
Safety Assessment of Citrus Plant- and Seed-Derived Ingredients as Used in Cosmetics

Status: Draft Report for Panel Review
Release Date: November 20, 2015
Panel Meeting Date: December 14-15, 2015

The 2015 Cosmetic Ingredient Review Expert Panel members are: Chairman, Wilma F. Bergfeld, M.D., F.A.C.P.; Donald V. Belsito, M.D.; Ronald A. Hill, Ph.D.; Curtis D. Klaassen, Ph.D.; Daniel C. Liebler, Ph.D.; James G. Marks, Jr., M.D., Ronald C. Shank, Ph.D.; Thomas J. Slaga, Ph.D.; and Paul W. Snyder, D.V.M., Ph.D. The CIR Director is Lillian J. Gill, D.P.A. This report was prepared by Christina Burnett, Senior Scientific Analyst/Writer.

Cosmetic Ingredient Review

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Memorandum

To: CIR Expert Panel Members and Liaisons
From: Christina Burnett, Senior Scientific Writer/Analyst
Date: November 20, 2015
Subject: Draft Report of the Safety Assessment of *Citrus* Plant- and Seed-Derived Ingredients

Enclosed is the draft Report of the Safety Assessment of *Citrus* Plant- and Seed-Derived Ingredients as Used in Cosmetics. (It is identified as *cplant122015rep* in the pdf document.)

At the March 2014 meeting, the Panel tabled further discussion of 198 *Citrus*-derived ingredients to allow CIR staff to reorganize the report and to obtain clarification from the Research Institute for Fragrance Materials (RIFM) on the functions of some of the ingredients. Based on the Panel's recommendation of grouping the ingredients by plant parts according to greatest number of uses, the first two assessments reviewed by the Panel were *Citrus*-derived peel oils (14 ingredients; final report issued September 2014) and *Citrus* fruit-derived ingredients (80 ingredients; draft final report currently under Panel consideration). As it stands, the Panel has concluded that the ingredients in these two safety assessments are safe for use in both rinse-off and leave-on cosmetic products when formulated to be non-sensitizing and non-irritating, provided that leave-on products do not contain more than 0.0015% (15 ppm) 5-methoxypsoralen (5-MOP).

At the September 2015 meeting, the Panel finalized the groupings of the remaining ingredients. The Panel will be reviewing the safety of *Citrus* plant- and seed-derived ingredients (33 ingredients), *Citrus* flower- and leaf-derived ingredients (32 ingredients), and *Citrus* peel-derived ingredients (47 ingredients) in three separate, concurrent reports. The minutes from the September Panel meeting and the initial meeting on the full *Citrus* family of ingredients from 2014 can be found in the *Citrus* fruit-derived ingredients package (*cfruit122015min* under the bookmark tabs "Citrus Reminders Strategy September 21-22, 2015" and "Citrus-Derived Ingredients March 2014").

Since March 2014, no new unpublished data on *Citrus* plant- and seed-derived ingredients have been received. The Council is currently conducting a new concentration of use survey to update the data that was originally collected in 2013. An updated search of the published literature has found no relevant safety test data concerning the ingredients found in this report.

Citrus aurantium (bitter orange) oil has the most reported uses of the ingredients in this report in cosmetic products, with a total of 276; more than half of the uses are in leave-on skin care preparations. This ingredient is not currently in *International Cosmetic Ingredient Dictionary and Handbook* but has been included in this report due to its high reported number of uses and presumed similarities to the other ingredients in this report. This ingredient was not included in the concentration of use survey conducted by the Council in 2013. The ingredients with the next highest frequency of use are *Citrus aurantifolia* (lime) oil (149 total uses) and *Citrus grandis* (grapefruit) seed extract (143 total uses); a majority of the uses for these ingredients are in leave-on skin care preparations. The results of the concentration of use survey indicate *Citrus grandis* (grapefruit) seed extract has the highest reported maximum concentration of use; it is used at up to 2% in a face and neck formulation. *Citrus aurantium amara* (bitter orange) leaf/twig oil had the second highest reported maximum concentration of use; it is used at up to 1.5% in a body and hand formulation.

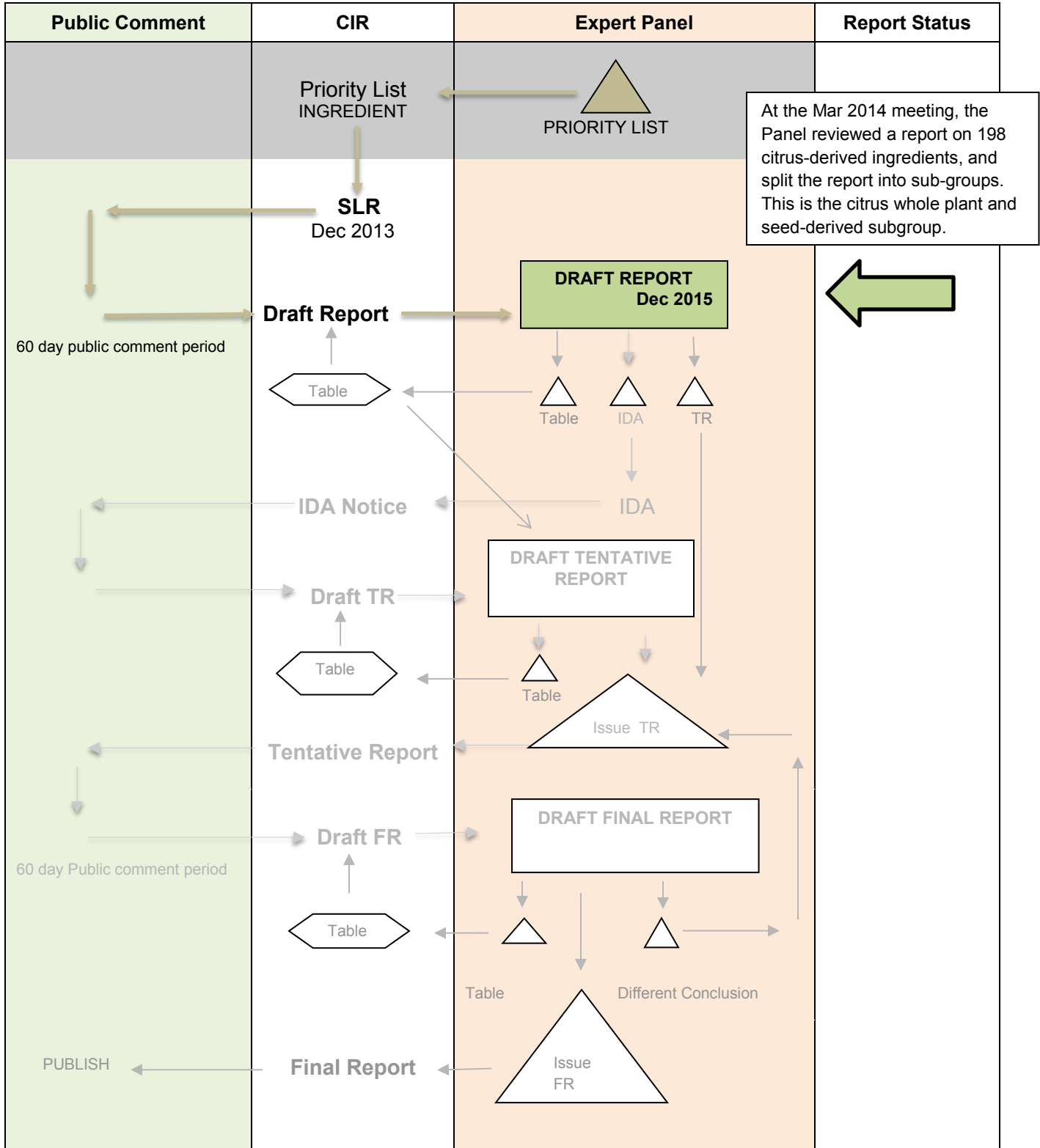
These ingredients function mainly as skin conditioning agents-miscellaneous; however, two ingredients (*Citrus sunki* seed extract and *Citrus sunki* seed oil) also are reported to function as skin bleaching agents, which are drug uses and not cosmetic uses.

The Panel may consider issuing an insufficient data announcement if the data needs preclude them from issuing a Tentative Report.

SAFETY ASSESSMENT FLOW CHART

INGREDIENT/FAMILY Citrus Whole Plant & Seed-Derived Ingredients

MEETING Dec 2015



Citrus Plant- and Seed-Derived Ingredients History

December 2013 – Scientific Literature Review announced.

March 2014 - The Panel tabled further discussion of 198 citrus-derived ingredients to allow CIR staff to reorganize the report and to obtain clarification from RIFM on the functions of some of the ingredients. These ingredients were presented in a single safety assessment report addressing ingredients from all of the citrus plant species currently reported to be used in cosmetics in the International Cosmetic Ingredient Dictionary and Handbook. The Panel felt revising this report into smaller subgroups would be a manageable and meaningful alternative approach to assessing the safety of these ingredients. Based on the Panel's recommendation of grouping the ingredients by plant parts according to greatest number of uses, the first assessment reviewed by the Panel was citrus-derived peel oils, followed by citrus fruit-derived ingredients.

September 2015 – The Panel reviewed the report strategy for the remaining citrus ingredients. The Panel agreed that the remaining ingredients could be divided into 3 reports: citrus flower- and leaf-derived ingredients, citrus peel-derived ingredients, and citrus plant- and seed-derived ingredients. These reports can be reviewed concurrently.

Citrus Plant- and Seed-Derived Ingredients Data Profile – December 2015 – Writer, Christina Burnett										
	In-Use	Physical/Chemical Properties	Method of Manufacturing	Composition	Carcinogenicity	Irritation/Sensitization - Nonhuman	Irritation/Sensitization - Clinical	Ocular/Mucosal	Phototoxicity	Case Studies
citrus aurantifolia (lime) oil	X									
citrus aurantium amara (bitter orange) leaf/twig oil	X									
citrus aurantium dulcis (orange) oil	X									
citrus aurantium sinensis powder	X									
citrus grandis (grapefruit)	X									
citrus grandis (grapefruit) extract	X									
citrus grandis (grapefruit) seed extract	X									
citrus junos seed extract	X									
citrus junos seed oil	X									
citrus limon (lemon) flower/leaf/stem extract	X									
citrus nobilis (mandarin orange) oil	X									
citrus paradisi (grapefruit) seed extract	X									
citrus tangerine (tangerine) extract	X									
citrus aurantium (bitter orange) oil (not INCI ingredient)	X									
NO USES OR DATA WERE AVAILABLE FOR THE REMAINING CITRUS INGREDIENTS LISTED IN TABLE 1.										

“X” indicates that data were available in the category for that ingredient.

Search Strategy for Citrus Plant- and Seed-Derived Ingredients

- August 2014 – miscellaneous searches for additional data on constituents
- Scifinder – February 26, 2013
 - Search for INCI citrus ingredients w/ CAS No. – 99 hits, 10 ordered
- PubMed – March 5, 2013
 - Search for “citrus cosmetics” – 65 hits, 1 ordered
 - Search for “citrus sensitization” – 36 hits, 8 ordered
 - Search for “citrus dermal” – 12 hits, 0 ordered
 - Search for “citrus phototoxicity” – 24 hits, 10 ordered
- SciFinder – Aug 19 2013
 - toxicity of citrus ingredients – 11 hits; 1 ordered
 - carcinogenicity of citrus – 466 hits; 8 ordered
- SciFinder – Aug 20, 2013
 - Phototoxicity of citrus – 47 hits; 21 ordered
 - Dermal effects of citrus – 51 hits; 1 new ref found
 - Dermal absorption of citrus – 1 hit; not useful
 - Constituents of citrus – 116 hits;
 - Citrus – Belsito, Marks, Bergfeld, Api, RIFM– 2 found

Ordered a few others; printed some directly

Updated searches in November, 2013 – ordered an additional 4 references

Updated searches July 2015 with the term “citrus” – 1 new relevant reference found.

Updated searches October 2015 with the term “citrus AND toxicity” or “citrus AND irritation”– 0 new relevant references found.

Online Info

- FDA
 - GRAS definitions
- Dr. Duke’s Phytochemical and Ethnobotanical Databases
 - Due to volume of data, limited search to Citrus limon (Lemon), Citrus aurantifolia (Lime), Citrus paradisi (Grapefruit), Citrus sinensis (Sweet Orange), and Citrus aurantium (Bitter Orange)
- National Toxicology Program (NTP)
 - Bitter Orange Extract (mixture)
- SCCS/SCCP
 - Opinion on fragrance allergens in cosmetic products
 - Opinion on Furocoumarins in cosmetic products
- Sigma Aldrich
 - Citrus aurantiifolia (lime)
 - Citrus aurantium (bitter orange)
 - Citrus paradisi (grapefruit)
 - Citrus reticulata (tangerine)
- IFRA
 - 7-methoxycoumarin
 - Standard for citrus oils and other furocoumarins containing essential oils. Ingredients include:

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INTRODUCTION

This report assesses the safety of the 33 *Citrus* plant- and seed-derived ingredient listed below, which are reported to mainly function as skin conditioning agents-miscellaneous in cosmetic ingredients (Table 1).¹ Citrus aurantium (bitter orange) oil is not currently in *International Cosmetic Ingredient Dictionary and Handbook* but has been included in this report due to its high reported number of uses and presumed similarities to the other ingredients in this report. Two ingredients (citrus sunki seed extract and citrus sunki seed oil) are reported to function as skin bleaching agents, which are drug uses and not cosmetic uses.

citrus aurantifolia (lime) oil	citrus junos extract
citrus aurantium (bitter orange) oil	citrus junos seed extract
citrus aurantium amara (bitter orange) leaf/twig extract	citrus junos seed oil
citrus aurantium amara (bitter orange) leaf/twig oil	citrus limon (lemon) flower/leaf/stem extract
citrus aurantium dulcis (orange) flower/leaf/stem powder	citrus limon (lemon) flower/leaf/stem oil
citrus aurantium dulcis (orange) oil	citrus limon (lemon) leaf/peel/stem oil
citrus aurantium dulcis (orange) seed extract	citrus nobilis (mandarin orange)
citrus aurantium sinensis powder	citrus nobilis (mandarin orange) oil
citrus australasica seed oil	citrus nobilis (mandarin orange) water
citrus depressa seed oil	citrus paradisi (grapefruit) seed extract
citrus glauca seed oil	citrus sunki seed extract
citrus grandis (grapefruit)	citrus sunki seed oil
citrus grandis (grapefruit) extract	citrus reticulata (tangerine) extract
citrus grandis peel/seed extract	citrus tangerina (tangerine) extract
citrus grandis (grapefruit) seed extract	citrus unshiu extract
citrus iyo oil	citrus unshiu pericarp extract
citrus jabara pericarp extract	

The Panel has reviewed previously the safety of *Citrus*-derived peel oils and concluded that 14 *Citrus*-derived peel oil ingredients are safe for use in both rinse-off and leave-on cosmetic products when formulated to be non-sensitizing and non-irritating, provided that leave-on products do not contain more than 0.0015% (15 ppm) 5-methoxypsoralen (5-MOP).² The Panel has also reviewed the safety of citrus aurantifolia (lime) seed oil, citrus aurantifolia (lime) seed oil unsaponifiables, citrus aurantium dulcis (orange) seed oil, citrus aurantium dulcis (orange) seed oil unsaponifiables, citrus grandis (grapefruit) seed oil, citrus grandis (grapefruit) seed oil unsaponifiables, citrus limon (lemon) seed oil, and citrus paradisi (grapefruit) seed oil, and concluded that these ingredients were safe in the present practices of use and concentration as described in the safety assessment of plant-derived fatty acid oils.³ The Panel is concurrently reviewing the safety of *Citrus* fruit-derived ingredients, *Citrus* flower- and leaf-derived ingredients, and *Citrus* peel-derived ingredients.

The CIR does not review ingredients that function only as fragrance ingredients because, as fragrances, the safety of these ingredients is evaluated by the Research Institute for Fragrance Materials (RIFM). Three of the *Citrus* plant- and seed-derived ingredients in this report function only as fragrance ingredients, according to the *International Cosmetic Ingredient Dictionary and Handbook* (see Table 2).⁴ However, according to personal communications with RIFM in March 2015, these ingredients were not included in their review process, thus CIR is reviewing the safety of these ingredients.

Botanical ingredients such as those derived from *Citrus* are comprised of hundreds of constituents, some of which have the potential to cause toxic effects; for example, bergapten (aka 5-methoxypsoralen or 5-MOP) is a naturally-occurring phototoxic furanocoumarin (psoralen) in some *Citrus* ingredients. In this assessment, CIR is reviewing the potential toxicity of each *Citrus* plant- or seed-derived ingredient as a whole, complex substance. Except for specific constituents of concern that the Panel has identified, CIR is not reviewing the potential toxicity of the individual constituents of the *Citrus* plants and seeds from which the ingredients in this report are derived.

Note: In many of the published studies included in this assessment, the information provided is not sufficient to determine how well the substance being tested represents the cosmetic ingredient. In this safety assessment, if a substance tested in a study is not clearly a cosmetic ingredient, because of lack of information on the genus and species from which the substance was derived and/or the method of extraction used, the test substance will be referred to by a common name (e.g. lemon extract). If the substance is clearly a cosmetic ingredient, the International Nomenclature of Cosmetic Ingredients (INCI) name will be used (e.g. "citrus limon (lemon) extract"). Additionally, some inconsistencies were noted in both taxonomic and INCI naming conventions. For example, this report includes the sweet orange ingredient described as citrus aurantium dulcis (orange) in the *International Cosmetic Ingredient Dictionary and Handbook*.¹ In contrast, most of the published literature and the Food and Drug Administration (FDA) Voluntary Cosmetic Registration Program (VCRP) refer to this ingredient as citrus sinensis (sweet orange). Another example of a naming inconsistency is citrus grandis (grapefruit); *Citrus grandis* is generally considered a name for a pummelo, which may also be referred to as *Citrus maxima*. *Citrus paradisi* appears to be the more widely accepted nomenclature for grapefruit. The INCI Committee of the Personal Care Products Council (Council) is working to correct some of these inconsistencies. The genus and species names associated with the ingredient names designated by the INCI Committee are listed in Table 3.⁵

CHEMISTRY

Definition and General Characterization

The definitions and functions of the *Citrus* plant- and seed-derived ingredients included in this report are provided in Table 1. The definition indicates what part(s) of the plant from which an ingredient is obtained. In some cases, the definition provides insight on the method(s) of manufacture. Essential oils are the hydrophobic, liquid, volatile aroma compounds in the insoluble condensate fraction, and typically are small molecules, but their chemical structures can vary rather widely. Fixed oils, on the other hand are hydrophobic, nonvolatile, fatty compounds from plants, animals or algae. These are primarily composed of glycerides, and to some extent, free fatty acids. Constituents of these *Citrus*-derived ingredients may include both oil types. The volatile nature of essential oils makes them more likely to be useful as fragrances, but that does not necessitate that fragrance is their only function.

Physical and Chemical Properties

No published physical and chemical properties on *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted.

Method of Manufacturing

No published data on method of manufacturing for *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted.

Constituents/Composition

The *Citrus* ingredients are complex botanicals made up of numerous constituents. Table 4 lists *Citrus* constituents that are established contact allergens, according the European Commission's Scientific Committee on Consumer Safety (SCCS).⁶

USE

Cosmetic

The safety of these cosmetic ingredients is evaluated on the basis of the expected use in cosmetics. The Panel utilizes data received from the FDA and the cosmetics industry in determining safety. The data received from the FDA are those it collects from manufacturers on the use of individual ingredients in cosmetics by cosmetic product category in its Voluntary Cosmetic Registration Program (VCRP), and those from the cosmetic industry are submitted in response to a survey of the maximum reported use concentrations by category conducted by the Personal Care Products Council (Council).

According to the 2015 VCRP data, citrus aurantium (bitter orange) oil has the most reported uses of the ingredients in this report in cosmetic products, with a total of 276; more than half of the uses are in leave-on skin care preparations (Table 5).⁷ This ingredient is not currently in *International Cosmetic Ingredient Dictionary and Handbook* but has been included in this report due to its high reported number of uses and presumed similarities to the other ingredients in this report. This ingredient was not included in the concentration of use survey conducted by the Council in 2013. The ingredients with the next highest frequency of use are citrus aurantifolia (lime) oil (149 total uses) and citrus grandis (grapefruit) seed extract (143 total uses); a majority of the uses for these ingredients are in leave-on skin care preparations. The results of the concentration of use survey indicate citrus grandis (grapefruit) seed extract has the highest reported maximum concentration of use; it is used at up to 2% in a face and neck formulation.⁸ Citrus aurantium amara (bitter orange) leaf/twig oil had the second highest reported maximum concentration of use; it is used at up to 1.5% in a body and hand formulation.

In some cases, reports of uses were received from the VCRP, but no concentration of use data were provided. For example, citrus aurantifolia (lime) oil is reported to be used in 149 formulations, but no use concentration data were available. In other cases, no reported uses were reported to the VCRP, but a maximum use concentration was provided in the industry survey. For example, citrus junos seed oil was not reported in the VCRP database to be in use, but the industry survey indicated that it is used in face and neck and body and hand formulations at up to 0.1%. It should be presumed that citrus junos seed oil is used in at least one cosmetic formulation.

Table 6 lists all *Citrus* plant- and seed-derived ingredients not indicated to be in use based on the VCRP data or the results of the Council concentration of use survey. A survey is currently being conducted for the ingredients citrus australasica seed oil, citrus depressa seed oil, citrus glauca seed oil, citrus sunki seed extract, and citrus sunki seed oil. These ingredients have no reported uses in the VCRP database.

Some of these ingredients were reported to be used in hair sprays, fragrance preparations, and skin care preparations and could possibly be inhaled. For example, citrus aurantium dulcis (orange) oil was reported to be used in face and neck sprays at a maximum concentration of 0.011%. In practice, 95% to 99% of the droplets/particles released from cosmetic sprays have aerodynamic equivalent diameters >10 μm , with propellant sprays yielding a greater fraction of droplets/particles below 10 μm compared with pump sprays.⁹⁻¹² Therefore, most droplets/particles incidentally inhaled from cosmetic sprays would be deposited in the nasopharyngeal and bronchial regions and would not be respirable (i.e., they would not enter the

lungs) to any appreciable amount.^{10,11} There is some evidence indicating that deodorant spray products can release substantially larger fractions of particulates having aerodynamic equivalent diameters in the range considered to be respirable.¹¹ However, the information is not sufficient to determine whether significantly greater lung exposures result from the use of deodorant sprays, compared to other cosmetic sprays.

Under the rules governing cosmetic products in the European Union, *Citrus*-derived ingredients must have furocoumarin content below 1 mg/kg in sun-protection products and in bronzing products.¹³ The International Fragrance Association (IFRA) has issued standards for citrus oils and other furocoumarin-containing essential oils.¹⁴ Thus, finished products that are applied to the skin, excluding rinse-off products like bath preparations and soaps, must not contain more than 0.0015% or 15 ppm 5-MOP. This equates to 0.0075% or 75 ppm in a fragrance compound used at 20% in a consumer product that is applied to the skin. If the level of 5-MOP has not been determined, limits specified for individual oils should be observed, and when such oils are used in combination with other phototoxic ingredients, the potential for an additive effect should be considered and use levels should be reduced accordingly. Restrictions for furocoumarin-containing essential oils have been recommended for bergamot oil expressed, bitter orange oil expressed, grapefruit oil expressed, lemon oil cold pressed, and lime oil expressed.

An IFRA standard also has been issued for 7-methoxycoumarin, which is prohibited for use in fragrance compounds.¹⁵ Based on established maximum levels of this substance from commercially-available natural sources (like essential oils, extracts and absolutes), exposure to 7-methoxycoumarin from the use of these oils and extracts is regarded to be acceptable if the level of 7-methoxycoumarin in the finished product does not exceed 100 ppm. Based on this standard, the maximum concentration of lime cold pressed oil is 0.1%, for example

The IFRA has also set limits on the amounts of some *Citrus*-derived oils in finished products. For leave-on products applied to skin areas exposed to direct sunlight, these limits include: 1.25% bitter orange peel expressed;¹⁶ 0.4% bergamot oil expressed;¹⁷ 4% grapefruit oil expressed;¹⁸ 2% lemon oil cold-pressed;¹⁹ 0.7% lime oil expressed.²⁰ There are no restrictions for any of these oils in rinse-off products and products that are not applied to the skin. IFRA specified that if combinations of phototoxic fragrance ingredients are used, the use levels must be reduced accordingly, so that the sum of the concentrations of all phototoxic fragrance ingredients, expressed as a percentage of their respective recommended maximum levels, shall not exceed 100% in the consumer product. Additionally, the general standard described above for '*Citrus* oils and other furocoumarins-containing essential oils' must be considered.

Non-Cosmetic

Essential (or volatile) oils of limes, lemons, grapefruits, bitter oranges, oranges, and tangerines are described as flavoring agents in the *Food Chemicals Codex*, a compendium of internationally recognized standards published by the United States Pharmacopeia (USP) for the purity and identity of food ingredients.²¹

TOXICOKINETICS

No relevant published toxicokinetics studies on *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted: these type of data are not expected since these botanical ingredients are mixtures of hundreds of constituents.

TOXICOLOGICAL STUDIES

Acute Toxicity

No relevant published acute toxicity studies on *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted.

Repeated Dose Toxicity

No relevant published repeated dose toxicity studies on *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted.

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY

No relevant published reproductive and developmental studies on *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted.

GENOTOXICITY

No relevant published genotoxicity studies on *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted.

CARCINOGENICITY

No relevant published carcinogenicity studies on *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted.

IRRITATION AND SENSITIZATION

No relevant published irritation and sensitization studies on *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted.

CLINICAL STUDIES

No relevant published clinical studies on *Citrus* plant- and seed-derived ingredients were identified in a literature search for these ingredients and no unpublished data were submitted.

SUMMARY

The 33 *Citrus* plant- and seed-derived ingredients described in this report function primarily as skin conditioning agents-miscellaneous. Botanical ingredients such as those derived from *Citrus* are composed of hundreds of constituents, some of which have the potential to cause toxic effects; for example, bergapten (aka 5-methoxypsoralen or 5-MOP) is a naturally-occurring, phototoxic furanocoumarin (psoralen) in *Citrus*. Presently, CIR reviewed the information available on the potential toxicity of each *Citrus* plant- and seed-derived ingredient as a whole, complex substance; CIR did not review the potential toxicity information on the individual constituents of which the *Citrus* plant- and seed-derived ingredients are comprised.

Citrus aurantium (bitter orange) oil has the most reported uses of the ingredients in this report in cosmetic products, with a total of 276; more than half of the uses are in leave-on skin care preparations. This ingredient is not currently in *International Cosmetic Ingredient Dictionary and Handbook* but has been included in this report due to its high reported number of uses and presumed similarities to the other ingredients in this report. This ingredient was not included in the concentration of use survey conducted by the Council in 2013. The ingredients with the next highest frequency of use are citrus aurantifolia (lime) oil (149 total uses) and citrus grandis (grapefruit) seed extract (143 total uses); a majority of the uses for these ingredients are in leave-on skin care preparations. The results of the concentration of use survey indicate citrus grandis (grapefruit) seed extract has the highest reported maximum concentration of use; it is used at up to 2% in a face and neck formulation. *Citrus aurantium amara* (bitter orange) leaf/twig oil had the second highest reported maximum concentration of use; it is used at up to 1.5% in a body and hand formulation.

Under the rules governing cosmetic products in the European Union, *Citrus*-derived ingredients must have furocoumarin content below 1 mg/kg in sun-protection and bronzing products. IFRA also has issued standards for *Citrus* oils and other furocoumarin-containing essential oils. Finished products that are applied to the skin, excluding rinse-off products like bath preparations and soaps, must not contain more than 0.0015% or 15 ppm 5-MOP. If the level of 5-MOP has not been determined, limits specified for individual oils should be observed, and when such oils are used in combination with other phototoxic ingredients, the potential additive effect should be taken into consideration and use levels should be reduced accordingly.

No relevant published studies on the toxicokinetics, acute or repeated dose toxicity, reproductive and development toxicity, carcinogenicity, genotoxicity, irritation or sensitization, or clinical assessments of *Citrus* plant- and seed-derived ingredients were discovered and no unpublished data were submitted to address these topics.

TABLESTable 1. Definitions and functions of *Citrus* plant- and seed-derived ingredients. ⁴

Ingredient	Definition	Function
Citrus Aurantifolia (Lime) Oil CAS No. 8008-26-2	Citrus Aurantifolia (Lime) Oil is the volatile oil obtained from the whole plant, <i>Citrus aurantifolia</i> .	Fragrance Ingredients; Skin-Conditioning Agents - Miscellaneous
Citrus Aurantium (Bitter Orange) Oil	Not reported.	Not reported.
Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Extract CAS No. 72968-50-4; 8016-38-4	Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Extract is the extract of the leaves and twigs of <i>Citrus aurantium amara</i> .	Skin-Conditioning Agents - Miscellaneous
Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Oil	Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Oil is the volatile oil obtained from the leaves and twigs of <i>Citrus aurantium amara</i> .	Flavoring Agents; Fragrance Ingredients
Citrus Aurantium Dulcis (Orange) Flower/Leaf/Stem Powder	Citrus Aurantium Dulcis (Orange) Flower/Leaf/Stem Powder is the powder obtained from the dried, ground flowers, leaves and stems of <i>Citrus aurantium dulcis</i> .	Exfoliants
Citrus Aurantium Dulcis (Orange) Oil	Citrus Aurantium Dulcis (Orange) Oil is the volatile oil obtained from the whole plant, <i>Citrus aurantium dulcis</i> .	Fragrance Ingredients
Citrus Aurantium Dulcis (Orange) Seed Extract	Citrus Aurantium Dulcis (Orange) Seed Extract is the extract of the seeds of <i>Citrus aurantium dulcis</i> .	Skin-Conditioning Agents - Miscellaneous
Citrus Aurantium Sinensis Powder	Citrus Aurantium Sinensis Powder is the powder obtained the dried ground plant, <i>Citrus aurantium sinensis</i> .	Exfoliants
Citrus Australasica Seed Oil CAS No. 1174331-57-7 (generic)	Citrus Australasica Seed Oil is the fixed oil expressed from the seeds of <i>Citrus australasica</i> .	Antioxidants; Hair Conditioning Agents; Humectants; Skin-Conditioning Agents - Miscellaneous
Citrus Depressa Seed Oil	Citrus Depressa Seed Oil is the oil expressed from the seeds of <i>Citrus depressa</i> . The accepted scientific name for <i>Citrus depressa</i> is <i>Citrus reticulata</i> .	Skin-Conditioning Agents - Emollient
Citrus Glauca Seed Oil	Citrus Glauca Seed Oil is the oil expressed from the seeds of <i>Citrus glauca</i> .	Antioxidants; Humectants; Skin Protectants; Skin-Conditioning Agents - Emollient; Skin-Conditioning Agents - Humectant
Citrus Grandis (Grapefruit)	Citrus Grandis (Grapefruit) is a plant material derived from the whole plant, <i>Citrus grandis</i> .	Not reported
Citrus Grandis (Grapefruit) Extract	Citrus Grandis (Grapefruit) Extract is the extract of the whole plant, <i>Citrus grandis</i> .	Skin-Conditioning Agents - Miscellaneous
Citrus Grandis Peel/Seed Extract	Citrus Grandis Peel/Seed Extract is the extract of the peel and seeds of <i>Citrus grandis</i> .	Antifungal Agents; Antimicrobial Agents; Preservatives
Citrus Grandis (Grapefruit) Seed Extract	Citrus Grandis (Grapefruit) Seed Extract is the extract of the seeds of <i>Citrus grandis</i> .	Preservatives; Skin-Conditioning Agents - Miscellaneous
Citrus Iyo Oil	Citrus Iyo Oil is the oil expressed from the whole plant, <i>Citrus iyo</i> .	Skin-Conditioning Agents - Emollient
Citrus Jabara Pericarp Extract	Citrus Jabara Pericarp Extract is the extract of the pericarp of <i>Citrus jabara</i> .	Humectants; Skin-Conditioning Agents - Miscellaneous
Citrus Junos Extract	Citrus Junos Extract is the extract of the whole plant, <i>Citrus junos</i> .	Antioxidants
Citrus Junos Seed Extract	Citrus Junos Seed Extract is the extract of the seeds of <i>Citrus junos</i> .	Antioxidants
Citrus Junos Seed Oil	Citrus Junos Seed Oil is the oil expressed from the seeds of <i>Citrus junos</i> .	Skin-Conditioning Agents - Emollient
Citrus Limon (Lemon) Flower/Leaf/Stem Extract CAS No. 84929-31-7; 85085-28-5	Citrus Limon (Lemon) Flower/Leaf/Stem Extract is the extract of the flowers, leaves and stems of <i>Citrus limon</i> .	Fragrance Ingredients; Skin-Conditioning Agents - Miscellaneous
Citrus Limon (Lemon) Flower/Leaf/Stem Oil CAS No. 84929-31-7; 85085-28-5	Citrus Limon (Lemon) Flower/Leaf/Stem Oil is the volatile oil obtained from the flowers, leaves and stems of <i>Citrus limon</i> .	Fragrance Ingredients
Citrus Limon (Lemon) Leaf/Peel/Stem Oil CAS No. 84929-31-7; 85085-28-5	Citrus Limon (Lemon) Leaf/Peel/Stem Oil is the volatile oil obtained from the leaves, peels, and stems of <i>Citrus limon</i> .	Skin-Conditioning Agents - Miscellaneous
Citrus Nobilis (Mandarin Orange)	Citrus Nobilis (Mandarin Orange) is a plant material derived from the whole plant, <i>Citrus nobilis</i> .	Not reported
Citrus Nobilis (Mandarin Orange) Oil	Citrus Nobilis (Mandarin Orange) Oil is the volatile oil obtained from the whole plant, <i>Citrus nobilis</i> .	Fragrance Ingredients
Citrus Nobilis (Mandarin Orange) Water	Citrus Nobilis (Mandarin Orange) Water is an aqueous solution of the steam distillate obtained from <i>Citrus nobilis</i> .	Skin-Conditioning Agents - Miscellaneous
Citrus Paradisi (Grapefruit) Seed Extract CAS No. 90045-43-5 (generic)	Citrus Paradisi (Grapefruit) Seed Extract is the extract of the seeds of <i>Citrus paradisi</i> .	Skin-Conditioning Agents - Miscellaneous
Citrus Reticulata (Tangerine) Extract	Citrus Reticulata (Tangerine) Extract is the extract of the whole plant, <i>Citrus reticulata</i> .	Skin-Conditioning Agents - Miscellaneous
Citrus Sunki Seed Extract	Citrus Sunki Seed Extract is the extract of the seeds of <i>Citrus sunki</i> . The accepted scientific name for <i>Citrus sunki</i> is <i>Citrus reticulata</i> .	Antioxidants; Skin Bleaching Agents; Skin-Conditioning Agents - Miscellaneous

Table 1. Definitions and functions of *Citrus* plant- and seed-derived ingredients. ⁴

Ingredient	Definition	Function
Citrus Sunki Seed Oil	Citrus Sunki Seed Oil is the oil expressed from the seeds of <i>Citrus sunki</i> . The accepted scientific name for <i>Citrus sunki</i> is <i>Citrus reticulata</i> .	Antioxidants; Skin Bleaching Agents; Skin-Conditioning Agents - Miscellaneous
Citrus Tangerina (Tangerine) Extract	Citrus Tangerina (Tangerine) Extract is the extract of the tangerine, <i>Citrus tangerina</i> .	Skin-Conditioning Agents - Miscellaneous
Citrus Unshiu Extract CAS No. 98106-71-9	Citrus Unshiu Extract is the extract of the whole plant, <i>Citrus unshiu</i> .	Skin-Conditioning Agents - Miscellaneous
Citrus Unshiu Pericarp Extract	Citrus Unshiu Pericarp Extract is the extract of the pericarp of <i>Citrus unshiu</i> .	Skin-Conditioning Agents - Miscellaneous

Table 2. *Citrus* plant- and seed-derived ingredients that potentially function solely as fragrance ingredients.

Citrus Aurantium Dulcis (Orange) Oil
Citrus Limon (Lemon) Flower/Leaf/Stem Oil
Citrus Nobilis (Mandarin Orange) Oil

Table 3. Review of *Citrus* genus species names⁵

Genus Species Name Used in INCI Names (common name)	Accepted Genus Species Name
<i>Citrus aurantifolia</i> (lime)	<i>Citrus x aurantifolia</i>
<i>Citrus aurantium amara</i> (bitter orange)	<i>Citrus x aurantium</i>
<i>Citrus aurantium bergamia</i> (bergamot)	<i>Citrus x limon</i>
<i>Citrus aurantium dulcis</i> (orange)	<i>Citrus x aurantium</i>
<i>Citrus clementina</i> (clementine)	<i>Citrus x aurantium</i>
<i>Citrus depressa</i>	<i>Citrus reticulata</i>
<i>Citrus glauca</i>	<i>Citrus glauca</i>
<i>Citrus grandis</i> (grapefruit or pomelo)	<i>Citrus maxima</i> or <i>Citrus x aurantium</i>
<i>Citrus hassaku</i>	<i>Citrus medica x Citrus x aurantium</i>
<i>Citrus iyo</i>	<i>Citrus x aurantium</i>
<i>Citrus jabara</i>	Not known
<i>Citrus japonica</i> (kumquat)	<i>Citrus japonica</i>
<i>Citrus junos</i>	<i>Citrus x junos</i>
<i>Citrus limon</i> (lemon)	<i>Citrus x limon</i>
<i>Citrus madurensis</i>	<i>Citrus x microcarpa</i>
<i>Citrus medica vulgaris</i>	<i>Citrus reticulata</i>
<i>Citrus natsudaidai</i>	<i>Citrus x aurantium</i>
<i>Citrus nobilis</i> (mandarin orange)	<i>Citrus reticulata</i>
<i>Citrus paradisi</i> (grapefruit)	<i>Citrus x aurantium</i>
<i>Citrus reticulata</i> (tangerine)	<i>Citrus reticulata</i>
<i>Citrus shunkokan</i>	Cultivated hybrid
<i>Citrus sinensis</i> (orange)	<i>Citrus x aurantium</i>
<i>Citrus sphaerocarpa</i>	Cultivated hybrid
<i>Citrus sudachi</i>	<i>Citrus reticulata</i>
<i>Citrus tachibana</i>	Not listed
<i>Citrus tamurana</i>	Cultivated hybrid
<i>Citrus tangelo</i> (tangelo)	<i>Citrus x aurantium</i>
<i>Citrus tangerine</i> (tangerine)	<i>Citrus reticulata</i>
<i>Citrus tankan</i>	<i>Citrus reticulata</i>
<i>Citrus unshiu</i>	<i>Citrus reticulata</i>

Table 4. Constituents that are established contact allergens in humans, according to the SCCS

Constituent	categorized according to number of patients reacting positively and to the number of patients tested (>1000 patients tested, unless indicated as r.t., i.e., rarely tested) ⁶
β -caryophyllene	≤ 10 (oxidized and non-oxidized)
carvone	≤ 10 (r.t.)
citral	101 to 1000
citronellol	11-100
coumarin	101 to 1000
farnesol	101 to 1000
geraniol	101 to 1000
linalyl acetate	≤ 10
α - and β -pinene	11-100
(DL)-limonene	11-100 (non-oxidized); 101 to 1000 (oxidized)
terpineol (mixture of isomers)/ α -terpineol	≤ 10
terpinolene	11-100

Table 5. Frequency (2015) and concentration of use (2013) according to duration and type of exposure for *Citrus* plant- and seed-derived ingredients.^{7,8}

	<i># of Uses</i>	<i>Max Conc of Use (%)</i>	<i># of Uses</i>	<i>Max Conc of Use (%)</i>	<i># of Uses</i>	<i>Max Conc of Use (%)</i>	<i># of Uses</i>	<i>Max Conc of Use (%)</i>
	Citrus Junos Seed Extract		Citrus Junos Seed Oil		Citrus Limon (Lemon) Flower/Leaf/Stem Extract		Citrus Nobilis (Mandarin Orange) Oil	
Totals[†]	7	0.001-0.0045	NR	0.01-0.1	8	NR	36	0.075
<i>Duration of Use</i>								
Leave-On	7	0.001-0.0045	NR	0.01-0.1	8	NR	28	0.075
Rinse Off	NR	0.001	NR	NR	NR	NR	4	NR
Diluted for (Bath) Use	NR	0.001	NR	NR	NR	NR	4	NR
<i>Exposure Type</i>								
Eye Area	1	0.001	NR	NR	NR	NR	NR	NR
Incidental Ingestion	NR	NR	NR	NR	NR	NR	1	NR
Incidental Inhalation-Spray	4 ^a ; 2 ^b	NR	NR	0.01 ^a	6 ^a ; 1 ^b	NR	8; 2 ^a ; 4 ^b	NR
Incidental Inhalation-Powder	2 ^b	0.0045 ^c	NR	0.1 ^c	1 ^b	NR	4 ^b ; 1 ^c	NR
Dermal Contact	7	0.001-0.0045	NR	0.1	8	NR	35	0.075
Deodorant (underarm)	NR	NR	NR	NR	NR	NR	NR	NR
Hair - Non-Coloring	NR	NR	NR	0.01	NR	NR	NR	NR
Hair-Coloring	NR	NR	NR	NR	NR	NR	NR	NR
Nail	NR	NR	NR	NR	NR	NR	NR	NR
Mucous Membrane	NR	0.001	NR	NR	NR	NR	7	NR
Baby Products	NR	NR	NR	NR	NR	NR	2	NR

	Citrus Paradisi (Grapefruit) Seed Extract		Citrus Tangerina (Tangerine) Extract	
Totals[†]	44	NR	16	NR
<i>Duration of Use</i>				
Leave-On	33	NR	4	NR
Rinse Off	11	NR	12	NR
Diluted for (Bath) Use	NR	NR	NR	NR
<i>Exposure Type</i>				
Eye Area	NR	NR	NR	NR
Incidental Ingestion	NR	NR	NR	NR
Incidental Inhalation-Spray	16 ^a ; 11 ^b	NR	1; 1 ^a ; 1 ^b	NR
Incidental Inhalation-Powder	11 ^b ; 1 ^c	NR	1 ^b	NR
Dermal Contact	43	NR	5	NR
Deodorant (underarm)	NR	NR	NR	NR
Hair - Non-Coloring	1	NR	11	NR
Hair-Coloring	NR	NR	NR	NR
Nail	NR	NR	NR	NR
Mucous Membrane	6	NR	2	NR
Baby Products	2	NR	NR	NR

NR = Not reported.

† Because each ingredient may be used in cosmetics with multiple exposure types, the sum of all exposure types may not equal the sum of total uses.

^a It is possible these products may be sprays, but it is not specified whether the reported uses are sprays.^b Not specified whether a powder or a spray, so this information is captured for both categories of incidental inhalation.^c It is possible these products may be powders, but it is not specified whether the reported uses are powders.^d Listed as Citrus Aurantium (Bitter Orange) Leaf/Twig Oil in the VCRP database.^e Only listed in the VCRP database, not in the INCI dictionary. Included because of assumed similarity.^f Listed as Citrus Sinensis (Sweet Orange) Plant Oil in the VCRP database.^g Listed as Citrus Sinensis (Orange) Powder in the VCRP database.

Table 6. Ingredients that are not reported to be in use

Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Extract
Citrus Aurantium Dulcis (Orange) Flower/Leaf/Stem Powder
Citrus Aurantium Dulcis (Orange) Seed Extract
Citrus Aurantium Sinensis Powder
Citrus Grandis Peel/Seed Extract
Citrus Iyo Oil
Citrus Jabara Pericarp Extract
Citrus Junos Extract
Citrus Limon (Lemon) Flower/Leaf/Stem Oil
Citrus Limon (Lemon) Leaf/Peel/Stem Oil
Citrus Nobilis (Mandarin Orange)
Citrus Unshiu Extract
Citrus Unshiu Pericarp Extract

REFERENCES

1. Nikitakis J and Breslawec HP. International Cosmetic Ingredient Dictionary and Handbook. 15 ed. Washington, DC: Personal Care Products Council, 2014.
2. Burnett CL, Fiume MM, Bergfeld WF, Belsito DV, Hill RA, Klaassen CD, Liebler DC, Marks JG, Shank RC, Slaga TJ, Snyder PW, and Gill LG. Safety Assessment of Citrus-Derived Peel Oils as Used in Cosmetics. 1620 L Street NW, Suite 1200, Washington, DC 20036-4702, Cosmetic Ingredient Review. 2014.
3. Burnett CL, Fiume MM, Bergfeld WF, Belsito DV, Hill RA, Klaassen CD, Liebler DC, Marks JG, Shank RC, Slaga TJ, Snyder PW, and Andersen FA. Final Report on Plant-Derived Fatty Acid Oils as Used in Cosmetics. Cosmetic Ingredient Review. 2011.
4. Gottschalck TE and Breslawec H. International Cosmetic Ingredient Dictionary and Handbook. Washington, DC: Personal Care Products Council, 2012.
5. Personal Care Products Council. 6-5-2015. Review of Citrus Genus Species Names.
6. European Commission. Scientific Committee on Consumer Safety (SCCS) opinion on fragrance allergens in cosmetic products. http://ec.europa.eu/health/scientific_committees/consumer_safety/docs/sccs_o_102.pdf. Last Updated 2012. Date Accessed 9-3-2013.
7. Food and Drug Administration (FDA). Frequency of use of cosmetic ingredients. *FDA Database*. 2015. Washington, DC: FDA.
8. Personal Care Products Council. 7-25-2013. Concentration of use by FDA Product Category: Citrus Derived Ingredients. 24 pages.
9. Rothe H, Fautz R, Gerber E, Neumann L, Rettinger K, Schuh W, and Gronewold C. Special aspects of cosmetic spray safety evaluations: Principles on inhalation risk assessment. *Toxicol Lett*. 2011;205(2):97-104.
10. Rothe H. Special Aspects of Cosmetic Spray Evaluation. 9-26-2011.
11. Bremmer HJ, Prud'homme de Lodder LCH, and Engelen JGM. Cosmetics Fact Sheet: To assess the risks for the consumer; Updated version for ConsExpo 4. 2006. Report No. RIVM 320104001/2006. pp. 1-77.
12. Johnsen MA. The Influence of Particle Size. *Spray Technology and Marketing*. 2004;14(11):24-27.
13. European Commission. Scientific Committee on Consumer Products (SCCP) Opinion on Furocoumarins in Cosmetic Products. 12-13-2005. http://ec.europa.eu/health/ph_risk/committees/04_sccp/docs/sccp_o_036.pdf. Date Accessed 6-3-2013. Report No. SCCP/0942/05.
14. International Fragrance Association. IFRA standard for citrus oils and other furocoumarins-containing essential oils. http://www.ifraorg.org/en-us/standards_restricted. Last Updated 10-14-2009. Date Accessed 2-26-2013.
15. International Fragrance Association. IFRA standard for 7-methoxycoumarin. <http://www.ifraorg.org/en-us/search/s/lime#.UiQD0TXD-Uk>. Last Updated 2009. Date Accessed 9-1-2013.
16. International Fragrance Association. IFRA standard for bitter orange peel oil expressed. www.ifraorg.org/view_document.aspx?docId=23155. Last Updated 2009. Date Accessed 3-7-2013.
17. International Fragrance Association. IFRA standard for bergamot oil expressed. http://www.ifraorg.org/en-us/search/s/bergamot_oil_expressed#.UiQCGTXD-Uk. Last Updated 2009. Date Accessed 9-1-2013.

18. International Fragrance Association. IFRA standard for grapefruit oil expressed. http://www.ifraorg.org/en-us/search/s/grapefruit_oil_expressed#.UiP-7DXD-Uk. Last Updated 2009. Date Accessed 3-7-0013.
19. International Fragrance Association. IFRA standard for lemon oil cold pressed. http://www.ifraorg.org/en-us/search/s/lemon_oil_cold_pressed#.UiQAQDXD-Uk. Last Updated 2009. Date Accessed 3-7-2013.
20. International Fragrance Association. IFRA standard for lime oil expressed. http://www.ifraorg.org/en-us/search/s/lime_oil_expressed#.UiQA_zXD-Uk. Last Updated 2009. Date Accessed 9-1-2013.
21. Council of Experts, United States Pharmacopeial Convention. Food Chemicals Codex. 8th *ed.* Rockville, MD: United States Pharmacopeia (USP), 2012.

2015 FDA Raw Data
Citrus Plant- and Seed-Derived Ingredients

8008262	CITRUS AURANTIFOLIA (LIME) OIL	01A - Baby Shampoos	1
8008262	CITRUS AURANTIFOLIA (LIME) OIL	01B - Baby Lotions, Oils, Powders, and Creams	1
8008262	CITRUS AURANTIFOLIA (LIME) OIL	01C - Other Baby Products	1
8008262	CITRUS AURANTIFOLIA (LIME) OIL	02A - Bath Oils, Tablets, and Salts	5
8008262	CITRUS AURANTIFOLIA (LIME) OIL	02B - Bubble Baths	4
8008262	CITRUS AURANTIFOLIA (LIME) OIL	04B – Perfumes	1
8008262	CITRUS AURANTIFOLIA (LIME) OIL	04E - Other Fragrance Preparation	8
8008262	CITRUS AURANTIFOLIA (LIME) OIL	05A - Hair Conditioner	6
8008262	CITRUS AURANTIFOLIA (LIME) OIL	05F - Shampoos (non-coloring)	5
8008262	CITRUS AURANTIFOLIA (LIME) OIL	05G - Tonics, Dressings, and Other Hair Grooming Aids	5
8008262	CITRUS AURANTIFOLIA (LIME) OIL	07F - Makeup Bases	1
8008262	CITRUS AURANTIFOLIA (LIME) OIL	07I - Other Makeup Preparations	2
8008262	CITRUS AURANTIFOLIA (LIME) OIL	10A - Bath Soaps and Detergents	16
8008262	CITRUS AURANTIFOLIA (LIME) OIL	10E - Other Personal Cleanliness Products	8
8008262	CITRUS AURANTIFOLIA (LIME) OIL	11B - Beard Softeners	1
8008262	CITRUS AURANTIFOLIA (LIME) OIL	11D - Preshave Lotions (all types)	1
8008262	CITRUS AURANTIFOLIA (LIME) OIL	11E - Shaving Cream	5
8008262	CITRUS AURANTIFOLIA (LIME) OIL	11G - Other Shaving Preparation Products	2
8008262	CITRUS AURANTIFOLIA (LIME) OIL	12A – Cleansing	14
8008262	CITRUS AURANTIFOLIA (LIME) OIL	12C - Face and Neck (exc shave)	17
8008262	CITRUS AURANTIFOLIA (LIME) OIL	12D - Body and Hand (exc shave)	11
8008262	CITRUS AURANTIFOLIA (LIME) OIL	12F – Moisturizing	20
8008262	CITRUS AURANTIFOLIA (LIME) OIL	12G – Night	1

8008262	CITRUS AURANTIFOLIA (LIME) OIL	12H - Paste Masks (mud packs)	1
8008262	CITRUS AURANTIFOLIA (LIME) OIL	12I - Skin Fresheners	6
8008262	CITRUS AURANTIFOLIA (LIME) OIL	12J - Other Skin Care Preps	5
8008262	CITRUS AURANTIFOLIA (LIME) OIL	13A - Suntan Gels, Creams, and Liquids	1
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	02A - Bath Oils, Tablets, and Salts	3
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	02B - Bubble Baths	1
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	05A - Hair Conditioner	1
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	10A - Bath Soaps and Detergents	5
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	10E - Other Personal Cleanliness Products	1
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	12A – Cleansing	3
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	12C - Face and Neck (exc shave)	6
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	12D - Body and Hand (exc shave)	5
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	12F – Moisturizing	7
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	12G – Night	4
99900114 2	CITRUS AURANTIUM (BITTER ORANGE) LEAF/TWIG OIL	12J - Other Skin Care Preps	3
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	01B - Baby Lotions, Oils, Powders, and Creams	1

99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	01C - Other Baby Products	5
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	02A - Bath Oils, Tablets, and Salts	16
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	02B - Bubble Baths	3
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	02C - Bath Capsules	1
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	02D - Other Bath Preparations	1
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	04A - Cologne and Toilet waters	1
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	04B – Perfumes	14
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	04E - Other Fragrance Preparation	15
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	05A - Hair Conditioner	8
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	05B - Hair Spray (aerosol fixatives)	1
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	05C - Hair Straighteners	1
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	05E - Rinses (non-coloring)	1
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	05F - Shampoos (non-coloring)	12
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	05G - Tonics, Dressings, and Other Hair Grooming Aids	4
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	05I - Other Hair Preparations	1
99900224	CITRUS AURANTIUM (BITTER	06A - Hair Dyes and Colors (all types requiring caution statements and patch	3

2	ORANGE) OIL	tests)	
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	06D - Hair Shampoos (coloring)	5
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	07E – Lipstick	1
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	07F - Makeup Bases	2
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	07I - Other Makeup Preparations	1
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	09C - Other Oral Hygiene Products	1
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	10A - Bath Soaps and Detergents	19
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	10E - Other Personal Cleanliness Products	10
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	11E - Shaving Cream	2
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	12A – Cleansing	21
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	12C - Face and Neck (exc shave)	13
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	12D - Body and Hand (exc shave)	34
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	12F – Moisturizing	22
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	12G – Night	2
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	12H - Paste Masks (mud packs)	4
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	12I - Skin Fresheners	6

99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	12J - Other Skin Care Preps	44
99900224 2	CITRUS AURANTIUM (BITTER ORANGE) OIL	13B - Indoor Tanning Preparations	1
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	01B - Baby Lotions, Oils, Powders, and Creams	2
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	01C - Other Baby Products	5
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	02A - Bath Oils, Tablets, and Salts	5
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	02B - Bubble Baths	3
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	03D - Eye Lotion	2
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	03F – Mascara	3
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	04E - Other Fragrance Preparation	1
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	05A - Hair Conditioner	9
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	05B - Hair Spray (aerosol fixatives)	1
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	05E - Rinses (non-coloring)	2
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	05F - Shampoos (non-coloring)	9
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	05G - Tonics, Dressings, and Other Hair Grooming Aids	5
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	07C – Foundations	5

99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	07F - Makeup Bases	1
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	09A – Dentifrices	9
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	09B - Mouthwashes and Breath Fresheners	2
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	09C - Other Oral Hygiene Products	1
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	10A - Bath Soaps and Detergents	7
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	10B - Deodorants (underarm)	14
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	12A – Cleansing	13
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	12C - Face and Neck (exc shave)	7
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	12D - Body and Hand (exc shave)	11
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	12F – Moisturizing	9
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	12H - Paste Masks (mud packs)	2
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	12I - Skin Fresheners	12
99900197 8	CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT	12J - Other Skin Care Preps	3
99900208 1	CITRUS JUNOS SEED EXTRACT	03G - Other Eye Makeup Preparations	1
99900208 1	CITRUS JUNOS SEED EXTRACT	12C - Face and Neck (exc shave)	1


99900208 1	CITRUS JUNOS SEED EXTRACT	12D - Body and Hand (exc shave)	1
99900208 1	CITRUS JUNOS SEED EXTRACT	12F – Moisturizing	4
99900401 6	CITRUS LIMON (LEMON) FLOWER/LEAF/STEM EXTRACT	12C - Face and Neck (exc shave)	1
99900401 6	CITRUS LIMON (LEMON) FLOWER/LEAF/STEM EXTRACT	12F – Moisturizing	6
99900401 6	CITRUS LIMON (LEMON) FLOWER/LEAF/STEM EXTRACT	12J - Other Skin Care Preps	1
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	01B - Baby Lotions, Oils, Powders, and Creams	1
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	01C - Other Baby Products	1
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	02A - Bath Oils, Tablets, and Salts	4
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	04B - Perfumes	4
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	04E - Other Fragrance Preparation	4
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	07I - Other Makeup Preparations	1
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	09A - Dentifrices	1
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	10A - Bath Soaps and Detergents	2
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	12A - Cleansing	1

99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	12D - Body and Hand (exc shave)	4
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	12F - Moisturizing	2
99900197 7	CITRUS NOBILIS (MANDARIN ORANGE) OIL	12J - Other Skin Care Preps	11
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	01B - Baby Lotions, Oils, Powders, and Creams	1
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	01C - Other Baby Products	1
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	05A - Hair Conditioner	1
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	07I - Other Makeup Preparations	1
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	10A - Bath Soaps and Detergents	6
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	11B - Beard Softeners	1
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	12A - Cleansing	4
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	12D - Body and Hand (exc shave)	11
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	12F - Moisturizing	14
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	12G - Night	1
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	12J - Other Skin Care Preps	2
97704099 5	CITRUS PARADISI (GRAPEFRUIT) SEED EXTRACT	13A - Suntan Gels, Creams, and Liquids	1

99900352 2	CITRUS SINENSIS (ORANGE) POWDER	12C - Face and Neck (exc shave)	1
99900400 1	CITRUS SINENSIS (SWEET ORANGE) PLANT OIL	02A - Bath Oils, Tablets, and Salts	1
99900400 1	CITRUS SINENSIS (SWEET ORANGE) PLANT OIL	04B - Perfumes	1
99900400 1	CITRUS SINENSIS (SWEET ORANGE) PLANT OIL	05G - Tonics, Dressings, and Other Hair Grooming Aids	1
99900400 1	CITRUS SINENSIS (SWEET ORANGE) PLANT OIL	12I - Skin Fresheners	1
99900272 7	CITRUS TANGERINA (TANGERINE) EXTRACT	04E - Other Fragrance Preparation	1
99900272 7	CITRUS TANGERINA (TANGERINE) EXTRACT	05A - Hair Conditioner	4
99900272 7	CITRUS TANGERINA (TANGERINE) EXTRACT	05F - Shampoos (non-coloring)	6
99900272 7	CITRUS TANGERINA (TANGERINE) EXTRACT	05G - Tonics, Dressings, and Other Hair Grooming Aids	1
99900272 7	CITRUS TANGERINA (TANGERINE) EXTRACT	10A - Bath Soaps and Detergents	2
99900272 7	CITRUS TANGERINA (TANGERINE) EXTRACT	12D - Body and Hand (exc shave)	1
99900272 7	CITRUS TANGERINA (TANGERINE) EXTRACT	12J - Other Skin Care Preps	1



TO: Lillian Gill, Ph.D.
Director - COSMETIC INGREDIENT REVIEW (CIR)

FROM: Halyna Breslawec, Ph.D.
Industry Liaison to the CIR Expert Panel 

DATE: July 25, 2013

SUBJECT: Concentration of Use by FDA Product Category: Citrus-Derived Ingredients

Concentration of Use by FDA Product Category - Citrus-Derived Ingredients*

Citrus Aurantifolia (Lime)/Citrus Limon (Lemon) Fruit Water	Citrus Aurantium Dulcis (Orange) Flower Extract
Citrus Aurantifolia (Lime) Flower Extract	Citrus Aurantium Dulcis (Orange) Flower/Leaf/Stem Powder
Citrus Aurantifolia (Lime) Fruit	Citrus Aurantium Dulcis (Orange) Flower Oil
Citrus Aurantifolia (Lime) Fruit Extract	Citrus Aurantium Dulcis (Orange) Flower Water
Citrus Aurantifolia (Lime) Fruit Water	Citrus Aurantium Dulcis (Orange) Flower Wax
Citrus Aurantifolia (Lime) Juice	Citrus Aurantium Dulcis (Orange) Fruit Extract
Citrus Aurantifolia (Lime) Leaf Oil	Citrus Aurantium Dulcis (Orange) Fruit Powder
Citrus Aurantifolia (Lime) Oil	Citrus Aurantium Dulcis (Orange) Fruit Water
Citrus Aurantifolia (Lime) Peel	Citrus Aurantium Dulcis (Orange) Juice
Citrus Aurantifolia (Lime) Peel Extract	Citrus Aurantium Dulcis (Orange) Leaf Extract
Citrus Aurantifolia (Lime) Peel Oil	Citrus Aurantium Dulcis (Orange) Oil
Citrus Aurantifolia (Lime) Peel Powder	Citrus Aurantium Dulcis (Orange) Peel Extract
Citrus Aurantifolia (Lime) Peel Water	Citrus Aurantium Dulcis (Orange) Peel Oil
Citrus Aurantifolia (Lime) Seed Oil	Citrus Aurantium Dulcis (Orange) Peel Powder
Citrus Aurantifolia (Lime) Seed Oil Unsaponifiables	Citrus Aurantium Dulcis (Orange) Peel Wax
Citrus Aurantium Amara (Bitter Orange) Flower Extract	Citrus Aurantium Dulcis (Orange) Seed Extract
Citrus Aurantium Amara (Bitter Orange) Flower Oil	Citrus Aurantium Dulcis (Orange) Seed Oil
Citrus Aurantium Amara (Bitter Orange) Flower Water	Citrus Aurantium Dulcis (Orange) Seed Oil Unsaponifiables
Citrus Aurantium Amara (Bitter Orange) Flower Wax	Citrus Aurantium Sinensis (Orange) Fiber
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	Citrus Aurantium Sinensis Peel Extract
Citrus Aurantium Amara (Bitter Orange) Fruit Juice Extract	Citrus Aurantium Sinensis Powder
Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Extract	Citrus Aurantium Tachibana Peel Extract
Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Oil	Citrus Clementina Fruit Extract
Citrus Aurantium Amara (Bitter Orange) Peel	Citrus Clementina Juice
Citrus Aurantium Amara (Bitter Orange) Peel Extract	Citrus Clementina Peel Oil
Citrus Aurantium Amara (Bitter Orange) Peel Oil	Citrus Depressa Fruit Extract
Citrus Aurantium Amara (Bitter Orange) Peel Powder	Citrus Depressa Fruit Water
Citrus Aurantium Bergamia (Bergamot) Fruit Extract	Citrus Depressa Peel Extract
Citrus Aurantium Bergamia (Bergamot) Fruit Oil	Citrus Depressa Peel Powder
Citrus Aurantium Bergamia (Bergamot) Fruit Water	Citrus Glauca Fruit Extract
Citrus Aurantium Bergamia (Bergamot) Leaf Extract	Citrus Grandis (Grapefruit)
Citrus Aurantium Bergamia (Bergamot) Leaf Oil	Citrus Grandis (Grapefruit) Extract
Citrus Aurantium Bergamia (Bergamot) Peel Oil	Citrus Grandis (Grapefruit) Fruit Extract
Citrus Aurantium Bergamia (Bergamot) Peel Water	Citrus Grandis (Grapefruit) Fruit Water
Citrus Aurantium Curassuiviensis Peel Oil	Citrus Grandis (Grapefruit) Juice
Citrus Aurantium Dulcis (Orange) Flower	Citrus Grandis (Grapefruit) Leaf Extract

Citrus Grandis (Grapefruit) Peel
 Citrus Grandis (Grapefruit) Peel Extract
 Citrus Grandis (Grapefruit) Peel Oil
 Citrus Grandis (Grapefruit) Peel Powder
 Citrus Grandis (Grapefruit) Seed Extract
 Citrus Grandis (Grapefruit) Seed Oil
 Citrus Grandis (Grapefruit) Seed Oil Unsapomifiabiles
 Citrus Grandis/Paradisi Fruit Water
 Citrus Grandis Peel/Seed Extract
 Citrus Hassaku Fruit Extract
 Citrus Hassaku/Natsudaikai Fruit Juice
 Citrus Hassaku/Natsudaikai Fruit Powder
 Citrus Hassaku/Natsudaikai Peel Powder
 Citrus Hystrix Leaf Extract
 Citrus Iyo Fruit Extract
 Citrus Iyo Oil
 Citrus Iyo Peel Extract
 Citrus Iyo Peel Oil
 Citrus Iyo Peel Water
 Citrus Jabara Juice
 Citrus Jabara Peel Extract
 Citrus Jabara Peel Water
 Citrus Jabara Peel Powder
 Citrus Jabara Pericarp Extract
 Citrus Japonica Fruit Extract
 Citrus Junos Extract
 Citrus Junos Fruit Extract
 Citrus Junos Fruit Juice
 Citrus Junos Fruit Oil
 Citrus Junos Fruit Powder
 Citrus Junos Fruit Water
 Citrus Junos Peel Extract
 Citrus Junos Peel Oil
 Citrus Junos Peel Powder
 Citrus Junos Peel Water
 Citrus Junos Seed Extract
 Citrus Junos Seed Oil
 Citrus Limon (Lemon) Flower/Leaf/Stem Extract
 Citrus Limon (Lemon) Flower/Leaf/Stem Oil
 Citrus Limon (Lemon) Fruit Extract
 Citrus Limon (Lemon) Fruit Oil
 Citrus Limon (Lemon) Fruit Powder
 Citrus Limon (Lemon) Fruit Water
 Citrus Limon (Lemon) Juice
 Citrus Limon (Lemon) Juice Extract
 Citrus Limon (Lemon) Juice Powder
 Citrus Limon (Lemon) Leaf Extract
 Citrus Limon (Lemon) Leaf Oil
 Citrus Limon (Lemon) Leaf/Peel/Stem Oil
 Citrus Limon (Lemon) Peel
 Citrus Limon (Lemon) Peel Extract
 Citrus Limon (Lemon) Peel Oil
 Citrus Limon (Lemon) Peel Powder
 Citrus Limon (Lemon) Peel Water
 Citrus Limon (Lemon) Peel Wax
 Citrus Limon (Lemon) Seed Oil
 Citrus Madurensis Fruit Extract
 Citrus Madurensis Fruit Juice
 Citrus Medica Vulgaris Fruit Extract
 Citrus Medica Vulgaris Peel Oil
 Citrus Natsudaikai Flower Water
 Citrus Natsudaikai Peel Extract
 Citrus Nobilis (Mandarin Orange)
 Citrus Nobilis (Mandarin Orange) Fruit Extract
 Citrus Nobilis (Mandarin Orange) Fruit Juice
 Citrus Nobilis (Mandarin Orange) Oil
 Citrus Nobilis (Mandarin Orange) Peel Extract
 Citrus Nobilis (Mandarin Orange) Peel Oil
 Citrus Nobilis (Mandarin Orange) Peel Powder
 Citrus Nobilis (Mandarin Orange) Water
 Citrus Paradisi (Grapefruit) Fruit Extract
 Citrus Paradisi (Grapefruit) Fruit Water
 Citrus Paradisi (Grapefruit) Juice
 Citrus Paradisi (Grapefruit) Peel Extract

<p>Citrus Paradisi (Grapefruit) Peel Oil Citrus Paradisi (Grapefruit) Seed Extract Citrus Paradisi (Grapefruit) Seed Oil Citrus Reticulata (Tangerine) Extract Citrus Reticulata (Tangerine) Fruit Citrus Reticulata (Tangerine) Fruit Extract Citrus Reticulata (Tangerine) Fruit Water Citrus Reticulata (Tangerine) Leaf Oil Citrus Reticulata (Tangerine) Leaf Water Citrus Reticulata (Tangerine) Peel Extract Citrus Reticulata (Tangerine) Peel Oil Citrus Reticulata (Tangerine) Peel Powder Citrus Shunkokan Fruit Extract Citrus Shunkokan Peel Extract Citrus Sinensis (Orange) Fruit Extract Citrus Sinensis (Orange) Fruit Water Citrus Sinensis Sanguinello (Blood Orange) Peel Oil Citrus Sphaerocarpa Fruit Juice Citrus Sudachi Fruit Extract Citrus Sudachi Fruit Juice Citrus Sunki Peel Extract Citrus Tachibana Peel Extract Citrus Tachibana/Reticulata Fruit Juice Citrus Tachibana/Reticulata Peel Oil Citrus Tachibana/Reticulata Peel Powder Citrus Tamurana Flower Extract Citrus Tamurana Fruit Extract</p>	<p>Citrus Tangelo Fruit Juice Citrus Tangelo Fruit Powder Citrus Tangelo Peel Powder Citrus Tangerina (Tangerine) Extract Citrus Tangerina (Tangerine) Fruit Citrus Tangerina (Tangerine) Fruit Water Citrus Tangerina (Tangerine) Peel Citrus Tangerina (Tangerine) Peel Extract Citrus Tangerina (Tangerine) Peel Oil Citrus Tankan Fruit Extract Citrus Tankan Fruit Water Citrus Unshiu/Citrus Reticulata/Citrus Iyo Fruit Water Citrus Unshiu Extract Citrus Unshiu Flower Powder Citrus Unshiu Flower Water Citrus Unshiu Fruit Extract Citrus Unshiu Fruit Juice Citrus Unshiu Fruit Oil Citrus Unshiu Fruit Powder Citrus Unshiu Fruit Water Citrus Unshiu Peel Extract Citrus Unshiu Peel Powder Citrus Unshiu Peel Water Citrus Unshiu Pericarp Extract Citrus Unshiu/Sinensis/Reticulata Fruit Extract Microcitrus Australasica Fruit Extract Microcitrus Australis Fruit Extract</p>
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Ingredient	FDA Code†	Product Category	Maximum Concentration of Use
Citrus Aurantifolia (Lime) Flower Extract	02B	Bubble baths	0.0005%
Citrus Aurantifolia (Lime) Flower Extract	02D	Other bath preparations	0.0005%
Citrus Aurantifolia (Lime) Flower Extract	04E	Other fragrance preparations	0.0005%

Citrus Aurantifolia (Lime) Flower Extract	05F	Shampoos (noncoloring)	0.005%
Citrus Aurantifolia (Lime) Flower Extract	10A	Bath soaps and detergents	0.0005%
Citrus Aurantifolia (Lime) Flower Extract	12D	Body and hand products not spray	0.0005%
Citrus Aurantifolia (Lime) Fruit Extract	02D	Other bath preparations	0.002%
Citrus Aurantifolia (Lime) Fruit Extract	04E	Other fragrance preparations	0.001%
Citrus Aurantifolia (Lime) Fruit Extract	05A	Hair conditioners	0.01%
Citrus Aurantifolia (Lime) Fruit Extract	05D	Permanent waves	0.01%
Citrus Aurantifolia (Lime) Fruit Extract	05F	Shampoos (noncoloring)	0.0005-0.005%
Citrus Aurantifolia (Lime) Fruit Extract	05G	Tonics, dressings and other hair grooming aids	0.01%
Citrus Aurantifolia (Lime) Fruit Extract	05I	Other hair preparations (noncoloring)	0.005%
Citrus Aurantifolia (Lime) Fruit Extract	10A	Bath soaps and detergents	0.005%
Citrus Aurantifolia (Lime) Fruit Extract	10E	Other personal cleanliness products	0.06-0.2%
Citrus Aurantifolia (Lime) Fruit Extract	11E	Shaving cream (aerosol, brushless and lather)	0.0002-0.0097%
Citrus Aurantifolia (Lime) Fruit Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0001-0.002%
Citrus Aurantifolia (Lime) Fruit Extract	12D	Body and hand products not spray	0.001-0.2%
Citrus Aurantifolia (Lime) Fruit Extract	12E	Foot powders and sprays	0.0009%
Citrus Aurantifolia (Lime) Fruit Extract	12F	Moisturizing products not spray	0.05%
Citrus Aurantifolia (Lime) Fruit Extract	12H	Paste masks and mud packs	0.0025%
Citrus Aurantifolia (Lime) Peel	12H	Paste masks and mud packs	1.5%

Citrus Aurantifolia (Lime) Peel Extract	05F	Shampoos (noncoloring)	0.00025%
Citrus Aurantifolia (Lime) Peel Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0005%
Citrus Aurantifolia (Lime) Peel Extract	12D	Body and hand products not spray	0.009%
Citrus Aurantifolia (Lime) Peel Extract	12F	Moisturizing products not spray	0.0005%
Citrus Aurantifolia (Lime) Peel Extract	12H	Paste masks and mud packs	0.00001%
Citrus Aurantifolia (Lime) Peel Extract	12J	Other skin care products	0.001-0.025%
Citrus Aurantium Amara (Bitter Orange) Flower Extract	12C	Face and neck products not spray	5%
Citrus Aurantium Amara (Bitter Orange) Flower Extract	12D	Body and hand products not spray	0.023%
Citrus Aurantium Amara (Bitter Orange) Flower Oil	02A	Bath oils, tablets and salts	0.001%
Citrus Aurantium Amara (Bitter Orange) Flower Oil	05F	Shampoos (noncoloring)	0.001%
Citrus Aurantium Amara (Bitter Orange) Flower Oil	10A	Bath soaps and detergents	0.001%
Citrus Aurantium Amara (Bitter Orange) Flower Oil	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.02%
Citrus Aurantium Amara (Bitter Orange) Flower Oil	12C	Face and neck products not spray	0.4%
Citrus Aurantium Amara (Bitter Orange) Flower Oil	12D	Body and hand products not spray	0.001-0.1%
Citrus Aurantium Amara (Bitter Orange) Flower Oil	12G	Night products not spray	0.6%
Citrus Aurantium Amara (Bitter Orange) Flower Oil	12H	Paste masks and mud packs	0.02%
Citrus Aurantium Amara (Bitter Orange) Flower Water	12C	Face and neck products	

			not spray	0.0005%
Citrus Aurantium Amara (Bitter Orange) Flower Water	12G		Night products not spray	2-4%
Citrus Aurantium Amara (Bitter Orange) Flower Water	12H		Paste masks and mud packs	0.0004%
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	03C		Eye shadow	0.0001%
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	03D		Eye lotion	0.0002%
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	03G		Other eye makeup preparations	0.002%
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	07C		Foundations	0.00002%
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	07E		Lipstick	0.002%
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	07H		Makeup fixatives	0.00002%
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	12A		Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0001%
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	12C		Face and neck products not spray	0.00002%
Citrus Aurantium Amara (Bitter Orange) Fruit Extract	12D		Body and hand products not spray	0.0002%
Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Oil	12A		Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.04%
Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Oil	12D		Body and hand products not spray	1.5%
Citrus Aurantium Amara (Bitter Orange) Leaf/Twig Oil	12G		Night products not spray	0.1%
Citrus Aurantium Amara (Bitter Orange) Peel Extract	03C		Eye shadow	0.18%
Citrus Aurantium Amara (Bitter Orange) Peel Extract	05A		Hair conditioners	0.001%
Citrus Aurantium Amara (Bitter Orange) Peel Extract	05F		Shampoos (noncoloring)	0.001%

Citrus Aurantium Amara (Bitter Orange) Peel Extract	05G	Tonics, dressings and other hair grooming aids	0.001%
Citrus Aurantium Amara (Bitter Orange) Peel Extract	07A	Blushers (all types)	0.0002%
Citrus Aurantium Amara (Bitter Orange) Peel Extract	07C	Foundations	0.0002%
Citrus Aurantium Amara (Bitter Orange) Peel Extract	07E	Lipstick	0.0002%
Citrus Aurantium Amara (Bitter Orange) Peel Extract	08A	Basecoats and undercoats (manicuring preparations)	0.00002%
Citrus Aurantium Amara (Bitter Orange) Peel Extract	08E	Nail polish and enamel	0.00014%
Citrus Aurantium Amara (Bitter Orange) Peel Extract	12C	Face and neck products not spray	0.0005%
Citrus Aurantium Amara (Bitter Orange) Peel Oil	07E	Lipstick	0.75%
Citrus Aurantium Amara (Bitter Orange) Peel Oil	10A	Bath soaps and detergents	0.25%
Citrus Aurantium Amara (Bitter Orange) Peel Oil	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.2%
Citrus Aurantium Amara (Bitter Orange) Peel Oil	12C	Face and neck products not spray	2%
Citrus Aurantium Amara (Bitter Orange) Peel Oil	12D	Body and hand products not spray	0.9%
Citrus Aurantium Amara (Bitter Orange) Peel Oil	12G	Night products not spray	0.2%
Citrus Aurantium Amara (Bitter Orange) Peel Oil	12H	Paste masks and mud packs	0.05%
Citrus Aurantium Amara (Bitter Orange) Peel Powder	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	6%
Citrus Aurantium Bergamia (Bergamot) Fruit Extract	05A	Hair conditioners	0.000001-0.0001%
Citrus Aurantium Bergamia (Bergamot) Fruit Extract	05B	Hair sprays pump spray	0.000001%
Citrus Aurantium Bergamia (Bergamot) Fruit Extract	05F	Shampoos (noncoloring)	0.000001-0.0001%

Citrus Aurantium Bergamia (Bergamot) Fruit Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0025-0.0063%
Citrus Aurantium Bergamia (Bergamot) Fruit Extract	12C	Face and neck products not spray	0.0001-0.001%
Citrus Aurantium Bergamia (Bergamot) Fruit Extract	12J	Other skin care products	0.82%
Citrus Aurantium Bergamia (Bergamot) Fruit Oil	05F	Shampoos (noncoloring)	0.005%
Citrus Aurantium Bergamia (Bergamot) Fruit Oil	05G	Tonics, dressings and other hair grooming aids	0.0017-0.05%
Citrus Aurantium Dulcis (Orange) Flower Extract	02B	Bubble baths	0.1%
Citrus Aurantium Dulcis (Orange) Flower Extract	03D	Eye lotion	0.01%
Citrus Aurantium Dulcis (Orange) Flower Extract	03G	Other eye makeup preparations	0.002%
Citrus Aurantium Dulcis (Orange) Flower Extract	04A	Colognes and toilet waters	0.01%
Citrus Aurantium Dulcis (Orange) Flower Extract	05A	Hair conditioners	0.0025-0.005%
Citrus Aurantium Dulcis (Orange) Flower Extract	05B	Hair sprays aerosol pump spray	0.0025% 0.0025%
Citrus Aurantium Dulcis (Orange) Flower Extract	05D	Permanent waves	0.002%
Citrus Aurantium Dulcis (Orange) Flower Extract	05F	Shampoos (noncoloring)	0.0025-0.005%
Citrus Aurantium Dulcis (Orange) Flower Extract	05G	Tonics, dressings and other hair grooming aids	0.0013%
Citrus Aurantium Dulcis (Orange) Flower Extract	07C	Foundations	0.002%
Citrus Aurantium Dulcis (Orange) Flower Extract	07H	Makeup fixatives	0.002%
Citrus Aurantium Dulcis (Orange) Flower Extract	08B	Cuticle softeners	0.001%
Citrus Aurantium Dulcis (Orange) Flower Extract	10A	Bath soaps and detergents	0.01%
Citrus Aurantium Dulcis (Orange) Flower Extract	10E	Other personal cleanliness products	0.01-0.2%

Citrus Aurantium Dulcis (Orange) Flower Extract	11A	Aftershave lotions	0.007%
Citrus Aurantium Dulcis (Orange) Flower Extract	11E	Shaving cream (aerosol, brushless and lather)	0.000023%
Citrus Aurantium Dulcis (Orange) Flower Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0001%
Citrus Aurantium Dulcis (Orange) Flower Extract	12D	Body and hand products not spray spray	0.01-0.2% 0.01%
Citrus Aurantium Dulcis (Orange) Flower Extract	12F	Moisturizing products not spray	0.00013%
Citrus Aurantium Dulcis (Orange) Flower Extract	12G	Night products not spray	0.00003%
Citrus Aurantium Dulcis (Orange) Flower Extract	12H	Paste masks and mud packs	0.0002-0.002%
Citrus Aurantium Dulcis (Orange) Flower Extract	12J	Other skin care preparations	0.00013-0.001%
Citrus Aurantium Dulcis (Orange) Flower Oil	07E	Lipstick	0.9%
Citrus Aurantium Dulcis (Orange) Flower Oil	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.000001%
Citrus Aurantium Dulcis (Orange) Fruit Extract	03D	Eye lotion	0.1%
Citrus Aurantium Dulcis (Orange) Fruit Extract	05A	Hair conditioners	0.0054%
Citrus Aurantium Dulcis (Orange) Fruit Extract	05F	Shampoos (noncoloring)	0.0007%
Citrus Aurantium Dulcis (Orange) Fruit Extract	05I	Other hair preparations (noncoloring)	0.25%
Citrus Aurantium Dulcis (Orange) Fruit Extract	08B	Cuticle softeners	0.2%
Citrus Aurantium Dulcis (Orange) Fruit Extract	10A	Bath soaps and detergents	0.041%
Citrus Aurantium Dulcis (Orange) Fruit Extract	10E	Other personal cleanliness products	0.004-0.039%
Citrus Aurantium Dulcis (Orange) Fruit Extract	11A	Aftershave lotions	0.1%

Citrus Aurantium Dulcis (Orange) Fruit Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.00003-0.2%
Citrus Aurantium Dulcis (Orange) Fruit Extract	12C	Face and neck products not spray	0.002-0.32%
Citrus Aurantium Dulcis (Orange) Fruit Extract	12D	Body and hand products not spray	0.0005-0.12%
Citrus Aurantium Dulcis (Orange) Fruit Extract	12F	Moisturizing products not spray	0.00003-0.004%
Citrus Aurantium Dulcis (Orange) Fruit Extract	12G	Night products not spray	1.2%
Citrus Aurantium Dulcis (Orange) Fruit Extract	12H	Paste masks and mud packs	0.002-0.04%
Citrus Aurantium Dulcis (Orange) Fruit Extract	13B	Indoor tanning preparations	0.001%
Citrus Aurantium Dulcis (Orange) Fruit Water	07C	Foundations	2%
Citrus Aurantium Dulcis (Orange) Fruit Water	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	2%
Citrus Aurantium Dulcis (Orange) Fruit Water	12C	Face and neck products not spray	10%
Citrus Aurantium Dulcis (Orange) Fruit Water	12D	Body and hand products not spray	3%
Citrus Aurantium Dulcis (Orange) Fruit Water	12H	Paste masks and mud packs	19%
Citrus Aurantium Dulcis (Orange) Juice	05G	Tonics, dressings and other hair grooming aids	0.000038%
Citrus Aurantium Dulcis (Orange) Oil	02A	Bath oils, tablets and salts	0.93%
Citrus Aurantium Dulcis (Orange) Oil	03D	Eye lotion	0.033%
Citrus Aurantium Dulcis (Orange) Oil	05E	Rinses (noncoloring)	0.033%
Citrus Aurantium Dulcis (Orange) Oil	05F	Shampoos (noncoloring)	0.043%

Citrus Aurantium Dulcis (Orange) Oil	07A	Blushers (all types)	0.047%
Citrus Aurantium Dulcis (Orange) Oil	07B	Face powders	0.0014%
Citrus Aurantium Dulcis (Orange) Oil	07C	Foundations	0.0066-0.025%
Citrus Aurantium Dulcis (Orange) Oil	07E	Lipstick	0.033-0.95%
Citrus Aurantium Dulcis (Orange) Oil	08B	Cuticle softeners	0.025%
Citrus Aurantium Dulcis (Orange) Oil	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.021-0.2%
Citrus Aurantium Dulcis (Orange) Oil	12C	Face and neck products not spray spray	0.025-0.14% 0.011%
Citrus Aurantium Dulcis (Orange) Oil	12D	Body and hand products not spray	0.066%
Citrus Aurantium Dulcis (Orange) Oil	12F	Moisturizing products not spray	0.033%
Citrus Aurantium Dulcis (Orange) Oil	13A	Suntan products not spray	0.02%
Citrus Aurantium Dulcis (Orange) Peel Extract	02B	Bubble baths	0.0025%
Citrus Aurantium Dulcis (Orange) Peel Extract	02D	Other bath preparations	0.0025%
Citrus Aurantium Dulcis (Orange) Peel Extract	03D	Eye lotion	0.0002%
Citrus Aurantium Dulcis (Orange) Peel Extract	03G	Other eye makeup preparations	0.0005%
Citrus Aurantium Dulcis (Orange) Peel Extract	04E	Other fragrance preparations	0.001%
Citrus Aurantium Dulcis (Orange) Peel Extract	05A	Hair conditioners	0.001%
Citrus Aurantium Dulcis (Orange) Peel Extract	05B	Hair sprays pump spray	0.001%

Citrus Aurantium Dulcis (Orange) Peel Extract	05F	Shampoos (noncoloring)	0.0001-0.001%
Citrus Aurantium Dulcis (Orange) Peel Extract	05G	Tonics, dressings and other hair grooming aids	0.00001%
Citrus Aurantium Dulcis (Orange) Peel Extract	07E	Lipstick	1.9%
Citrus Aurantium Dulcis (Orange) Peel Extract	10A	Bath soaps and detergents	0.0001%
Citrus Aurantium Dulcis (Orange) Peel Extract	10E	Other personal cleanliness products	0.000025-0.008%
Citrus Aurantium Dulcis (Orange) Peel Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.00005-0.65%
Citrus Aurantium Dulcis (Orange) Peel Extract	12C	Face and neck products not spray	0.0002-0.013%
Citrus Aurantium Dulcis (Orange) Peel Extract	12D	Body and hand products not spray	0.00002-0.33%
Citrus Aurantium Dulcis (Orange) Peel Extract	12F	Moisturizing products not spray	0.0065%
Citrus Aurantium Dulcis (Orange) Peel Extract	12G	Night products not spray	0.0001%
Citrus Aurantium Dulcis (Orange) Peel Extract	12H	Paste masks and mud packs	0.0002-0.0011%
Citrus Aurantium Dulcis (Orange) Peel Oil	02D	Other bath preparations	0.33%
Citrus Aurantium Dulcis (Orange) Peel Oil	03E	Eye makeup remover	0.1%
Citrus Aurantium Dulcis (Orange) Peel Oil	05A	Hair conditioners	0.00002-29%
Citrus Aurantium Dulcis (Orange) Peel Oil	05F	Shampoos (noncoloring)	0.00002%
Citrus Aurantium Dulcis (Orange) Peel Oil	05G	Tonics, dressings and other hair grooming aids	0.00038%
Citrus Aurantium Dulcis (Orange) Peel Oil	08E	Nail polish and enamel	0.5%
Citrus Aurantium Dulcis (Orange) Peel Oil	08G	Other manicuring preparations	0.54%

Citrus Aurantium Dulcis (Orange) Peel Oil	10A	Bath soaps and detergents	0.1%
Citrus Aurantium Dulcis (Orange) Peel Oil	11E	Shaving cream (aerosol, brushless and lather)	0.17%
Citrus Aurantium Dulcis (Orange) Peel Oil	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.001-0.1%
Citrus Aurantium Dulcis (Orange) Peel Oil	12B	Depilatories	0.1%
Citrus Aurantium Dulcis (Orange) Peel Oil	12C	Face and neck products not spray	0.12-0.3%
Citrus Aurantium Dulcis (Orange) Peel Oil	12D	Body and hand products not spray	0.03-0.4%
Citrus Aurantium Dulcis (Orange) Peel Oil	12G	Night products not spray	0.3%
Citrus Aurantium Dulcis (Orange) Peel Oil	12H	Paste masks and mud packs	0.0066%
Citrus Aurantium Dulcis (Orange) Peel Oil	12J	Other skin care preparations	0.14%
Citrus Aurantium Dulcis (Orange) Peel Powder	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	6%
Citrus Aurantium Dulcis (Orange) Peel Wax	03D	Eye lotion	0.16%
Citrus Aurantium Dulcis (Orange) Peel Wax	03F	Mascara	0.15%
Citrus Aurantium Dulcis (Orange) Peel Wax	05A	Hair conditioners	0.005%
Citrus Aurantium Dulcis (Orange) Peel Wax	05F	Shampoos (noncoloring)	0.045%
Citrus Aurantium Dulcis (Orange) Peel Wax	07E	Lipstick	0.5%
Citrus Aurantium Dulcis (Orange) Peel Wax	11A	Aftershave lotions	0.15%
Citrus Aurantium Dulcis (Orange) Peel Wax	12A	Skin cleansing (cold creams, cleansing lotions liquids and pads)	0.39%
Citrus Aurantium Dulcis (Orange) Peel Wax	12J	Other skin care preparations	0.07%
Citrus Aurantium Tachibana Peel Extract	12J	Other skin care preparations	0.0008%

Citrus Depressa Peel Extract	12D	Body and hand products not spray	0.0014%
Citrus Glauca Fruit Extract	05A	Hair conditioners	0.003%
Citrus Glauca Fruit Extract	05F	Shampoos (noncoloring)	0.0051%
Citrus Grandis (Grapefruit)	03D	Eye lotion	0.5%
Citrus Grandis (Grapefruit) Extract	05F	Shampoos (noncoloring)	0.01%
Citrus Grandis (Grapefruit) Fruit Extract	02A	Bath oils, tablets and salts	0.005%
Citrus Grandis (Grapefruit) Fruit Extract	02D	Other bath preparations	0.01%
Citrus Grandis (Grapefruit) Fruit Extract	04A	Colognes and toilet waters	0.01%
Citrus Grandis (Grapefruit) Fruit Extract	05A	Hair conditioners	0.000001-0.01%
Citrus Grandis (Grapefruit) Fruit Extract	05D	Permanent waves	0.01%
Citrus Grandis (Grapefruit) Fruit Extract	05E	Rinses (noncoloring)	0.0005%
Citrus Grandis (Grapefruit) Fruit Extract	05F	Shampoo (noncoloring)	0.0000005-0.01%
Citrus Grandis (Grapefruit) Fruit Extract	05G	Tonics, dressings and other hair grooming aids	0.005-0.01%
Citrus Grandis (Grapefruit) Fruit Extract	07E	Lipstick	0.01-0.02%
Citrus Grandis (Grapefruit) Fruit Extract	10A	Bath soaps and detergents	0.1%
Citrus Grandis (Grapefruit) Fruit Extract	10E	Other personal cleanliness products	0.001-0.002%
Citrus Grandis (Grapefruit) Fruit Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0005-1%
Citrus Grandis (Grapefruit) Fruit Extract	12C	Face and neck products not spray	0.015-15%
Citrus Grandis (Grapefruit) Fruit Extract	12D	Body and hand products not spray	0.0001-0.09%

Citrus Grandis (Grapefruit) Fruit Extract	12E	Foot powders and sprays	0.0001%
Citrus Grandis (Grapefruit) Fruit Extract	12H	Paste masks and mud packs	0.1-8%
Citrus Grandis (Grapefruit) Fruit Extract	12I	Skin fresheners	0.01%
Citrus Grandis (Grapefruit) Fruit Extract	12J	Other skin care preparations	0.01%
Citrus Grandis (Grapefruit) Fruit Extract	13A	Suntan products not spray	0.0001%
Citrus Grandis (Grapefruit) Fruit Water	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0029%
Citrus Grandis (Grapefruit) Juice	12A	Skin cleansing (cold creams, cleansing lotions liquids and pads)	0.01%
Citrus Grandis (Grapefruit) Peel Extract	03F	Mascara	0.5%
Citrus Grandis (Grapefruit) Peel Extract	12A	Skin cleansing (cold cream, cleansing lotions, liquids and pads)	0.0225%
Citrus Grandis (Grapefruit) Peel Extract	12C	Face and neck products not spray	0.0001%
Citrus Grandis (Grapefruit) Peel Extract	12D	Body and hand products not spray	0.0005%
Citrus Grandis (Grapefruit) Peel Extract	12F	Moisturizing creams, lotions and powders not spray	0.009%
Citrus Grandis (Grapefruit) Peel Extract	12H	Pastes masks and mud packs	0.03%
Citrus Grandis (Grapefruit) Peel Extract	12J	Other skin care preparations	0.0008%
Citrus Grandis (Grapefruit) Peel Oil	02D	Other bath preparations	0.0014%
Citrus Grandis (Grapefruit) Peel Oil	05F	Shampoos (noncoloring)	0.005%
Citrus Grandis (Grapefruit) Peel Oil	12B	Depilatories	0.0001-0.05%
Citrus Grandis (Grapefruit) Peel Oil	12D	Body and hand creams not spray	0.0004%

Citrus Grandis (Grapefruit) Peel Oil	12H	Paste masks and mud packs	0.00004%
Citrus Grandis (Grapefruit) Peel Oil	12J	Other skin care preparations	0.0008%
Citrus Grandis (Grapefruit) Seed Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.75%
Citrus Grandis (Grapefruit) Seed Extract	12C	Face and neck products not spray	0.053-2%
Citrus Grandis (Grapefruit) Seed Extract	12H	Paste masks and mud packs	0.75%
Citrus Grandis (Grapefruit) Seed Extract	12I	Skin fresheners	0.15%
Citrus Japonica Fruit Extract	05A	Hair conditioners	0.0038%
Citrus Japonica Fruit Extract	05F	Shampoos (noncoloring)	0.0038%
Citrus Junos Fruit Extract	04B	Perfumes	0.001%
Citrus Junos Fruit Extract	07C	Foundations	0.001%
Citrus Junos Fruit Extract	07E	Lipstick	0.001%
Citrus Junos Fruit Extract	10E	Other personal cleanliness products	0.0005%
Citrus Junos Fruit Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.001%
Citrus Junos Fruit Extract	12C	Face and neck products not spray	0.002%
Citrus Junos Fruit Extract	12D	Body and hand products not spray spray	0.0005-0.001% 0.0005%
Citrus Junos Peel Extract	07E	Lipstick	0.0012%
Citrus Junos Peel Extract	07G	Rouges	0.0012%
Citrus Junos Peel Extract	12F	Moisturizing products not spray	0.036%

Citrus Junos Seed Extract	02A	Bath oils, tablets and salts	0.001%
Citrus Junos Seed Extract	03D	Eye lotion	0.001%
Citrus Junos Seed Extract	07C	Foundations	0.001%
Citrus Junos Seed Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.001%
Citrus Junos Seed Extract	12C	Face and neck products not spray	0.0045%
Citrus Junos Seed Extract	12F	Moisturizing products not spray	0.001%
Citrus Junos Seed Oil	05G	Tonics dressings and other hair grooming aids	0.01%
Citrus Junos Seed Oil	12C	Face and neck products not spray	0.1%
Citrus Junos Seed Oil	12D	Body and hand products not spray	0.1%
Citrus Limon (Lemon) Fruit Extract	05A	Hair conditioners	0.004%
Citrus Limon (Lemon) Fruit Extract	05D	Permanent waves	0.002%
Citrus Limon (Lemon) Fruit Extract	05F	Shampoos (noncoloring)	0.005%
Citrus Limon (Lemon) Fruit Extract	05I	Other hair preparations (noncoloring)	0.004%
Citrus Limon (Lemon) Fruit Extract	07C	Foundations	0.02-0.04%
Citrus Limon (Lemon) Fruit Extract	07E	Lipstick	0.03%
Citrus Limon (Lemon) Fruit Extract	08B	Cuticle softeners	0.0001%
Citrus Limon (Lemon) Fruit Extract	08G	Other manicuring preparations	0.01-0.5%
Citrus Limon (Lemon) Fruit Extract	10A	Bath soaps and detergents	0.04%

Citrus Limon (Lemon) Fruit Extract	10E	Other personal cleanliness products hand scrub	0.0028-0.02% 0.039%
Citrus Limon (Lemon) Fruit Extract	11A	Aftershave lotions	0.1%
Citrus Limon (Lemon) Fruit Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0025-0.5%
Citrus Limon (Lemon) Fruit Extract	12C	Face and neck products not spray	0.24-0.5%
Citrus Limon (Lemon) Fruit Extract	12D	Body and hand products not spray	0.0001-0.4%
Citrus Limon (Lemon) Fruit Extract	12F	Moisturizing products not spray	0.004%
Citrus Limon (Lemon) Fruit Extract	12G	Night products not spray	1.2%
Citrus Limon (Lemon) Fruit Extract	12H	Paste masks and mud packs	0.002-0.5%
Citrus Limon (Lemon) Fruit Extract	12J	Other skin care preparations	0.8%
Citrus Limon (Lemon) Fruit Extract	13B	Indoor tanning products	0.001%
Citrus Limon (Lemon) Fruit Water	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	1%
Citrus Limon (Lemon) Juice	05F	Shampoos (noncoloring)	0.05%
Citrus Limon (Lemon) Juice	05G	Tonics, dressings and other hair grooming aids	0.05%
Citrus Limon (Lemon) Juice	12B	Depilatories	0.035%
Citrus Limon (Lemon) Juice	12C	Face products not spray	1%
Citrus Limon (Lemon) Juice Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.05%
Citrus Limon (Lemon) Juice Extract	12D	Body and hand products not spray	0.2%

Citrus Limon (Lemon) Peel Extract	05A	Hair conditioners	0.0011-0.01%
Citrus Limon (Lemon) Peel Extract	05F	Shampoos (noncoloring)	0.0011%
Citrus Limon (Lemon) Peel Extract	07E	Lipstick	0.0005%
Citrus Limon (Lemon) Peel Extract	10E	Other personal cleanliness products	0.51%
Citrus Limon (Lemon) Peel Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.057%
Citrus Limon (Lemon) Peel Extract	12C	Face and neck products not spray	0.0001-0.0075%
Citrus Limon (Lemon) Peel Extract	12D	Body and hand products not spray	0.25%
Citrus Limon (Lemon) Peel Extract	12F	Moisturizing creams, lotions and powders	0.012%
Citrus Limon (Lemon) Peel Extract	12H	Paste masks and mud packs	0.002-0.04%
Citrus Limon (Lemon) Peel Oil	02D	Other bath preparations	0.012%
Citrus Limon (Lemon) Peel Oil	08G	Other manicuring preparations	0.0001-0.14%
Citrus Limon (Lemon) Peel Oil	10A	Bath soaps and detergents	0.001%
Citrus Limon (Lemon) Peel Oil	10B	Deodorants (underarm) not spray	0.002%
Citrus Limon (Lemon) Peel Oil	11A	Aftershave lotions	0.0001%
Citrus Limon (Lemon) Peel Oil	12D	Body and hand products not spray	0.0001-0.14%
Citrus Limon (Lemon) Peel Oil	12E	Foot powders and sprays	0.06%
Citrus Limon (Lemon) Peel Oil	12H	Paste masks and mud packs	0.0006%
Citrus Limon (Lemon) Peel Oil	12J	Other skin care preparations	0.012-0.5%

Citrus Madurensis Fruit Extract	02D	Other bath preparations	0.0005%
Citrus Madurensis Fruit Extract	12D	Body and hand products not spray	0.0005%
Citrus Nobilis (Mandarin Orange) Fruit Extract	05A	Hair conditioners	0.001-0.01%
Citrus Nobilis (Mandarin Orange) Fruit Extract	05D	Permanent waves	0.01%
Citrus Nobilis (Mandarin Orange) Fruit Extract	05F	Shampoos (noncoloring)	0.01%
Citrus Nobilis (Mandarin Orange) Fruit Extract	05G	Tonics, dressings and other hair grooming aids	0.001-0.01%
Citrus Nobilis (Mandarin Orange) Fruit Extract	05I	Other hair preparations (noncoloring)	0.005%
Citrus Nobilis (Mandarin Orange) Fruit Extract	10A	Bath soaps and detergents	0.04%
Citrus Nobilis (Mandarin Orange) Fruit Extract	10E	Other personal cleanliness products	0.002%
Citrus Nobilis (Mandarin Orange) Fruit Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0018%
Citrus Nobilis (Mandarin Orange) Fruit Extract	12C	Face and neck products not spray	0.0018%
Citrus Nobilis (Mandarin Orange) Fruit Extract	12D	Body and hand products not spray spray	0.002-0.04% 0.0075%
Citrus Nobilis (Mandarin Orange) Oil	07G	Rouges	0.075%
Citrus Nobilis (Mandarin Orange) Peel Extract	02B	Bubble baths	0.0025%
Citrus Nobilis (Mandarin Orange) Peel Extract	02D	Other bath preparations	0.0005%
Citrus Nobilis (Mandarin Orange) Peel Extract	05A	Hair conditioners	0.00025-0.005%
Citrus Nobilis (Mandarin Orange) Peel Extract	05F	Shampoos (noncoloring)	0.00025-0.005%
Citrus Nobilis (Mandarin Orange) Peel Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0025-0.023%

Citrus Nobilis (Mandarin Orange) Peel Extract	12D	Body and hand products not spray	0.0025%
Citrus Nobilis (Mandarin Orange) Peel Extract	12F	Moisturizing products not spray	0.009%
Citrus Nobilis (Mandarin Orange) Peel Extract	12H	Paste masks and mud packs	0.0051-0.03%
Citrus Nobilis (Mandarin Orange) Peel Oil	05A	Hair conditioners	0.0005%
Citrus Nobilis (Mandarin Orange) Peel Oil	05F	Shampoos (noncoloring)	0.00005-0.03%
Citrus Nobilis (Mandarin Orange) Peel Oil	07E	Lipstick	0.0099%
Citrus Nobilis (Mandarin Orange) Peel Oil	08B	Cuticle softeners	0.012%
Citrus Nobilis (Mandarin Orange) Peel Oil	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.00005-0.02%
Citrus Nobilis (Mandarin Orange) Peel Oil	12C	Face and neck products not spray	0.05%
Citrus Nobilis (Mandarin Orange) Peel Oil	12D	Body and hand products not spray	0.00005-0.1%
Citrus Nobilis (Mandarin Orange) Peel Oil	12F	Moisturizing products not spray	0.05%
Citrus Nobilis (Mandarin Orange) Peel Oil	12G	Night products not spray	0.05%
Citrus Nobilis (Mandarin Orange) Peel Oil	12J	Other skin care preparations rinse-off	0.05%
Citrus Paradisi (Grapefruit) Fruit Extract	05F	Shampoos (noncoloring)	0.005%
Citrus Paradisi (Grapefruit) Fruit Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.2%
Citrus Paradisi (Grapefruit) Fruit Extract	12C	Face and neck products not spray	0.3%

Citrus Paradisi (Grapefruit) Fruit Extract	12D	Body and hand products not spray	0.05-1.5%
Citrus Paradisi (Grapefruit) Fruit Extract	12F	Moisturizing products not spray	0.05%
Citrus Paradisi (Grapefruit) Fruit Extract	12H	Paste masks and mud packs	0.16%
Citrus Paradisi (Grapefruit) Peel Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.0068%
Citrus Paradisi (Grapefruit) Peel Extract	12J	Other skin care preparations	0.0017%
Citrus Paradisi (Grapefruit) Peel Oil	05B	Hair sprays pump spray	0.00068%
Citrus Paradisi (Grapefruit) Peel Oil	12F	Moisturizing products not spray	0.5%
Citrus Tangerina (Tangerine) Peel Oil	05A	Hair conditioners	0.0000013%
Citrus Tangerina (Tangerine) Peel Oil	05F	Shampoos (noncoloring)	0.0000013%
Citrus Tangerina (Tangerine) Peel Oil	05G	Tonics, dressings and other hair grooming aids	0.0000013%
Citrus Unshiu Peel Extract	02A	Bath oils, tablets and salts	0.03%
Citrus Unshiu Peel Extract	03D	Eye lotion	0.002%
Citrus Unshiu Peel Extract	03E	Eye makeup remover	0.000002%
Citrus Unshiu Peel Extract	07C	Foundations	0.0002%
Citrus Unshiu Peel Extract	12A	Skin cleansing (cold creams, cleansing lotions, liquids and pads)	0.002-0.94%
Citrus Unshiu Peel Extract	12C	Face and neck products not spray	0.002-0.94%
Citrus Unshiu Peel Extract	12D	Body and hand products not spray	0.002-0.0095%

Citrus Unshiu Peel Extract	12F	Moisturizing products not spray	0.00095-0.002%
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*Ingredients included in the title of the table but not found in the table were included in the concentration of use survey, but no uses were reported.

†Product category codes used by FDA

Information collected in 2013
Table prepared: July 25, 2013