



Organoleptic Characteristics of Flavor Materials

Gerard Mosciano

Gerard Mosciano is joined by Judith Michalski, chief flavorist, Edlong Flavors; Carl Holmgren, consulting flavor chemist; William Jaggard, Bell Flavors; and Douglas Young, principal flavorist, Symrise, in the organoleptic evaluations presented here. Natural occurrence information is from Leffingwell & Associates.

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Suppliers of most materials found in this report can be located in *Allured's Flavor & Fragrance Materials*, published by Allured Publishing Corporation, 336 Gundersen Drive, Suite A, Carol Stream, IL 60188-2403 USA; telephone 1-630-653-2155; fax 1-630-653-2192; www.PerfumerFlavorist.com.

Blue Ester Natural (synonym: (Z)-2-Methyl-2-butenolate)

Source: Treatt USA

Odor: @ 1.0%. Floral chamomile, herbal, tea and haylike with green fruity apple, blueberry and blackberrylike nuances.

Taste: @ 5 PPM. Tea, herbal, dry floral with astringent fruity and berry nuances reminiscent of blueberry and apple.

Possible applications: Tea, root beer, tobacco, blueberry, blackberry, herbal nuances, hay and crisp apple.

► Treatt USA; treatt.com



pecan, potato chips, rice and tomato.
Odor: @ 1.0%. Fatty, chicken fat, cilantro, waxy fatty mutton, sautéed butter, creamy dairy with tropical fruity and aldehydic citrus nuances.

Taste: @ 1 PPM. Fatty, cilantro, lard and tallowlike with greasy chicken fat, dairy and cheese notes with citrus nuances.

Possible applications: Dairy nuances, chicken fat, cheese notes, citrus nuances, savory lard and tallow flavors.

► Treatt USA; treatt.com

Butyl Isothiocyanate

Source: SAFC

FEMA# 4082, CAS# 592-82-5, Artificial

Odor: @ 1.0%. Slightly pungent, rooty mustard, horseradish and wasabilike with a sulfurous onion and garlic note and a tropical nuance.

Taste: @ 0.5–5 PPM. Horseradish and vegetative cabbage-like with rooty, wasabi radishlike notes and leaving a biting and metallic aftertaste.

Possible applications: Wasabi, horseradish, salad dressings, Bloody Mary mixes, onion and garlic notes, tropical fruit nuances.

► SAFC; safcsuppliesolutions.com



5- & 6-Decenoic Acid

Source: Fontarome Chemical, Inc.

FEMA# 3742, CAS# 72881-27-7,

Artificial

Odor: @ 1.0%. Rich dairy milky, creamy lactonic with some goat cheese notes, woody, very fatty with waxy coconutlike nuances.

Taste: @ 0.1–5 PPM. Creamy, lactoniclike and reminiscent of massoia lactone, waxy and milky with a cheesy body reminiscent of a hard Italian cheese such as Romano with a slight burning bite and a good mouthfeel.

Possible applications: Dairy cheeses such as cottage, Romano and parmesan, milk, lamb, coconut, meaty notes, cocoa, sour cream, yogurt and butter.

► Fontarome Chemical, Inc.; fontaromechemical.com



trans-2-Decenal

Source: Treatt USA

FEMA# 2366, CAS# 3913-81-3, Natural

Natural occurrence: Carrot, cooked chicken, lamb, mutton and port, coriander seed, fish, melon, orange,

Geranic Acid

Source: SAFC

FEMA# 4121, CAS# 459-80-3, Nature identical

Natural occurrence: Tea, tomato and wine.

Odor: Neat. Sweet, floral green, geranium leaflike, woody with a citrus orange body nuance.

Taste: @ 20 PPM. Sweet, woody, leafy, fruity body with

some mouthfeel effects.

Possible applications: Orange, tea, mint, ripe fruit and melon notes.

► SAFC; safcsupplysolutions.com

cis-3-Hexenyl trans-2-Hexenoate

Source: Fontarome Chemical, Inc.
FEMA# 3928, CAS# 53398-87-1,
Nature identical



Natural occurrence: Mango, black, green and partially fermented teas.

Odor: @ 1.0%. Intense green, fresh estry, fruity apple and pearlike with ripe pineapple, kiwi, mango and banana nuances.

Taste: @ 1 PPM. Fresh green, fruity applelike with ripe pineapple and citrus nuances.

Possible applications: Apple, pear, strawberry, kiwi, pineapple, mango and banana.

► Fontarome Chemical, Inc.; fontaromechemical.com

cis-3-Hexenyl cis-3-Hexenoate

Source: Fontarome Chemical, Inc.
FEMA# 3689, CAS# 61444-38-0, Artificial

Odor: @ 1.0%. Strong penetrating green, fruity stemlike with pear, waxy Granny Smith applelike nuances and salad vegetative leafy notes.



Taste: @ 0.2 PPM. Fresh green fruity, characterizing of pear and green apple with a vegetative cucumberlike nuance

Possible applications: Pear, green apple, banana, melon, white grape skin, raspberry and strawberry, cactus pear, tropical fruit nuances and vegetative lettuce and cucumber nuances.

► Fontarome Chemical, Inc.; fontaromechemical.com

2-Isobutyl-3-methyl Pyrazine

Source: Fontarome Chemical, Inc.
FEMA# 3133, CAS# 13925-06-9, Nature identical



Natural occurrence: Coffee, potato chips and baked potato.

Odor: @ 1.0%. Strong, musty, green vegetative, mild nutty bell pepperlike with earthy peanut, baked potato skin and mintylike nuances.

Taste: @ 1–5 PPM. Weedy, fresh green vegetative, dry, green pepperlike with peanut, potato and coffeelike nuances.

Possible applications: Bell pepper, asparagus, salad dressings, mint blends, tomato, paprika, potato, peanut and coffee.

► Fontarome Chemical, Inc.; fontaromechemical.com

Isopropyl Isovalerate

Source: Fontarome Chemical, Inc.
FEMA# 2961, CAS# 32665-23-9, Nature identical



Natural occurrence: Apple.

Odor: @ 1.0%. Sharp, sour cheesy valeric acid topnote, fruity berry, applelike, tutti-frutti with overripe blueberry and pineapple nuances.

Taste: @ 1–5 PPM. Ripe, fruity blueberry, apple and pineapplelike with fermented nuances and a sharp sour cheesy finish.

Possible applications: Berry flavors, apple, pear, tropical fruit blends, pineapple, blueberry, cherry, grape, as well as cheese and yeast flavors.

► Fontarome Chemical, Inc.; fontaromechemical.com

4-Methyl Benzyl Acetate (synonym: para-Tolyl Acetate)

Source: Fontarome Chemical, Inc.
FEMA# 3702, CAS# 2216-45-7, Artificial

Odor: @ 1.0%. Sweet, fruity jammy cherry, floral, berrylike with a soapy powdery dryout.

Taste: @ 5 PPM. Sweet estry fruity cherry, floral, slightly anisyl-like.

Possible applications: Marshmallow, black cherry, vanilla, raspberry, almond, peach, cherry cough syrup flavors.

► Fontarome Chemical, Inc.; fontaromechemical.com

Methyl Propionate

Source: Fontarome Chemical, Inc.
FEMA# 2742, CAS# 554-12-1, Nature identical



Natural occurrence: Apple, banana, cheddar cheese, coffee, honey, strawberry and cooked pork.

Odor: @ 1.0%. Impacting ethereal solventlike, fruity, slightly rum, brandy and winelike with fruity nuances of apple, banana and blackberry.

Taste: @ 10–15 PPM. Impacting solventlike, fusel and rumlike with fruity estry nuances reminiscent of plum, cherry and banana.

Possible applications: Most fruits, white wine, beer, rum and whiskey, cognac, plum and cherry

► Fontarome Chemical, Inc.; fontaromechemical.com

2,3-Octanedione (synonym: Acetyl Caproyl)

Source: Fontarome Chemical, Inc.
FEMA# 4060, CAS# 585-25-1, Nature identical



Natural occurrence: Boiled mutton, raw fish, roasted turkey and chicken, cooked beef, coffee, black tea, roasted peanuts and soybeans.

Odor: @ 1.0%. Creamy, fatty, sautéed buttery, slightly toasted and cooked with nuances of blue cheese and grilled fat.

Taste: @ 5 PPM. Creamy, buttery, slightly lactonic cheesy with a sour dairy mouthfeel and a slight coconutlike aftertaste.

Possible applications: Butter, cheese, milk, blue cheese, grilled fat and coconut.

► Fontarome Chemical, Inc.; fontaromechemical.com