



Organoleptic Characteristics of Flavor Materials

by Gerard Mosciano

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

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2-Methyl Tetrahydro Furan-3-one, Coffee Furanone

Source: Frutarom

FEMA# 3373, CAS# 3188-00-9, Nature identical

Natural occurrence: Guava, roasted onion, baked potato, tea, tomato, thyme, heated chicken and cooked beef, heated pork, beer, rum, cocoa, coffee, roasted peanuts, soy.

Odor: @ 0.10 percent. Creamy, musty, pyridine-like, roasted coffee, brown caramel, meaty pot roast and brown gravy-like.

Taste: @ 0.1 to 5 PPM. Musty beany, coffee and cocoa-like, vegetative celery-like, savory roasted meaty with a creamy latte coffee nuance.

Possible applications: Vegetative notes, cocoa, nut flavors such as almond, peanut, pecan, hazelnut and macadamia, rum, dulce de leche, butterscotch, cereal and bread notes as well as savory roasted meaty nuances.

► **Frutarom;** *tel:* 201-861-9500; *www.frutarom.com*

2-Methyl-4-Propyl-1, 3-Oxathiane, Maracuya Compound

Source: Natural Advantage

FEMA# 3578, CAS# 67715-90-4, Nature identical

Natural occurrence: Passionfruit.

Odor: (odor threshold of 3 PPB) @ 0.1 percent.

Sulfurous, green alliaceous, vegetative and tropical with an oily citrus and ripe fruity character with nuances of currant, pulpy mango and passionfruit and peach.

Taste: @ 0.3 to 2.0 PPM. Sulfurous, pulpy tropical, passion fruit and durian, oily green waxy citrus with a fresh pineapple nuance.

Possible applications: Tropical currant, buchu, onion, orange, grapefruit, berry minty nuances, pineapple, characteristic passion fruit, jackfruit, peach, mango and durian.

► **Natural Advantage;** *tel:* 732-274-9683; *www.natural-advantage.net*

3-Phenyl Propyl Propionate

Source: Penta

FEMA# 2897, CAS# 122-74-7, Artificial, Not reported found in nature

Odor: @ 1.0 percent. Sweet winey, fruity, fermented, floral, berry-like with a spicy honey-like nuance.

Taste: @ 5.0 PPM. Floral, fruity, musty, green citrus with berry nuances.

Possible applications: Tropical fruits such as mango, papaya, guava, apricot and strawberry, grape, cherry and raspberry.

► **Penta;** *tel:* 973-740-2300; *www.pentamfg.com*

6-Methoxy-3-Ethyl Pyrazine

Source: Fontarome

FEMA# 3280, CAS# 68739-00-4, Nature identical

Natural occurrence: Coffee and potato.

Odor: @ 1.0 percent. Musty, earthy, brown nutty,

baked potato skin, peanut and hazelnut-like, with nuances of coffee beans and cocoa.

Taste: @ 5 PPM. Musty, nut shell, toasted almond, hazelnut and peanut, cocoa powder, baked potato.

Possible applications: Almond, hazelnut, peanut, peanut butter, cocoa powder, baked and roasted potato, coffee, and french-fried nuances.

► **Fontarome;** *tel:* 414-744-3993; *www.fontaromechemical.com*

Clove Leaf Madagascar

Source: Charabot

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

Odor: @ 1.0 percent. Spicy, aromatic, woody, clove, sharp with a slightly smoky character.

Taste: @ 5.0 PPM. Spicy, aromatic, woody clove.

Possible applications: Spice and herbal blends, ketchup spice, confections, oral care products, colas, banana, cinnamon modifiers, tropical nuances.

► **Charabot;** *tel:* 33-4-9309-3333

Coffee Concentrate

Source: Sensus

Natural spinning cone concentration

Odor: @ 100 percent. Rich dark roasted coffee beany with a slight cocoa powder nuance.

Taste: @ 1.0 percent. Rich coffee beany, slightly ashy with a lingering rich coffee aftertaste.

Possible applications: Beverage coffees, mocha and cappuccino, cocoa and chocolate nuances.

► **Sensus;** *tel:* 513-759-6500; *www.sensusflavors.com*

Ethyl Acrylate

Source: Aldrich

FEMA# 2418, CAS# 140-88-5, Nature identical

Natural occurrence: Durian, pineapple and raspberry.

Odor: @ 0.1 percent. Diffusive, pungent, ethereal, canned pineapple, harsh rum-like with liqueur-type nuances.

Taste: @ 1.0 PPM. Harsh acrid rum, pineapple, tequila-like with a slightly peppery nuance.

Possible applications: Rum, whiskey, tequila, tobacco, tropical fruit nuances, pineapple, horseradish and radish.

► **Aldrich;** *tel:* 414-273-3850; *www.sigmaaldrich.com*

Ginger Extract Natural, Acetone Extraction

Source: Frutarom

Odor: @ 1.0 percent. Woody, herbal, spicy ginger, citrus lemon with a botanical afternote.

Taste: @ 50 PPM + 5 percent Sugar Solution. Harsh ginger, woody, spicy with a lingering alcoholic bite and heat.

Possible applications: Ginger spice, cola flavors, ginger beer, cinnamon and cassia boosters, spice blends, pumpkin spice notes.

► **Frutarom;** *tel:* 201-861-9500; *www.frutarom.com*

Ginger Extract Natural, Ethyl Alcohol Extraction

Source: Frutarom

FEMA# 2521, CAS# 84696-15-1

Odor: @ 1.0 percent. Sweet, spicy ginger with citrus nuances; impacting with an earthy botanical nuance.

Taste: @ 50 PPM in 5 percent Sugar Solution. Spicy, biting ginger with a good citral lemon nuance.

Possible applications: Honey, ginger ale beverages, ginger beer, cola nuances, ethnic spice blends, pumpkin pie spice, lemon citrus nuances.

► **Frutarom**; tel: 201-861-9500; *www.frutarom.com*

Methyl Heptenone, 6-Methyl-4-hepten-2-one

Source: Fleurchem

FEMA# 2707, CAS# 110-03-0, Nature identical

Natural occurrence: Apple, apricot, sour cherry, citrus fruits, guava, grape, melon, papaya, raspberry, baked potato, tomato and clove.

Odor: @ 1.0 percent. Green waxy fruity and slightly herbaceous.

Taste: @ 10 PPM. Green, fruity, melon and citrus rindy and sweet.

Possible applications: Banana, tomato, cucumber, mango, apple, pear, kiwi, guava and citrus nuances.

► **Fleurchem**; tel: 914-341-2100

Milk Caramel Pyrazine

Source: Frutarom

A blend of various pyrazines, which includes 2,3- and 2,6-dimethyl, trimethyl, ethyl and acetyl dimethyl pyrazines

Odor: @ 1.0 percent. Musty, nutty and powdery cocoa, potato with caramel nuances.

Taste: @ 5 PPM. Musty, potato, nut skin, earthy mushroom-like with caramel and coffee beany nuances.

Possible applications: Condensed milk, caramel, dulce de leche, almond, peanut, hazelnut, coffee, potato and coffee powders.

► **Frutarom**; tel: 201-861-9500; *www.frutarom.com*

Orange Oil Valencia, Cold Pressed

Source: Polarome

Natural

Odor: @ 1.0 percent. Sweet, juicy orange, fresh, slightly peely, pulpy with terpy aldehydic nuances.

Taste: @ 100 PPM. 6 percent Sugar and 0.10 percent CA. Juicy, orange, sweet and fresh, pulpy with green aldehydic nuances.

Possible applications: Citrus flavors in general, fruit punches, nuance effects in a broad range of fruit flavors, confections, orange cream flavors.

► **Polarome**; tel: 201-309-4500; *www.polarome.com*

Orange Top Notes Concentrated Essence

Source: Treatt USA

From the named fruit essence

Odor: @ 100 percent. Sweet, orange, fresh sharp and pungent, estry and juicy, aldehydic with a mandarin- and tangerine-like nuances.

Taste: @ 0.05 percent with 5 percent Sugar and 0.15 percent CA. Fresh estry orange juicy, with aldehydic nuances.

Possible applications: Orange juice add backs, mandarin and tangerine, valencia orange notes for clear beverages.

► **Treatt USA**; tel: 863 668 9500; e-mail: *enquiries@treattusa.com*

Roasted Coffee Liquid Concentrate 100 percent Robusta

Source: Amelia Bay

Natural concentrate

Odor: @ 100 percent. Roasted coffee beany, rich dark roasted coffee with no ashtray nuances.

Taste: @ 1 percent. Roasted coffee with a furanone nuance, bitter cocoa note, and a slightly roasted nutty and beany nuance.

Possible applications: Coffee, cocoa, caramel, molasses and nut flavors.

► **Amelia Bay**; tel: 770-772-6360; *jason@ameliabay.com*

Solid Extract Chicory FR

Source: Frutarom

Natural extract

Odor: @ 100 percent. Sweet, brown, fruity and slightly winey.

Taste: @ 1 percent. Sweet brown, coffee and cocoa-like, nutty with an astringent, slightly bitter aftertaste.

Possible applications: Coffee, cocoa, maple modifier for molasses and malt.

► **Frutarom**; tel: 201-861-9500; *www.frutarom.com*

Solid Extract Coffee FR

Source: Frutarom

Natural extractive

Odor: @ 5 percent. Water. Hi roast coffee beany, meaty HVP-like, with good depth and cocoa, chocolate and bready nuances.

Taste: @ 0.5 percent. Roasted coffee-like, with bitter, meaty and savory HVP nuances.

Possible applications: Coffee, cocoa, burnt maple nuances, malt, brown sugar, toffee and caramel.

► **Frutarom**; tel: 201-861-9500; www.frutarom.com

Solid Extract Hibiscus

Source: Chart

Natural extract

Odor: @ 10.0 percent. Sweet, brown and slightly fruity.

Taste: @ 2.0 percent. Sweet, fruity, acidic, slightly astringent, with a berry- and tea-like nuance.

Possible applications: Apricot, peach, strawberry, natural color and tea nuances.

► **Chart**; tel: 973-345-5554; www.chartcorp.com

Solid Extract Malt

Source: Chart

Natural extract

Odor: @ 100 percent. Sweet, brown, cooked, sugary, caramel, molasses-like with a ripe stewed tomato-like nuance.

Taste: @ 1.0 percent. Sweet, caramel, sugary, molasses, with a slight cooked tomato nuance.

Possible applications: Maple, brown sugar, molasses, malt, caramel and bread nuances.

► **Chart**; tel: 973-345-5554; www.chartcorp.com

Thialdine

Source: Fontarome

FEMA# 4018, CAS# 94944-51-1, Nature identical

Natural occurrence: Cooked beef.

Odor: @ 1.0 percent. Sulfurous, tropical durian-like, roasted meaty, savory and slightly nutty with a brothy and eggy nuance.

Taste: @ 5 PPM. Tropical mango and durian fruity, savory meaty, stewed beef and pork, slightly bloody and metallic with onion and garlic nuances.

Possible applications: Durian and other tropical fruits for added ripeness, brothy notes for turkey, chicken, beef and pork.

► **Fontarome**; tel: 414-744-3993; www.fontaromechemical.com

Valencene 50 percent Ex Orange

Source: Florida Worldwide Citrus

FEMA# 3443, CAS# 4630-07-3, FTNF natural fraction

Odor: @ 1.0 percent. Citrus juicy orange with a nice woody tropical fruity depth.

Taste: @ 1 PPM. Citrus juicy orange with a woody tropical fruity nuance.

Possible applications: Orange essence and juice compositions, grapefruit, tropical mango, peach and apricot depth notes.

► **Florida Worldwide Citrus**; tel: 941-746-9183; e-mail: contact@fwwcitrus.com ■