

Organoleptic Characteristics of Flavor Materials

By Gerard Mosciano



Gerard Mosciano is joined by Wayne Pohero, Chris Hansen; Judith Michalski, chief creative flavorist, Silesia Flavors; Carl Holmgren, chief creative flavorist, director of flavor development, Brooklyn by Perfetti Ltd.; and Douglas Young, senior creative flavorist, Dragoco, in the organoleptic evaluations presented here.

Address correspondence to Gerard Mosciano, 4646 Hickory Court, Zionsville, IN 46077.

Suppliers of most materials found in this report can be located in **Allured's Flavor & Fragrance Materials** published by Allured Publishing Corporation, 362 South Schmale Road, Carol Stream, IL 60188-2787 USA, telephone 630/653-2155, fax 630/653-2192.

Propanal

Source: Aldrich

FEMA #2923, CAS #123-38-6, Nature identical, Synonym: Propionaldehyde

Natural Occurrence: Apple, banana, blue cheese, cauliflower, cooked pork, grape brandy, potato chips, sake, tea, whiskey and wine.

Odor: @ 1% PG. Ethereal, pungent, choking with earthy, alcoholic wine lees-like with a whiskey and brandy impact and cocoa, nutty and slightly meaty nuance on dry out with a grape like nuance.

Taste: @ 5-10 PPM. Musty, yeasty, ethereal, nutty and vegetative with nuances of potato, blue cheese, grape, banana, apple, broccoli, almond and chocolate.

Possible Applications: Bread, yeast enhancers, nut flavors, apple and cider, peach, banana, wine and whiskey and cognac notes. Chocolate and cocoa notes, corn and cucumber.

Heptyl Iso Butyrate

Source: Aldrich

FEMA #2550, CAS #2349-13-5, Nature identical

Natural Occurrence: Hop oil.

Odor: @ 1%. Sweet, slightly green, fruity estery with pineapple, apple, cherry, apricot, and peach nuances.

Taste: @ 5-20 PPM. Raspberry, pineapple fruity with citrus orange and green winey nuances.

Possible Applications: Apricot, peach, pear, grape, cherry, plum, mango and orange.

Palmitic Acid

Source: Aldrich

FEMA # 2832, CAS # 57-10-3, Nature identical

Natural Occurrence: Blue, Swiss and cheddar cheeses, cooked beef, chicken, lamb, mutton, fish and roasted peanut.

Odor: @ 1%. Low heavy waxy, with a creamy, candle waxy nuance.

Taste: @ 50-100 PPM. Waxy, creamy, fatty, soapy with a Crisco like fatty, lard and tallow like mouth feel and a dairy nuance.

Possible Applications: Dairy flavors especially butter to add richness and mouth feel. Fat flavors and extenders, cheese enhancers.

Indole

Source: Aldrich

FEMA # 2593, CAS # 120-72-9, Nature identical

Natural Occurrence: Burley tobacco, butter, coffee, dried bonito, egg, fish, malt, rum, tea and wine.

Odor: @ 1%. Pungent, floral, slightly naphtha and mothball like with a fecal and animalic musty character.

Taste: @ 0.3-2 PPM. Animal, fecal, naphthyl, with earthy, perfumey, phenolic and chemical nuances.

Possible Applications: Jasmine and other floral enhancers, coffee, tobacco flavors, cocoa, concord grape, vanilla, parmesan and romano cheeses, egg top notes, honey and vanilla flavors.

Propanol

Source: Aldrich

FEMA #2928, CAS #71-23-8, Nature Identical

Natural Occurrence: Apple, apricot, banana, beer, gin, honey, pear, sherry and tea.

Odor: @ 5%. Alcoholic, fermented, weak fusel and tequila like, musty and yeasty, with a slightly sweet fruity nuance of apple and pear.

Taste: @ 25-250 PPM. Alcoholic, earthy, fermented, fusel-like, with peanut nutty nuances as well as fruity nuances of apple, pear, bubble gum.

Possible Applications: Fermented notes in beer and yeast, brandy, rum and tequila. Fruity nuances for apple, pear and banana. Vegetative notes such as in tomato and potato.

Heptanol

Source: Aldrich

FEMA # 2548, CAS #111-70-6, Nature identical

Natural Occurrence: Apple, apricot, beer, butter, macadamia nut, mushroom, strawberry, tea, tobacco and wine.

Odor: @ 1 %. Musty, pungent, leafy green, with vegetative and fruity nuances of apple and banana.

Taste: @ 1-10 PPM. Solvent-like, fermented with oily nutty and fatty notes, and a slight green aldehydic under note.

Possible Applications: Apple, banana, coconut, whiskey, apricot, chicken and turkey fats, citrus nuances, cucumber, watermelon.

Nonanal

Source: Aldrich

FEMA #2782, CAS #124-19-6, Nature identical

Natural Occurrence: Apple, avocado black currants, cooked beef, cucumber, fish, grapefruit, lemon, lime, mandarin, orange and peach.

Odor: @ 1%. Waxy, aldehydic, citrus, with a fresh slightly green lemon peel like nuance. And a cucumber fattiness.

Taste: @ 3-10 PPM. Effervescent, aldehydic citrus, cucumber and melon rindy, with raw potato and oily nutty and coconut-like nuances.

Possible Applications: Orange, lemon, citrus flavors in general, coconut, mango, watermelon, cucumber, peach, apricot, savory flavor nuances for fatty and lard like nuances. Fatty notes for macadamia and walnut. olive oil, tea.

α Methyl Benzyl Butyrate

Source: Aldrich

FEMA #2686, CAS #3460-44-4, Artificial, Not Naturally Occurring, Synonym: Styrallyl Butyrate

Odor: @ 5%. Sweet, fruity, berry-like with a juicy fruit and bubble gum character and a tropical fruity pulpy and over ripe fruit nectar like nuance.

Taste: @ 5-50 PPM. Heavy, fruity, plum-like with a rich tropical nectar nuance. It has juicy fruit and tutti frutti bubble gum-like nuances.

Possible Applications: Blueberry, raspberry, blackberry strawberry, tutti frutti and bubble gum, banana, cherry, tropical nuances, grape and cherry.

O-Methoxy Cinnamaldehyde

Source: Aldrich

FEMA #3181, CAS #1504-74-1, Nature identical

Natural Occurrence: Cinnamon.

Odor: @ 5%. Sweet, cinnamic, spicy, slightly woody and resinous nuances.

Taste: @ 5-25 PPM. Sweet, spicy, woody, cinnamon bark with medicinal and phenolic nuances.

Possible Applications: Cinnamon and cassia enhancers, spice blends, cola flavors, vanilla, chocolate, savory ham notes, gingerbread, cherry, raspberry flavors.

Oleic Acid

Source: Aldrich

FEMA # 2815, CAS #112-80-1, Nature identical

Natural Occurrence: Blue, cheddar and Swiss cheeses, cooked beef, mutton, pork, roast peanuts and various vegetable oils.

Odor: @ 5%. Oily, fatty, waxy with lard and tallow notes. It has a fried savory nuance.

Taste: @ 10-20 PPM. Fatty, vegetable oil with lard and tallow nuances of French fried potatoes.

Possible Applications: Peanut butter, lard, tallow, fat replacers, olive oil, fried nuances, pork and beef savory flavors.

Propyl Phenyl Acetate

Source: Aldrich

FEMA # 2955, CAS # 4606-15-9, Artificial, Not found in Nature

Odor: @ 1%. Sweet, honey, floral, with a rose-like nuance.

Taste: @ 1-5 PPM. Sweet, honey, floral with a fermented balsamic nuance.

Possible Applications: Honey, chocolate, tropical fruit blends, tea, and maple.

Eugenol

Source: Aldrich

FEMA # 2467, CAS # 97-53-0, Nature identical

Natural Occurrence: Black currant, cinnamon leaf oil, cloves, marjoram, nutmeg, peach, peppermint, raspberry, rosemary, strawberry.

Odor: @ 1%. Sweet, spicy, clove like, woody, with phenolic savory ham and bacon notes and cinnamon and allspice nuances.

Taste: @ 1-10 PPM. Sweet, warm spicy clove with phenolic and woody nuances.

Possible Applications: Spice blends, cinnamon, clove, allspice, root beer, banana, vanilla, cola blends, catsup, tomato, apple, pumpkin spice blends, ham and bacon, root beer, oral care products, cherry.

Octahydro Coumarin

Source: Aldrich

FEMA #3791, CAS # 4430-31-3, Artificial, Not Found in Nature, Synonym: Cyclo Hexyl Lacone.

Odor: @ 1%. Sweet, creamy, lactonic, coconut, coumarin, with milky and creamy vanilla nuances.

Taste: @ 5-10 PPM. Lactonic, coconut, creamy, sweet, with dairy vanilla and coumarin nuances.

Possible Applications: Coconut, vanilla, dairy blends, chocolate, vanilla, baked goods, nut nuances, milk and creamy nuances.

Sclareolide

Source: IFF

FEMA #3794, CAS #564-20-5, Nature identical.

Natural Occurrence: Cigar and oriental tobaccos.

Odor: @ 1%. Intense, aromatic, woody and moss like with a cedar and tobacco nuance.

Taste: @ 0.1-5 PPM. Intense aromatic, woody, cedar like, tobacco with a mushroom and earthy nuance. It has a vague perfumey oak moss note.

Possible Applications: Tobacco flavors, tea, maple, pepper and spice nuances.

Kiwi Treatarome

Source: Florida Treatt

Natural Distillate

Odor: Neat. Sweet, green, fruity, kiwi, raw green banana, grassy, with a hexanal nuance and a melon note.

Taste: @ 50-250 PPM. Green, fruity, grassy, seedy, green banana and kiwi-like with mango, melon and apple nuances.

Possible Applications: Kiwi, strawberry, green fruity notes, fresh vegetative nuances, mango, melon, green tea and herbal nuances

Coffee Treatarome, Full Roast

Source: Florida Treatt

Natural Distillate.

Odor: Neat. Roasted coffee, nutty, beany and ashy, caramellic, burnt, smoky, with cocoa nuances.

Taste: @ 10-500 PPM. Dark roast fresh coffee, cocoa, brown with caramellic and whiskey burnt nuances.

Possible Applications: Roasted coffee beverages, roasted brown notes, nutty nuances, top note for coffee. Whiskey and cocoa nuances.

Concentrated Onion Essence

Source: Sensus Inc.

Natural Distillate Via Spinning Cone Technology

Odor: Neat. Sweet, alliaceous, onion, pungent, with a sulfurous, sautéed and roasted onion nuance of French onion soup.

Taste: @ 0.2-0.3%. Strong sweet, cooked onion character, with fresh onion broth and slightly roasted savory sulfurous notes.

Possible Applications: Onion powder replacer, bouillon, roasted onion nuances, French onion soup top notes, savory snack applications. Salsa and dips.

2-Octen-4-one

Source: IFF

FEMA # 3603, CAS # 4643-27-0, Nature Identical

Natural Occurrence: Wheat bread.

Odor: @ 1%. Yeasty, fruity, mushroom, metallic, bread, pineapple, horseradish, earthy.

Taste: @ 2 PPM. Vegetable green earthy, horseradish, anchovy,

earthy, ketonic, onion, musty, tropical lift, yeasty, bread, mushroom, fermented.

Possible Applications: Tomato, pineapple, horseradish, cabbage, celery, potato, leek, chives, yogurt, tropical nuances, mushroom, bread.

Oil Vetiver

Source: A Woman of Uncommon Scents

CAS # 8016-96-4, Natural

Odor: @ 1.0%. Earthy, woody with guaiacwood-like notes. Slight peppery, and balsamic with a smoky nuance.

Taste: @ 2.5-10 PPM. Musky, woody, vegetative with woody pine and sandalwood notes and perfume rosy geranium nuances.

Possible Applications: Apple, raspberry, blackberry, mushroom, herbal nuances, tea notes, spice blends.

Cascarilla Bark Oil

Source: A Woman of Uncommon Scents

FEMA # 2255, CAS #8007-06-5, Natural

Odor: @1.0%. Spicy, black pepper, woody, terpy with olibanum, ginger, cinnamon and nutmeg nuances.

Taste: @ 2.5-10 PPM. Spicy, woody, peppery, cola like, with cinnamon, ginger, nutmeg and clove notes and a smoky nuance.

Possible Applications: Vanilla, spice notes for black pepper, cinnamon, ginger, nutmeg. Herbal nuances. ■