



# 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.

Address correspondence to Gerard Mosciano, c/o *Perfumer & Flavorist* magazine, 336 Gundersen Drive, Suite A, Carol Stream, IL 60188-2403.

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](http://www.PerfumerFlavorist.com).

## 4,5-Dihydro-3(2H)-Thiophenone

Source: Treatt

FEMA# 3266, CAS# 1003-04-9, Nature identical

Natural occurrence: Coffee, cooked beef, roasted filbert and roasted peanut.

Odor: @ 0.10%. Alliaceous and sulfurous fishy, eggy, meaty, onion vegetable with toasted nutty nuances.

Taste: @ 15 PPM. Onion and garlic, musty coffee, nutty, savory meaty beeflike with a smoky nutty mouthfeel.

Possible applications: Meaty base, beef, bacon, barbecue sauce, smoky, nut notes, coffee, cabbage, brothy, sautéed garlic and fish nuances.

►Treatt USA; tel: 1-863-668-9500; [www.treatt.com](http://www.treatt.com)

## Dodecanal Dimethyl Acetal

Source: Bedoukian Research, Inc.

FEMA# 4366, CAS# 14620-52-1, Artificial

Odor: @ 1.0%. Citruslike, fatty lard-like, aldehydic with a floral nuance and fruity notes of apple and melon.

Taste: @ 5–10 PPM. Citrus orange body, waxy and fatty with cilantro-like nuances.

Possible applications: Citrus orange, tangerine, grapefruit and Mexican lime, lard, Asian and Mexican spice nuances.

►Bedoukian Research, Inc.; tel: 1-203-830-4000; [www.bedoukian.com](http://www.bedoukian.com)



## trans-3-Hexenol

Source: Bedoukian Research, Inc.

FEMA# 4356, CAS# 928-97-2, Nature identical

Odor: @ 1.0%. Pungent, solventlike, sweaty, fruity and

leafy green.

Taste: Fresh green, fruity Granny Smith applelike, vegetative, dry oily with a sweaty finish.

Possible applications: Strawberry, apple, pear, general green notes for fruit, pear and tea flavors.

►Bedoukian Research, Inc.; tel: 1-203-830-4000; [www.bedoukian.com](http://www.bedoukian.com)

## trans-3-Hexenyl Acetate

Source: Bedoukian Research, Inc.

FEMA# 4413, CAS# 3681-82-1, Nature identical

Odor: @ 1.0%. Green, fatty and oily with ripe apple and pear notes and a soapy nuance.

Taste: @ 1–5 PPM. Dry fruity, green leafy and pear skin.

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

►Bedoukian Research, Inc.; tel: 1-203-830-4000; [www.bedoukian.com](http://www.bedoukian.com)



## S-Isopropyl 3-Methylbut-2-Enethioate

Source: Treatt

FEMA# 4260, CAS# 34365-79-2, Artificial

Odor: @ 0.10%. Bready, slightly caramellic, sulfurous hard-boiled egglike with savory and brothy nuances.

Taste: @ 1.0 PPM. Burnt tire savory, roasted meaty, savory brothy with sulfurous eggy nuances.

Possible applications: Egg yolk, savory nuances, dulce de leche nuances, goat cheese and other cheese notes.

►Treatt USA; tel: 1-863-668-9500; [www.treatt.com](http://www.treatt.com)



## Menthyl Lactate

Source: Taste Advantage

FEMA# 3748, CAS# 59259-38-0, Nature identical

Natural occurrence: *Mentha arvensis*.

Odor: @ 1.0%. Slightly cooling with green minty nuances.

Taste: @ 15 PPM. Cooling that builds and lingers on the palate with fresh green and slightly fruity nuances.

Possible applications: Chewing gum and other confections, toothpaste and other oral care products, fruit nuances and general cooling notes.

►Taste Advantage; tel: 1-863-619-8101; [www.tasteadvantage.com](http://www.tasteadvantage.com)

## 3-Mercapto-3-Methyl-1-Butyl Acetate

Source: Treatt

FEMA# 4324, CAS# 50746-09-3, Artificial

Odor: @ 0.10%. Impacting and pungent, overripe tropical fruitlike, sulfurous, savory beefy with roasted and burnt tire nuances.

Taste: @ 0.5 PPM. Rich savory meaty gravy with onion soupy nuances.

Possible applications: Roasted beef, grapefruit and other tropical fruit nuances, peach.

►Treatt USA; tel: 1-863-668-9500; [www.treatt.com](http://www.treatt.com)

## 2-Methyl-3-Furanthiol

Source: Treatt

FEMA# 3188, CAS# 28588-74-1, Nature identical

Natural occurrence: Cooked beef, chicken and pork. Yeast extract and canned fish.

Odor: @ 0.10%. Sulfurous, fishy salmon, slightly chicken meaty, metallic tuna with a cooked and roasted nuance.

Taste: @ 1.0 PPM. Sulfurous, fishy, salmon and tunalike, roasted meaty, slightly alliaceous with coffee, brothy and HVP-like notes.

Possible applications: Beef broth, chicken, tuna and salmon, onion and garlic, fried flavors and roasted nutty nuances.

►Treatt USA; tel: 1-863-668-9500; [www.treatt.com](http://www.treatt.com)

## 3-(Methylthio)Propyl Acetate (synonym: Methionyl Acetate)

Source: Treatt

FEMA# 3883, CAS# 16630-55-0,  
Nature identical

Natural occurrence: Apple, beer, whiskey and wine.

Odor: @ 0.10%. Musty, moldy, earthy fresh mushroom-like, potato-like with creamy dairy nuances.

Taste: @ 1.0 PPM. Musty, dank and earthy fresh mushroom with potato and brothy soupy metallic nuances.

Possible applications: Potato, mushroom, truffle, cheese and tropical fruit nuances.

►Treatt USA; tel: 1-863-668-9500; [www.treatt.com](http://www.treatt.com)



## Nonanal Dimethyl Acetal

Source: Bedoukian Research, Inc.

FEMA# 4367, CAS# 18824-63-0, Artificial

Odor: @ 1.0%. Slightly green vegetative, aldehydic, waxy, fatty, citrus and melonlike.

Taste: @ 1 PPM. Dry, slightly waxy citrus punchlike,

earthy, fatty with a green vegetative finish.

Possible applications: Citrus orange, ripe cheese, tallow, lard, melon and cucumber, asparagus, green pepper and other vegetative nuances.

►Bedoukian Research, Inc.; tel: 1-203-830-4000; [www.bedoukian.com](http://www.bedoukian.com)

## Oleoresin Cassia SOR

Source: Lionel Hitchen (Essential Oils) Ltd.

Natural

Odor: @ 1.0%. Sweet spicy, woody ground cinnamon with a powdery and nose tingly bite.

Taste: @ 5 PPM. Sweet spicy cinnamon, cassialike with woody notes reminiscent of freshly ground cinnamon.

Possible applications: Cinnamon and cassia notes for all baked goods and confections.

►LHEO Ltd.; tel: 44-(0)-1962-760815; [www.lheo.co.uk](http://www.lheo.co.uk)

## 1-Pentanethiol

Source: Treatt

FEMA# 4333, CAS# 110-66-7, Artificial

Odor: Sulfurous, metallic and waxy, green vegetative, slightly brothy, cultured dairy with a slight tropical nuance.

Taste: @ 0.10 PPM. Sulfurous, waxy, eggy, vegetative cabbage and broccolilike with cheesy and tropical nuances.

Possible applications: Sulfurous nuances for egg, cultured dairy and vegetative notes.

►Treatt USA; tel: 1-863-668-9500; [www.treatt.com](http://www.treatt.com)



## 2-Pentylthiophene

Source: Treatt

FEMA# 4387, CAS# 4861-58-9, Nature identical

Natural occurrence: Beer.

Odor: @ 0.10%. Sulfurous, tropical fruit impact with a mushroom souplike savory nuance.

Taste: @ 1.0 PPM. Savory, dairy cheese rindlike with a mushroom background. Slightly ricelike with toasted onion nuances.

Possible applications: Tropical fruits such as mango, mushroom, burnt butter, blue, Romano and Parmesan cheeses.

►Treatt USA; tel: 1-863-668-9500; [www.treatt.com](http://www.treatt.com)

## Safraleine

Source: Vigon International

FEMA# 4556, CAS# 54440-17-4, Artificial

Odor: @ 1.0%. Ionone berrylike, seedy woody with musk, fruit, leather and slightly minty nuances.

Taste: @ 10 PPM. Woody, seedy berry and raspberrylike with a fruity and tropical terpy floral note and nuances of leather and brown caramel.

Possible applications: Mango, blackberry, raspberry, dark cherry, leather, hay and tobacco, modifiers for cheese, woody and seedy nuances.

►Vigon International; tel: 570-476-6300; [www.vigoninternational.com](http://www.vigoninternational.com)

To purchase a copy of this article or others, visit [www.PerfumerFlavorist.com/articles](http://www.PerfumerFlavorist.com/articles).