



# Organoleptic Characteristics of Flavor Materials

Judith Michalski, Senior Flavorist, Bell Flavors & Fragrances; [jmichalski@bellff.com](mailto:jmichalski@bellff.com)

## Organoleptic Evaluation Panel

- Judith Michalski
- Tom Gibson, Creative Director, Silesia Flavors
- Carl Holmgren, Consulting Flavor Chemist
- Cyndie Lipka, Senior Flavorist, Bell Flavors & Fragrances
- Gerard Mosciano, Consulting Flavor Chemist
- Robert Pan, Senior Flavorist, Bell Flavors & Fragrances
- Susie Sadural, Consulting Flavorist

## BioNootkatone

Source: Isobionics

FEMA# 3166, CAS# 4674-50-4

Designated nature identical in the United States, artificial in Europe.

*Natural occurrence:* Bergamot, grapefruit, orange, satsuma mandarin, tangerine, wormwood oil.

*Odor:* @ 100%. Citrus, woody and grapefruitlike with an underlying terpeney nuance.

*Taste:* @ 5 ppm. Citrus and grapefruitlike with a woody note.

*Taste:* @ 6 ppm. Bitter, grapefruitlike, citrus and oily.

*Possible applications:* Nootkatone is a characterizing compound of grapefruit and will, accordingly, perform well in all such flavors as well as in sister citrus blends. It can also be used to enhance berry flavors, especially black currant and blackberry, as well as tropicals like mango and passion fruit.

► **Isobionics;** [www.isobionics.com](http://www.isobionics.com)

## 6-Amyl- $\alpha$ -pyrone (Hydroxydecadienoic acid lactone)

Source: Fontarome

FEMA# 3696, CAS# 27593-23-3

*Natural occurrence:* Cooked beef, mushrooms, osmanthus and peaches.

*Odor:* @ 100%. Herbal, oily, creamy, lactonic and coconutlike with a slight earthy nuance.

*Taste:* @ 0.5 ppm. Herbal, lactonic, creamy, fatty and coconutlike.

*Taste:* @ 1.0 ppm. Sweet, coconutlike, lactonic, fatty and creamy.

*Possible applications:* This material will provide creamy, lactone notes in dairy flavors, including milk, butter, cream and cheese; in sweet dairy flavors like dulce de leche, caramel and butterscotch; and in fruits like peach, apricot, mango, papaya, passion fruit and coconut. It can also add depth and sweetness to vanilla and chocolate, as well as oily notes to nut flavors such as pecan and macadamia.

► **Fontarome;** [www.fontaromechemical.com](http://www.fontaromechemical.com)

## Sandalwood Oil Australian

Source: Ungerer & Co.

FEMA# 3005, CAS# 8006-87-9

Natural

*Odor:* @ 100%. Woody, piney, aromatic, sweet and slightly perfumey.

*Taste:* @ 2 ppm. Slightly terpeney, oily, woody and citruslike, with a hint of perfume.

*Taste:* @ 4 ppm. Woody, oily, citruslike and perfumey.

*Possible applications:* This flavor and fragrance oil of antiquity can be used in modern fruit flavors like peach, apricot and berry; citrus flavors like orange, grapefruit and mandarin; and tropical flavors like mango, papaya and pineapple. It can also add woody, casky notes to vanilla and whiskey flavors and its piney notes will enhance gin-type flavors.

► **Ungerer;** [www.ungererandcompany.com](http://www.ungererandcompany.com)

## Lime Oil Persian Organic

Source: Ungerer & Co.

FEMA# 2631, CAS# 8008-26-2

Natural

*Odor:* @ 100%. Sweet, candylike, zesty, juicy and oily, with notes of lime and a slightly floral undertone.

*Taste:* @ 5 ppm. Fresh, juicy, citruslike and candylike with cold-pressed lime.

*Taste:* @ 10 ppm. Fresh, juicy, slightly peely and citruslike with cold-pressed lime.

*Possible applications:* When the flavor label requires organic, this product can be used to replace expressed lime oil. Its full-bodied profile will nicely enhance any lime flavor as well as citrus blends like cola.

► **Ungerer;** [www.ungererandcompany.com](http://www.ungererandcompany.com)

## Orange Oil 30x Dewaxed

*Source:* Ungerer & Co.

FEMA# 2825, CAS# 68606-94-0

Natural

*Odor:* @ 100%. Citrus and orange, with aldehydic, peely, terpeney and slightly woody notes.

*Taste:* @ 1 ppm. Waxy, aldehydic, citruslike and slightly woody.

*Taste:* @ 3 ppm. Waxy, aldehydic, citruslike and peely.

*Possible applications:* This potent fraction of orange oil will lend body to orange and other citrus flavors when used at very low levels. At concentrations below 1 ppm it could also be considered for use in supplying fatty, aldehydic notes in fat flavors, such as lard and tallow.

► **Ungerer;** [www.ungererandcompany.com](http://www.ungererandcompany.com)

## 2-Methyl Heptanoic Acid

*Source:* Fontarome

FEMA# 2706, CAS# 1188-02-9

*Natural occurrence:* Lamb, mutton, black tea.

*Odor:* @ 100%. Fatty, slightly cheesy, waxy and animalic.

*Taste:* @ 7 ppm. Large bodied, fatty, green, fruity, melon-like, cucumberlike and creamy.

*Taste:* @ 15 ppm. Waxy, rich, creamy, fatty and slightly animalic.

*Possible applications:* At lower levels this material manifests itself as more green and fruity and can be an interesting addition to melon and cucumber flavors. At higher levels the fatty, animalic side of the profile takes over, making it a good consideration for cheese flavors like manchego, cheddar and Parmesan, cultured dairy flavors like buttermilk, sour cream and yogurt as well as meat and fat flavors like lamb, mutton, tallow and lard.

► **Fontarome;** [www.fontaromechemical.com](http://www.fontaromechemical.com)

## Methyl *trans*-2-Nonenoate (Neofolione)

*Source:* Fontarome

FEMA# 2725 CAS# 111-79-5

*Natural occurrence:* Hop oil, tobacco.

*Odor:* @ 0.5%. Fatty, green, slightly leafy and fresh with fruity nuances.

*Taste:* @ 0.5 ppm. Fresh, green, fatty and leafy.

*Taste:* @ 1 ppm. Bitter, green and fatty with a vegetable note.

*Possible applications:* This lovely green component will fit very nicely into fruit flavors like melon, especially the honeydew variety, as well as pear, peach, mint, strawberry and guava. Vegetable flavors to consider for its use include green pepper, cucumber and avocado.

► **Fontarome;** [www.fontaromechemical.com](http://www.fontaromechemical.com)

## *cis*-3-Hexenyl Formate

*Source:* Fontarome

FEMA# 3353 CAS# 33467-73-1

*Natural Occurrence:* Chokeberry, cornmint, raspberry and black tea.

*Odor:* @ 1 %. Acrid, green, pungent, fruity and applelike.

*Taste:* @ 1 ppm. Green, grassy, fruity and vegetablelike.

*Taste:* @ 2 ppm. Green, grassy, gassy and fruity with an unripe quality.

*Possible applications:* This very interesting material lends greenness of an unripe type, but not necessarily freshness, to a composition. Flavors that should be considered for its use are guava, apple, pear, Asian pear, banana, strawberry, honeydew melon, watermelon rind and cucumber. Additional useful applications are in watercress, wasabi, horseradish and other vegetables of the cruciferous ilk.

► **Fontarome;** [www.fontaromechemical.com](http://www.fontaromechemical.com)

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