish liquid (G)

Compounds	**CAS#**
Ethanol*	64-17-5
Carbon tetrachloride*	56-23-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

4. FF#4 body hand and face cream (G) [Ci]

Compounds	CAS#
Benzyl alcohol*	100-51-6
Ethanol*	64-17-5
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)
[Ci]Certified organic ingredients

5. FF#5 shampoo (G)

Compounds	**CAS#**
Ethanol*	64-17-5
(E)-3-Tetradecene	41446-68-8
(4E)-4-Tetradecene	41446-78-0
(Z)-7-tetradecene	41446-60-0
trans-7-Tetradecene	41446-63-3

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

6. FF#6 shampoo (G)

Compounds	**CAS#**
Toluene*	108-88-3

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

7. FF#7 moisturising lotion (R)

Compounds	**CAS#**
Trimethylsilanol	1066-40-6
Benzyl alcohol*	100-51-6
Hexamethyldisiloxane	107-46-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

8. FF#8 moisturising lotion (G)

Compounds	**CAS#**
Benzyl alcohol*	100-51-6
Isopropyl alcohol*	67-63-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

9. FF#9 Baby lotion (R)

Compounds	CAS#
Ethyl acetate*	141-78-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

10. FF#10 deodorant (G)

Compounds	CAS#
Ethanol*	64-17-5

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

11. FF#11 hand cream (R)

Compounds	CAS#
Propylcyclopropane	2415-72-7

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

12. FF#12 shampoo (G)

Compounds	CAS#
Acetone*	67-64-1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

13. FF#13 lotion (R)

Compounds	CAS#
Ethyl acetate*	141-78-6

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

14. FF#14 laundry liquid (R)

Compounds	**CAS#**
Acetone*	67-64-1
Acetaldehyde*	75-07-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

15. FF#15 laundry liquid (G)

Compounds	**CAS#**
Ethanol*	64-17-5
2-Methyl-2-propanol*	75-65-0

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 19: Potentially hazardous* compounds among all products (n=134)

Compound	CAS #	Prevalence (# of products)	Regular (n=68)	Green (n=66)
Limonene	138-86-3	82	40	42
Ethanol	64-17-5	56	27	29
Acetaldehyde	75-07-0	50	23	27
Ethyl acetate	141-78-6	25	12	13
Butane	106-97-8	22	19	3
Acetone	67-64-1	21	6	15
Benzyl alcohol	100-51-6	19	7	12
Isopropyl alcohol	67-63-0	18	12	6
Pentane	109-66-0	17	12	5
Methanol	67-56-1	17	9	8
Phenoxyethanol	122-99-6	14	9	5
Isopentane	78-78-4	12	12	0
Octamethylcyclotetrasiloxane	556-67-2	10	8	2
Isoamyl acetate	123-92-2	10	7	3
3-Methylhexane	589-34-4	9	9	0
1-Octanol	111-87-5	9	1	8
Heptane	142-82-5	8	8	0
2-Methyl-2-propanol	75-65-0	8	5	3
2-Methylhexane	591-76-4	7	7	0
Toluene	108-88-3	7	4	3
Cyclohexane	110-82-7	6	6	0
beta-Citral	106-26-3	6	1	5
(E)-citral	141-27-5	5	1	4
Ethyl formate	109-94-4	5	0	5
2-Butene	107-01-7	4	4	0
Carbon monoxide	630-08-0	4	4	0
2,4-Dimethylpentane	108-08-7	3	3	0
Tetracarbonylnickel	13463-39-3	3	3	0
2-Methylpentane	107-83-5	3	0	3
Hexane	110-54-3	3	0	3
2,2-Dimethylbutane	75-83-2	2	2	0
5-Methylheptan-3-one	541-85-5	2	2	0
Methylcyclohexane	108-87-2	2	2	0
n-Butyl ether	142-96-1	2	2	0
1,4-Dioxane	123-91-1	2	1	1
1-Hexanol	111-27-3	2	1	1
1-Pentanol	71-41-0	2	1	1

Benzaldehyde	100-52-7	2	1	1
Carbon tetrachloride	56-23-5	2	1	1
D-carvone	2244-16-8	2	1	1
Ethyl methyl ether	540-67-0	2	1	1
3-Methylpentane	96-14-0	2	0	2
Acetaldehyde diethyl acetal	105-57-7	2	0	2
Methyl isobutyl ketone	108-10-1	2	0	2
1,1-dichloroethylene	75-35-4	1	1	0
1-Propanol	71-23-8	1	1	0
2-(4-tert-Butylbenzyl)propionaldehyde	80-54-6	1	1	0
2,3,4-Trimethylpentane	565-75-3	1	1	0
2,4,4-Trimethylpent-1-ene	107-39-1	1	1	0
2-Hexyloxyethanol	112-25-4	1	1	0
Acetic acid	109-60-4	1	1	0
Allyl alcohol	107-18-6	1	1	0
amitrole (ISO)	61-82-5	1	1	0
Butyl acetate	123-86-4	1	1	0
Chloroform	67-66-3	1	1	0
Cyclopentane	287-92-3	1	1	0
Dibutyl phthalate	84-74-2	1	1	0
Diisopropyl ether	108-20-3	1	1	0
Propylene glycol butyl ether	5131-66-8	1	1	0
Undecane	1120-21-4	1	1	0
2,4-Dimethylhexane	589-43-5	1	0	1
2,4-Dimethylpentan-3-one	565-80-0	1	0	1
2-chlorotoluene	95-49-8	1	0	1
2-Methylpropan-1-ol	78-83-1	1	0	1
Chloromethane	74-87-3	1	0	1
Methoxyacetic acid	625-45-6	1	0	1
Methyl acetate	79-20-9	1	0	1
Octane	111-65-9	1	0	1
Propanal	123-38-6	1	0	1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)

Supplementary Table 20: Potentially hazardous compounds among all fragranced products (n=104)

Compound	CAS #	Prevalence (# of products)	Regular (n=52)	Green (n=52)
Limonene	138-86-3	80	38	42
Ethanol	64-17-5	46	25	21
Acetaldehyde	75-07-0	38	14	24
Ethyl acetate	141-78-6	22	9	13
Butane	106-97-8	20	18	2
Acetone	67-64-1	18	5	13
Methanol	67-56-1	16	8	8
Benzyl alcohol	100-51-6	15	5	10
Pentane	109-66-0	13	12	1
Isopentane	78-78-4	12	12	0
Isopropyl alcohol	67-63-0	12	8	4
Octamethylcyclotetrasiloxane	556-67-2	10	8	2
Isoamyl acetate	123-92-2	10	7	3
3-Methylhexane	589-34-4	9	8	1
Heptane	142-82-5	8	8	0
Phenoxyethanol	122-99-6	8	4	4
1-Octanol	111-87-5	8	1	7
2-Methylhexane	591-76-4	7	7	0
2-Methyl-2-propanol	75-65-0	7	5	2
Toluene	108-88-3	6	4	2
beta-Citral	106-26-3	6	1	5
Cyclohexane	110-82-7	5	5	0
2-Butene	107-01-7	4	4	0
Carbon monoxide	630-08-0	4	4	0
2-Methylpentane	107-83-5	3	0	3
Hexane	110-54-3	3	0	3
2,4-Dimethylpentane	108-08-7	3	3	0
Tetracarbonylnickel	13463-39-3	3	3	0
2,2-Dimethylbutane	75-83-2	2	2	0
5-Methylheptan-3-one	541-85-5	2	2	0
Methylcyclohexane	108-87-2	2	2	0
n-Butyl ether	142-96-1	2	2	0
1,4-Dioxane	123-91-1	2	1	1
1-Hexanol	111-27-3	2	1	1
1-Pentanol	71-41-0	2	1	1
Benzaldehyde	100-52-7	2	1	1
D-carvone	2244-16-8	2	1	1

Ethyl methyl ether	540-67-0	2	1	1
3-Methylpentane	96-14-0	2	0	2
Acetaldehyde diethyl acetal	105-57-7	2	0	2
Methyl isobutyl ketone	108-10-1	2	0	2
(E)-citral	141-27-5	1	1	0
1,1-dichloroethylene	75-35-4	1	1	0
1-Propanol	71-23-8	1	1	0
2-(4-tert-Butylbenzyl)propionaldehyde	80-54-6	1	1	0
2,3,4-Trimethylpentane	565-75-3	1	1	0
2,4,4-Trimethylpent-1-ene	107-39-1	1	1	0
2-Hexyloxyethanol	112-25-4	1	1	0
Acetic acid	109-60-4	1	1	0
Allyl alcohol	107-18-6	1	1	0
amitrole (ISO)	61-82-5	1	1	0
Butyl acetate	123-86-4	1	1	0
Carbon tetrachloride	56-23-5	1	1	0
Chloroform	67-66-3	1	1	0
Cyclopentane	287-92-3	1	1	0
Dibutyl phthalate	84-74-2	1	1	0
Diisopropyl ether	108-20-3	1	1	0
Propylene glycol butyl ether	5131-66-8	1	1	0
Undecane	1120-21-4	1	1	0
2,4-Dimethylhexane	589-43-5	1	0	1
2,4-Dimethylpentan-3-one	565-80-0	1	0	1
2-chlorotoluene	95-49-8	1	0	1
2-Methylpropan-1-ol	78-83-1	1	0	1
Chloromethane	74-87-3	1	0	1
Methoxyacetic acid	625-45-6	1	0	1
Methyl acetate	79-20-9	1	0	1
Octane	111-65-9	1	0	1
Propanal	123-38-6	1	0	1

*Classified as hazardous under Safe Work Australia, Hazardous Chemical Information System (SWA 2018)