



# 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, principle flavorist, Symrise, in the organoleptic evaluations presented here.

Address correspondence to Gerard Mosciano, c/o Perfumer & Flavorist magazine, 362 S. Schmale, Carol Stream, IL 60188.

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.

## Butter Esters Natural

*Source:* Advanced Biotech  
Natural

*Odor:* @ 5.0 percent. Sweet, creamy, buttery and fatty with a slightly fruity and cheesy nuance.

*Taste:* @ 50 PPM. Fatty, creamy, sweet estry fruity reminiscent of pineapple.

*Possible applications:* Pineapple, cream, butter, caramel, butterscotch and dairy applications in general.

► **Advanced Biotech;** tel: 973-357-0577; [www.adv-bio.com](http://www.adv-bio.com)

## Clove Oleoresin

*Source:* Naturex  
Natural

*Odor:* @ 1.0 percent. Spicy, eugenol, woody, aromatic, sweet clove and cinnamon-like.

*Taste:* @ 10 PPM. Spicy, clove, cinnamon, eugenol, aromatic, woody with slight residual heat.

*Possible applications:* Spice blends for apple and pumpkin pie, baked goods in general, confections, cola flavors, mouthwash and other oral care products, cinnamon flavor enhancers.

► **Naturex;** tel: 914-381-5995; e-mail: [naturex@naturex.com](mailto:naturex@naturex.com)

## Hydratropic Aldehyde (2-Phenyl Propionaldehyde)

*Source:* Aldrich

FEMA# 2886, CAS# 93-53-8, Artificial

*Natural occurrence:* Not reported found in nature.

*Odor:* @ 1.0 percent. Aromatic floral green, honey-like with a fresh hyacinth-like note.

*Taste:* @ 1.0 PPM. Floral, green herbal, honey-like and slightly vegetative.

*Possible applications:* Honey, orange, cocoa and melon.

► **Aldrich;** tel: 414-273-3850; [www.sigmaldrich.com](http://www.sigmaldrich.com)

## Iso Butyraldehyde

*Source:* Aldrich

FEMA# 2220, CAS# 78-84-2, Nature identical

*Natural occurrence:* Apple, banana, cherry, berries, grape, currants, mint, bread, vinegar, cheese, fish, meat, cocoa and chocolate.

*Odor:* @ 1.0 percent. Sharp, penetrating, pungent, cocoa, malt with a slight sweet green nuance.

*Taste:* @ 5 PPM. Cocoa, chocolate brown with a sweet malt note.

*Possible applications:* Cocoa, chocolate, banana, caramel, malt, and dairy nuances.

► **Aldrich;** tel: 414-273-3850; [www.sigmaldrich.com](http://www.sigmaldrich.com)

## Linalyl Cinnamate

*Source:* Givaudan

FEMA# 2641, CAS# 78-37-5, Artificial

*Natural occurrence:* Not reported found in nature.

*Odor:* @ 1.0 percent. Fruity plum, floral, spicy with a sweet balsamic nuance.

*Taste:* @ 5.0 PPM. Fruity plum, floral, creamy, spicy with a balsamic nuance.

*Possible applications:* Date, fig, plum, tropical nuances, grape, honey and tea notes.

► **Givaudan;** tel: 201-833-7500; [www.givaudan.com](http://www.givaudan.com)

## 6-Methyl-5-Hepten-2-one

Source: Givaudan

Natural

FEMA# 2707, CAS# 110-93-0, Nature identical

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

*Odor:* @ 1.0 percent. Green, waxy sweet fruity banana, apple, citrus, banana with a tropical nuance.

*Taste:* @ 5 PPM. Green, fresh fruity and fatty, earthy tropical reminiscent of guava, kiwi and melon.

*Possible applications:* Melon, kiwi, guava, raspberry, banana, pear, apple, peach, pineapple, apricot and passion fruit.

► **Givaudan**; tel: 201-833-7500;

[www.givaudan.com](http://www.givaudan.com)

## Ortho Toluene Thiol

Source: Frutarom

FEMA# 3240, CAS# 137-06-4,  
Nature identical

*Natural occurrence:* Cooked beef and coffee.

*Odor:* @ 0.2 percent. Roasted meaty, savory, sulfurous onion and garlic, with eggy, liver-like, fishy and phenolic metallic nuances.

*Taste:* @ 0.5 PPM. Onion and garlic, roasted beefy, meaty and brothy notes, with hard cooked boiled eggs, egg yolk and liver nuances.

*Possible applications:* Onion, garlic, roast beef, liver, fish, egg and coffee nuances.

► **Frutarom**; tel: 201-861-9500;

[www.frutarom.com](http://www.frutarom.com)

## Octyl Iso Valerate

Source: Aldrich

FEMA# 2814, CAS# 7786-58-5,  
Nature identical

*Natural occurrence:* Orange and pear.

*Odor:* @ 1.0 percent. Waxy, fatty, fruity, slightly green with a mushroom nuance.

*Taste:* @ 5.0 PPM. Waxy, fruity apple-like with an earthy nuance.

*Possible applications:* Apple, pear, guava, apricot, mushroom, coconut and nutty nuances.

► **Aldrich**; tel: 414-273-3850;

[www.sigmaaldrich.com](http://www.sigmaaldrich.com)

## Butyric Acid

Source: Aldrich

FEMA# 2221, CAS# 107-92-6, Nature identical

*Natural occurrence:* Blue and cheddar cheeses, cherry, cocoa, coffee, fish, grape, peach, pear, raspberry, strawberry and whisky.

*Odor:* @ 1.0 percent. Sour acidic, buttery, dairy fatty, waxy and cheese-like.

*Taste:* @ 150 PPM. Buttery acidic, cheesy with a fatty nuance.

*Possible applications:* Butter, various

cheese products, butterscotch, caramel, condensed milk, sweet dough flavors, chocolate, sweet and sour cream flavors.

► **Aldrich**; tel: 414-273-3850; [www.sig-maaldrich.com](http://www.sig-maaldrich.com)

### Vanilla Extract 3 Fold

Source: Edgar A. Weber

Natural extract

*Natural occurrence:* Derived from bourbon vanilla beans.

*Odor:* @ 100 percent. Sweet, brown, creamy vanilla with aromatic woody and beany nuances and a rich lingering creamy afternote.

*Taste:* @ 0.1 percent in 10 percent Sugared Milk. Sweet creamy, well rounded aromatic vanilla with good beany notes.

*Possible applications:* Cola, maple, baked goods and ice cream vanilla applications; general flavor applications.

► **Edgar A. Weber**; tel: 847-215-1980; [www.weberflavors.com](http://www.weberflavors.com)

### Cocoa Concentrate #5

Source: Frutarom

Natural extract

*Natural occurrence:* Cocoa nibs.

*Odor:* @ 10 percent. Intense deep rich dark cocoa, with roasted, nutty, beany and powdery nuances.

*Taste:* @ 200 PPM. Dark bitter cocoa with powdery, beany and nutty nuances.

*Possible applications:* Dark and milk chocolate and cocoa flavors, nut nuances.

► **Frutarom**; tel: 201-861-9500; [www.frutarom.com](http://www.frutarom.com)

### Grapefruit, Super Fresh Squeezed (FTNF)

Source: Florida Worldwide Citrus

Natural

*Odor:* @ 100 percent. Fresh, characteristic grapefruit with a slightly bitter woody citrus note.

*Taste:* @ 0.04 percent in 5 percent Acidulated Sugar Water. Citrus, fresh, tart and astringent with a characteristic grapefruit aftertaste.

*Possible applications:* Grapefruit juice add backs, citrus punches.

► **Florida Worldwide Citrus**; tel: 941-746-9183; e-mail: [contact@fwvcitrus.com](mailto:contact@fwvcitrus.com)

### Butter Concentrate, Liquid Natural

Source: Butter Buds Food Ingredients

Natural

*Odor:* @ 100 percent. Acetic, dairy buttery, creamy, caproic acid-like with an acetyl propionyl rich dairy nuance.

*Taste:* @ 1000 PPM. Fatty, buttery and dairy with a dimethyl sulfide top note and a nutty nuance.

*Possible applications:* Chocolate, butter and cream flavors, dairy nuances, toffee and caramel notes.

► **Butter Buds Food Ingredients**; tel: 262-598-9900; [www.bbuds.com](http://www.bbuds.com)

### 2-Ethyl-1-Hexanol

Source: Aldrich

FEMA# 3151, CAS# 104-76-7, Nature identical

*Natural occurrence:* Apple, blackcurrant, blueberry, butter, cooked rice, corn, grape, pear, strawberry and tea.

*Odor:* @ 1.0 percent. Slightly cooling, alcoholic, fusel-like with apple and tropical fruity nuances.

*Taste:* @ 10 PPM. Musty, apple flesh, slightly green, mouth drying, tea-like with honey and tobacco nuances.

*Possible applications:* Apricot, peach, apple, mint nuances, tropical fruits such as papaya and mango, tobacco and honey.

► **Aldrich**; tel: 414-273-3850; [www.sigmaaldrich.com](http://www.sigmaaldrich.com)

### Caproic Acid

Source: Fontarome

FEMA# 2559, CAS# 142-62-1, Nature identical

*Natural occurrence:* Apple, apricot, cheddar and blue cheeses, butter, cider, potato chips, whisky and sake.

*Odor:* @ 1.0 percent. Caproic, dirty, slightly rancid cheesy, with sweaty, fatty, yeasty and coconut-like nuances.

*Taste:* @ 10 PPM. Dirty, acidic, dairy, cheesy, fermented with waxy and soapy nuances.

*Possible applications:* Cheddar, blue and other cheeses, butter flavors, condensed milk notes, cream flavors, chocolate, strawberry, cocoa and chocolate flavors.

► **Fontarome**; tel: 414-744-3993; [www.fontaromechemical.com](http://www.fontaromechemical.com)

### Oleoresin Cocoa CO2 Extract

Source: Alfrebro

Natural extract

*Odor:* @ 100 percent. Rich bitter cocoa with creamy milk chocolate nuances.

*Taste:* @ 5 PPM in 5 percent sugar solution. Rich cocoa, dark milk chocolate, sweet, creamy, with brown earthy nuances.

*Possible applications:* Cocoa powder, dark and milk chocolate flavors, tiramisu, bakery applications.

► **Alfrebro**; tel: 513-539-7373; [www.alfrebro.com](http://www.alfrebro.com)

## **Oil Limette Expressed Rectified**

*Source:* Danisco

Natural

*Odor:* @ 1.0 percent. Sweet, citrus with a slightly earthy lemon/lime character.

*Taste:* @ 10 PPM in acidulated sugar solution. Sweet, citrus, lemon/lime with a slight peely nuance.

*Possible applications:* General applications where lemon and lime are used such as cola flavors, confections, beverage emulsions and extractions.

**Danisco USA;** *tel:* 913-764-8100; *www.danisco.com*

## **Cocoa White Distillate**

*Source:* Danisco

Natural

*Odor:* @ 100 percent. Milk chocolate-like, creamy, dark roasted cocoa with a powdery nuance.

*Taste:* @ 1000 PPM. Cocoa, creamy, sweet milk chocolate, full bodied with a powdery and roasted nuance.

*Possible applications:* Cocoa beverages, milk chocolate flavors, vanilla enhancers, cordial flavors, nut and coffee nuances.

► **Danisco USA;** *tel:* 913-764-8100; *www.danisco.com*

## **Butter Buds 32x**

*Source:* Butter Buds Food Ingredients

Natural

*Odor:* @ 100 percent. Very slight buttery and dairy-like.

*Taste:* @ 0.2 percent. Rich, fatty, acidic creamy butter.

*Possible applications:* Butter notes for baked applications, heat stable butter flavors, pretzel and microwave popcorn butter notes, caramel and butterscotch notes.

► **Butter Buds Food Ingredients;** *tel:* 262-598-9900; *www.bbuds.com* ■