



Organoleptic Characteristics of Flavor Materials

by Gerard Mosciano

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Ethyl Benzoate^a

Source: Alfrebro

FEMA# 2422, CAS# 93-89-0, Natural

Natural occurrence: Feijoa, guava, plum, raspberry, rum, strawberry, Virginia tobacco.

Odor: @ 1.0 percent. Spicy, wintergreen, cherry, grape, slightly cooling anisic and powdery with a balsamic and tobacco under note.

Taste: @ 10 PPM. Chemical, cherry vanilla, spicy wintergreen, grape and yara-yara-like.

Possible applications: Root beer, grape, vanilla, banana, cherry, licorice, anise, yara-yara, cranberry and coumarin.

Ethyl 2-Mercapto Propionate

Source: Oxford Organics

FEMA# 3279, CAS# 19788-49-9, Artificial, Not found to occur in nature

Odor: @ 0.1 percent. Diffusive, strong sulfurous and alliaceous, meaty/brothy with fishy nuances; it has ripe tropical durian and jackfruit notes as well as mango, peach and grape-like nuances.

Taste: @ 0.2 to 0.5 ppm. Sulfurous, meaty and brothy, slightly vegetative and tropical durian like with a savory sautéed onion note.

Possible applications: Tropical Fruits such as mango, durian, jackfruit as well as other ripe fruit notes for pineapple, peach, and grape, vegetative nuances for onion and tomato and coffee.

1-Methyl-3-Methoxy-4-Isopropyl Benzoate

Source: Oxford Organics

FEMA# 3436, CAS# 1076-56-8, Nature identical

Natural occurrence: Pepper, thyme and marjoram.

Odor: @ 1.0 percent. Herbal, spicy, chemical, slightly medicinal thymol-like with a green chemical phenolic nuance.

Taste: @ 5 PPM. Spicy, herbal, medicinal, carvacrol-like, thyme, green with a peppery marjoram aftertaste.

Possible applications: Tequila, herbal spice notes for thyme and marjoram.

2-Ethyl-4,5-Dimethyl Oxazole

Source: Oxford Organics

FEMA# 3672, CAS# 53833-30-0, Nature identical

Natural occurrence: Coffee, french fried potato.

Odor: @ 1.0 percent. Oily, green vegetative, musty and slightly moldy potato-bin-like, with a beany coffee body and a roasted dark cocoa note; it has a raw nut skin character with tobacco and tomato nuances

Taste: @ 1.0-5.0 PPM. Musty green earthy, coffee beany, brown baked and mashed potato like, nut skin notes with a vegetative tomato and cocoa powder nuances.

Possible applications: Coffee, mashed, baked and fried potato, bread crust, and nut flavors such as

^a Natural occurrences were obtained from Leffingwell's database.

walnut, almond, pecan, cocoa and chocolate nuances, malt and tobacco.

2-Methoxy-3,5- and 6-Isopropyl Pyrazine

Source: Oxford Organics

FEMA# 3358, CAS# 93905-03-4, Nature identical

Natural occurrence: Green peas and potatoes.

Aroma: @ 1.0 percent. Green, raw

vegetative, galbanum-like, green pepper, earthy musty, baked potato skin with a slightly nutty nuance.

Taste: @ 0.05 to 1.0 PPM. Vegetative, green pepper, potato, celery, mushroom with grassy earthy nuances; peanut hell, radish and tomato-like nuances.

Possible applications: Horseradish, mashed, boiled and baked potatoes, radish, celery, mushroom notes. Raw vegetative nuances for green peppers and chili, nut flavors such as walnut and peanut, nuances for radish and tomato.

Iso butyl Acetate: Nature Identical

Source: Aldrich.

FEMA # 2175, CAS # 110-19-0

Natural occurrence: Apple, banana, cocoa, fig, grape, grape brandy, pear, pineapple, sherry, strawberry and wine.

Odor: @1.0%. Fruity, fatty, apple and banana like with winery nuances.

Taste: @ 10 PPM: Ripe lifting fruity banana, apple and pineapple like with winery and tropical notes.

Possible applications: Pineapple, pear, apple, banana, winery notes, mint enhancers, strawberry and juicy fruit compositions.

2,5-Dimethyl-3(2H)-Furanone

Source: Oxford Organics

Not FEMA approved, CAS# 14400-67-0, Nature identical

Natural occurrence: Wheat bread, coffee, passion fruit juice, wild rice and canned mango.

Odor: @ 1.0 percent. Creamy buttery brown, caramellic, nutty, bready with coffee beany nuances; popcorn-like with a slightly lactonic coconut and a honey nuance.

Taste: @ 12.5 to 100 PPM. Dairy brown buttery, condensed milk with fatty and sour yogurt notes, and slightly caramel-like, nutty and bread crust nuances.

Possible applications: Milk, butter, ghee and cheese flavors, chocolate, vanilla, brown sugar, walnut, caramel, molasses, canned apricot and peach nuances and coffee.

Carvomenthone (Tetra hydro Carvone)

Source: Frutarom

FEMA# 3176, CAS# 499-70-7, Nature identical

Natural occurrence: Native spearmint and *Mentha arvensis*.

Odor: @ 1.0 percent. Sweet spicy and cooling, spearmint minty, slightly peppermint-like and herbal; the cooling aftertaste increases with time.

Taste: @ 5.0 PPM. Woody, herbal, spearmint and cooling with a green minty nuance.

Possible applications: Spearmint and peppermint boosters, herbal tea flavors, mouthwash and other oral care and cough cold preparations; cordial and liqueur flavors.

Methyl Naphthyl Ketone (Oranger Crystals) Artificial

Source: Polarome

FEMA# 2723, CAS# 93-08-3, Not found in nature

Odor: @ 1.0 percent. Sweet naphthyl, fruity, orange blossom-like, anisic and powdery.

Taste: @ 10 PPM. Naphthyl, floral, green fruity, slightly coconut and orange blossom-like.

Possible applications: Grape, coumarin replacers, coconut, vanilla, berry raspberry and strawberry, mandarin citrus.

Phenoxy Ethyl Isobutyrate: Artificial

Source: Abaco

Not found in nature

Odor: @ 1 percent. Sweet fruity green, powdery, floral with a slightly peach-like nuance.

Taste: @ 5 PPM. Green, fruity apple-like.

Possible applications: Heat-stable note for apple, berry, pineapple, peach, grape, apricot, grape and tea flavors.

Styrax Resinoid Absolute

Source: Givaudan

FEMA# 3037, CAS# 9000-64-0, Natural

Odor: @ 1.0 percent. Chemical, sweet powdery, berry with a balsamic vanilla nuance.

Taste: @ 15 PPM. Chemical, powdery, sweet berry balsamic.

Possible applications: Cranberry, balsamic nuances for vanilla, berry, cinnamon and nut flavors.

Tetrahydrofurfuryl Propionate

Source: Oxford Organics

FEMA# 3058, CAS# 2217-33-6, Artificial, Not found in nature

Odor: @ 10.0 percent. Weak, musty, sweetly ethereal, tropical rummy, solvent winey and fermented, with an overripe fruity banana nuance.

Taste: @ 50 to 100 PPM. Musty, solventy, fruity, slightly fermented, rummy, malt-like with an overripe fruit nuance.

Possible applications: Tropical fruits such as mango, berry nuances, banana, rum and malt flavors.

Clove Leaf Oil, Madagascar

Source: Charabot

FEMA# 2325, CAS# 8000-34-8, Natural

Odor: @ 1.0 percent. Spicy, aromatic, woody, clove-like with a sharp and slightly smoky nuance.

Taste: @ 10 PPM. Spicy, aromatic, woody clove.

Possible applications: Spice and herbal blends, ketchup spice, red hot confections, oral care products, banana, cola flavors and tropical fruit nuances.

3-Mercapto-3-Methylbutyl Formate (3-Methyl-3-Thiobutyl Formate)

Source: Oxford Organics

FEMA# 3855, CAS# 50746-10-6, Artificial

Natural occurrence: Coffee.

Odor: @ 0.1 percent. Roasted coffee, nutty, meaty/eggy, alliaceous and sulfurous skunk-like, rubbery with a catty/fuzzy ripe tropical fruit nuance and a slight minty under note.

Taste: @ 0.5-1.0 PPM. Roasted savory meaty burnt rubber, caramelized onion and sulfurous coffee nutty or beany character; it has a tropical fruit catty or fuzzy peach skin note.

Possible applications: Soft cheeses, cooked meaty notes, ripe and tropical fruits such as durian, coffee

and nut flavors, blackcurrant, grapefruit, peach as well as onion and egg nuances.

3-Methyl-2-Butanethiol-1, (Prenyl Mercaptan)

Source: Oxford Organics

FEMA# 3896, CAS# 5287-45-6, Nature identical

Natural occurrence: Beer and coffee.

Odor: @ 1.0% Triacetin. Sulfurous seared meaty, alliaceous garlic and onion, roasted coffee, with a stale beer and aged cultured/sweaty cheesy and egg-like nuances.

Taste: @ 0.01-0.5PPM. Sulfurous, roasted garlic and roasted coffee beans, grilled meaty with a nutty nuance.

Possible applications: Garlic, coffee, grilled or seared meat, tuna, and pork, ripe aged cheeses.

Cassia Oil Redistilled

Source: Citrus & Allied

FEMA# 2258, CAS# 8007-80-5, Natural

Odor: @ 1.0 percent. Sweet cinnamon, spicy.

Taste: @ 10 PPM. Sweet cinnamon, spicy with a dirty woody nuance.

Possible Applications: Cinnamon flavors, oral care products, confections, ketchup spice blends, cola flavors, red-hot candy.

Clove Bud Oil: Natural

Source: Charabot

FEMA# 2323, CAS# 8000-34-8

Odor: @ 1.0 percent. Rich sweet spicy woody clove.

Taste: @ 5 PPM. Rich aromatic, woody, clove spice.

Possible applications: Spice blends, cake mixes, confections and candy flavors, oral care products.

Isobutyl Formate

Source: Fleurchem

FEMA# 2197, CAS# 542-55-2, Natural

Natural occurrence: Apple, beer, grape brandy, pineapple, rum and vinegar.

Odor: @ 1.0 percent. Impacting ethereal, rum-like with a fresh pineapple character.

Taste: @ 10 PPM. Ethereal, rummy, fresh pineapple fruity with a good impact.

Possible applications: Apple, pineapple, rum, whiskey and cognac.

Vanillin Isobutyrate: Artificial

Source: Fleurchem.

FEMA# 3754, CAS# 20665-85-4, Not found in nature

Odor: @ 1.0 percent. Sweet powdery vanillin, slightly cooked creamy, cake like, nutty and vanilla bean-like.

Taste: @ 5 PPM. Sweet vanillin, creamy and dairy-like, almond marzipan candy, cookie, piecrust and cake-like.

Possible applications: Vanilla, almond, baked goods, chocolate, vanilla bean nuances, cherry fruit.

Thymol Methyl Ether

Source: Oxford Organics

Nature Identical

Natural occurrence: Orange, oregano, sweet marjoram, thyme and tangerine.

Odor: @ 1 percent. Green, herbal, dirty thyme like, oily, slightly woody with an anthranilate grapey nuance.

Taste: @ 1.0 to 3.0 PPM. Warm, green herbal, dirty thyme/oregano spicy, vegetative with a woody and oily mouth feel.

Possible applications: Spice blends such as thyme, oregano and marjoram, MSG replacers; grape nuances methyl salicylate modifiers, savory nuances. ■