



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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sec. Butyl Amine

Source: SAFC

FEMA# 4240, CAS# 13952-84-6,

Nature identical

Natural occurrence: Camembert cheese and cocoa.

Odor: @ 0.1%. Slight ammonialike, cooked fishy, dried squidlike with vegetative notes and soylike nuances.

Taste: @ 40 PPM. Sweet fishy, ammonia-like with woody and creamy cheesy nuances.

Possible applications: Fish flavors, meat and fried food, camembert and cheddar cheese, soy nuances.

►SAFC; tel: 1-800-227-4563;
www.safcsupplysolutions.com

Chicory Extract

Source: Moore Ingredients/A.M. Todd

Natural

Odor: Neat. Brown, drying, woody, astringent chestnut and valerianlike with cocoalike nuances.

Taste: @ 0.15%. Astringent, brown woody, bitter with vermouthislike nuances.

Possible applications: Nutty nuances, woody nuances, vermouthis, cocoa, maple.

►Moore Ingredients;
tel: 1-513-881-7144; www.moorelab.com

2,6-Dimethyl-4-Heptanol

Source: SAFC

FEMA# 3140, CAS# 108-82-7,

Nature identical

Natural occurrence: Cognac, white and red wines.

Odor: @ 1.0%. Fruity, green, cooling musty, winey, alcoholic fusel-like with fruity apple, blueberry, grape and pear nuances.

Taste: @ 10 PPM. Musty alcoholic fusel, fruity apple and pear, winey and berry with a lingering cooling mouthfeel.

Possible applications: Grape, blueberry, citrus, peppermint, melon, tea, banana, fusel-like notes, apple and pear.

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1-Ethyl Hexyl Tiglate

Source: SAFC

FEMA# 3676, CAS# 94133-92-3,

Artificial

Not reported found in nature.

Odor: @ 1.0%. Green pepper, spicy, musty, slightly mushroomlike with fruity nuances.

Taste: @ 10 PPM. Green musty, fruity, pepperlike with cocoa nuances.

Possible applications: Nutmeg, green pepper, pear, apple and spice nuances.

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4-Ethyl Octanoic acid

Source: Treatt USA

FEMA# 3800, CAS# 16493-80-4, Nature identical

Natural occurrence: Costus root, male goat meat/fat, Virginia tobacco.

Odor: @ 1.0%. Waxy, fatty, creamy, moldy, sour sweaty cheesy with animal-like nuances.

Taste: @ 10 PPM. Waxy, fatty, savory meaty, greasy, sweaty cheesy with yeasty and tallowlike nuances.

Possible applications: Tallow, fatty meaty nuances, savory notes for goat meat/fat, cheesy dairy nuances.

► **Treatt USA**; tel: 1-863-668-9500; www.treatt.com

Iso Butyl 3-Methylthio Butyrate

Source: Oxford Chemicals Ltd.

FEMA# 4150, CAS# 127931-21-9, Nature identical

Odor: @ 1.0%. Sulfurous, cultured dairy creamy and cheeselike with fruity nuances of apple, banana and melon.

Taste: @ 1.5 PPM. Sweet fruity with cultured creamy and acidic cheesy nuances of butter and cream.

Possible applications: Cream, milk, butter, caramel, dulce de leche, apple, melon and banana.

► **Oxford Chemicals Ltd.**; tel: 44-(0)-1429-863555; www.oxfordchemicals.com



Linoleic Acid (synonym: 9.12.15-Octadecadienoic Acid)

Source: SAFC

FEMA# 3380, CAS# 60-33-3, Nature identical

Natural occurrence: Apple, apricot, banana, various cheeses, tomato, butter, whiskey, rum, coconut, peanut, pork and avocado.

Odor: @ 10%. Fatty and slightly rancidlike, oily, waxy and aldehydic with a slight green nuance.

Taste: @ 100 PPM. Fatty and waxy mouthfeel with a green cucumber aftertaste.

Possible applications: Bacon, meaty savory notes, various dairy applications, coconut and tallow replacers for mouthfeel.

► **SAFC**; tel: 1-800-227-4563; www.safcsupplysolutions.com

3-Metcaptohexyl Hexanoate

Source: Oxford Chemicals Ltd.

FEMA# 3853, CAS# 136954-22-8, Nature identical

Natural occurrence: Yellow passion fruit.

Odor: @ 1.0%. Sweet, sulfurous with grapefruit and berrylike buchu notes, tropical fruitlike reminiscent of papaya and passion fruit with buttery and meaty nuances.

Taste: @ 1.25 PPM. Catty and vegetative, sulfurous with a slightly fruity aftertaste, meaty grapefruit with strong tropical fruit notes of papaya and passion fruit.



Possible applications: Grapefruit, papaya and passion fruit, savory brothy nuances, savory onion and meat, coffee.

► **Oxford Chemicals Ltd.**; tel: 44-(0)-1429-863555; www.oxfordchemicals.com

2-Methoxy-3-(1-Methyl Propyl)-Pyrazine

Source: Treatt USA

FEMA# 3433, CAS# 24168-70-5, Nature identical

Natural occurrence: Asparagus, capsicum varieties, raw carrot, celery, cucumber, galbanum oil, lettuce, parsnips, pumpkin.

Odor: @ 1.0%. Green bell pepper, musty, earthy, raw nutty, potato with fatty nuances.

Taste: @ from 0.1–1 PPM. Green musty, mushroom, vegetative, green bell pepper, galbanumlike with fatty and nutty nuances.

Possible applications: Weedy notes for mint, mushroom, nut nuances for cashew, vegetative notes for tomato, potato and celery.

► **Treatt USA**; tel: 1-863-668-9500; www.treatt.com



Nonivamide (synonym: Nonanoyl 4-Hydroxy-3-Methoxy Benzaldehyde)

Source: Fontarome Chemical Inc.

FEMA# 2787, CAS# 2444-46-4, Nature identical

Natural occurrence: Capsicum species.

Odor: @ 1.0%. No apparent aroma.

Taste: @ 5 PPM. Delayed pungency but induces a clean biting heat on sides of tongue and in the back of the throat.

Possible applications: Capsicum replacers for seasoning blends, snack foods, bitterness modifiers, confection effects.

► **Fontarome Chemical Inc.**; tel: 1-414-744-3993; www.fontaromechemical.com

2-Oxo-3-Phenylpropionic Acid (synonym: 3-PhenylPyruvic Acid)

Source: SAFC

FEMA# 3892, CAS# 156-06-9, Nature identical

Natural occurrence: Blue and provolone cheese, beer, red and white wines, cocoa.

Odor: @ 1.0%. Sweet almond vanilla, creamy, fruity cherrylike, acidic sour Swiss cheeselike, clover honey with floral and coumarinic nuances.

Taste: @ 20–25 PPM. Slightly creamy, cherry vanilla, powdery coumarin and coconutlike with fruity honey nuances.

Possible applications: Cherry, vanilla, berry flavors, honey, dairy notes for cream and cheese flavors, mint modifiers, coconut and coumarin.

► **SAFC**; tel: 1-800-227-4563; www.safcsupplysolutions.com



2-Pentanonyl Furan (synonym: Butyl 2-Furyl Ketone)



Source: Oxford Chemicals Ltd.
FEMA# 4192, CAS# 3194-17-0,
Nature identical

Natural occurrence: Grilled and roasted meat.

Odor: @ 5.0%. Chemical, nutty, brown, tobacco-like, meaty, bread-like with licorice and tropical fruity nuances.

Taste: @ 25 PPM. Brown, tobacco, bread-like, nutty with burnt and roasted nuances.

Possible applications: Nut flavors, tobacco, bread, licorice, date flavors, egg nuances.

► **Oxford Chemicals Ltd.;**
tel: 44-(0)-1429- 863555;
www.oxfordchemicals.com

2-Propionyl Thiazole



Source: Treatt USA
FEMA# 3611, CAS# 43039-98-1,
Nature identical

Natural occurrence: Cooked beef.

Odor: @ 0.1%. Nutty, savory meaty with eggy, caramel and cheeselike nuances.

Taste: @ 0.05 PPM. Nutty, savory meaty with roasted notes.

Possible applications: Hazelnut, Swiss cheese, peanut and peanut butter, roast beef.

► **Treatt USA;** tel: 1-863-668-9500; www.treatt.com

10-Undecenoic Acid

Source: SAFC

FEMA# 3247, CAS# 112-38-9, Nature identical

Natural occurrence: Castor oil and vegetable oils.

Odor: @ 1.0%. Waxy, fatty, Costus-like with creamy and green berry nuances.

Taste: @ 10 PPM. Waxy, fatty, Costus-like with creamy musty nuances.

Possible applications: Berry flavors, creamy notes for butter and other dairy applications, fried flavors, fat replacers and coconut.

► **SAFC;** tel: 1-800-227-4563;
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