



# Organoleptic Characteristics of Flavor Materials

Gerard Mosciano

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## 2,3,4,5-Tetramethyl Pyrazine: Natural

Source: Fleurchem

FEMA# 3237, CAS# 1124-11-4, Natural

*Natural occurrence:* Burley tobacco, cocoa, coffee, cooked lamb/mutton, emmental cheese, soy sauce, roasted peanut, sake, tea, wheat bread and wine.

*Odor:* @ 1.0 percent. Slight musty, nutty, cocoa-like with a vanilla undertone.

*Taste:* @ 10 PPM. Weak, nutty, musty cocoa and chocolate-like with dry coffee nuances.

*Possible applications:* Cocoa, roasted peanut, hazelnut and other nut meats, coffee, butterscotch, caramel, vanilla milk, brown sugar, bailey's Irish cream cordial, malt and licorice undertones.

► **Fleurchem;** tel: 845-341-2100; [www.fleurchem.com](http://www.fleurchem.com)

## 2-Ethyl-4-Methyl Thiazole (Chocolate Thiazole)

Source: Natural Advantage

FEMA# 3680, CAS# 15679-12-6, Natural

*Natural occurrence:* Coffee.

*Odor:* @ 0.10 percent. Musty, oily, nutty, cocoa powdery with a coffee top note, casky and whiskey-like, with a slight meaty savory nuance.

*Taste:* @ 0.10-0.50 PPM. Oily, woody, musty cocoa powdery with a coffee bean nuance.

*Possible applications:* Nut flavors, chocolate, seafood and savory nuances, cocoa powder and whiskey.

► **Natural Advantage;** tel: 732-274-9683; [www.natural-advantage.net](http://www.natural-advantage.net)

## 2T,4T-Decadienal

Source: Natural Advantage

FEMA# 3135, CAS # 2363-88-4, Natural

*Natural occurrence:* Brazil nut, butter, cassava, caviar, cooked beef, lamb/mutton, fish, potato chips, roasted almonds, roasted peanuts and pecans, soybeans.

*Odor:* @ 0.1 percent. Rich fatty, aldehydic, green melon, chicken fat, oily and creamy with chicken stock and chicken meat nuances.

*Taste:* @ 2.0 PPM. Rich oily fatty, aldehydic, green, chicken meat with tropical fruit and cilantro nuances.

*Possible applications:* Fatty notes for chicken, cilantro, ghee, lard, pork, french fries and potato chips, all fried nuances, tomato and butter.

► **Natural Advantage;** tel: 732-274-9683; [www.natural-advantage.net](http://www.natural-advantage.net)

## 3-Mercapto Hexyl Acetate

Source: Oxford Organics

FEMA# 3851, CAS# 136954-20-6, Natural

*Natural occurrence:* Yellow passion fruit.

*Odor:* @ 0.001 percent. Green sulfurous with a sweet meaty background, slightly caramelized onion-like and with a catty dry out.

*Taste:* @ 0.0005 PPM. Sulfurous, fruity, catty, savory meaty, fried onion, with a tropical fruity catty aftertaste.

*Possible applications:* Onion, garlic, meat, tomato, peach, tropical fruits, cassis and grapefruit.

► **Oxford Organics;** tel: 908-351-0002; [www.oxford-chemicals.com](http://www.oxford-chemicals.com)

### **5,6,7,8-Tetrahydroquinoxaline (Cyclohexyl Pyrazine)**

*Source:* Oxford Organics  
FEMA# 3321, CAS# 34413-35-9, Nature identical

*Natural occurrence:* Pork and pork liver, cocoa, coffee, roasted filberts and peanut, sesame seeds.

*Odor:* @1.0 percent. Nutty, corn chip, roasted peanut, toasted cracker, roasted hazelnut, toasted coconut and coffee.

*Taste:* @ 5 to 15 PPM. Roasted hazelnut nutty, roasted corn and popcorn-like, toasted corn chip, fatty taco, basmati rice, roasted coffee.

*Possible applications:* Nut, roasted peanut, pecan and hazelnut, corn chips, cereal, bread, walnut, nutty nuances for popcorn, rice flavors, coffee, savory fried food nuances, butter pecan and chocolate.

► **Oxford Organics**; *tel:* 908-351-0002; [www.oxfordchemicals.com](http://www.oxfordchemicals.com)

### **5-Methyl-2-Hept-4-one 1.0 percent Neobee (Filbertone)**

*Source:* Degussa (via Chemical Sources Association presentation)  
FEMA# 3761, CAS# 81925-81-7

*Natural occurrence:* Roasted hazelnuts.

*Odor:* @1.0 percent (as presented). Sweet, roasted hazelnuts, rich nutty with a roasted nut skin.

*Taste:* @ 5 PPM in sugar fondant. Delicate, roasted nutty hazelnut, with macadamia and pecan nuances.

*Possible applications:* Coffee, hazelnut, pecan, macadamia nut, almond and coffee flavors.

► **Degussa**; [www.degussa.com](http://www.degussa.com)

### **Absolute Pepper Melegueta**

*Source:* Danisco  
Natural

*Odor:* @ 1.0 percent. Woody, green, peppery, pine- and incense-like, with a musty earthy nuance.

*Taste:* @ 5.0 percent. Incense-like, woody and peppery with a slight burning sensation.

*Possible applications:* Mushroom, spice blends, cinnamon and cassia notes.

**Danisco USA**; *tel:* 913-764-8100; [www.danisco.com](http://www.danisco.com)

### **Acetoin (Acetyl Methyl Carbinol)**

*Source:* Fleurchem  
FEMA# 2008, CAS# 513-86-0, Natural  
*Natural occurrence:* Apple, butter, cheddar cheese, coffee, cocoa, honey, wheat bread and wind.

*Odor:* @ 1.0 percent. Strong buttery and creamy.  
*Taste:* @ 10 PPM. Sweet creamy, dairy and butter-like.  
*Possible applications:* Butter, cheeses in general, general dairy applications for creams and caramels, coconut, strawberry, peach and hazelnut nuances.

► **Fleurchem**; *tel:* 845-341-2100; [www.fleurchem.com](http://www.fleurchem.com)

### **Benzyl Hexanoate**

*Source:* Silesia  
FEMA# 4026, CAS# 6938-45-0, Natural  
*Natural occurrence:* Passion fruit.

*Odor:* @ 1.0 percent. Sweet, chemical fruity and slightly lactonic, pineapple and slightly tropical.

*Taste:* @ 5.0 PPM. Sweet, tropical, ripe fruity pineapple with a candy nuance.

*Possible applications:* Tropical nuances, pineapple and passion fruit.

► **Silesia**; *tel:* 49-2137-7840; [www.silesia.de](http://www.silesia.de)

### **Chamomile Oil English**

*Source:* Treatt  
FEMA# 2272, Natural

*Odor:* @ 1.0 percent. Floral lavender-like, woody tea-like with honey and citrus nuances.

*Taste:* @ 5 PPM. Woody, tea, floral, honey, slightly aromatic, tobacco-like and herbal with a slight cooling spiciness.

*Possible applications:* Floral notes in general, honey, tea, raisin, tropical fruit flavors and breath fresheners.

► **Treatt USA**; *tel:* 800-866-7704; [www.treatt.com](http://www.treatt.com)

### **cis-3-Hexenyl Iso Valerate**

*Source:* Fleurchem  
FEMA# 3498, CAS# 1003201108, Natural  
*Natural occurrence:* Capsicum varieties, cornmint and peppermint oils.

*Odor:* @ 1.0 percent. Grassy green, waxy, estry fruity, sweet woody floral pear, tropical banana, fleshy grape notes with a slightly vegetative nuance.

*Taste:* @ 1.0 PPM. Green, waxy, fruity apple, pineapple, pear with woody and walnut nuances.

*Possible applications:* Unripe banana, blueberry, fresh apple skins, pear, pineapple, tropical melon and guava, strawberry and peppermint nuances.

► **Fleurchem**; *tel:* 845-341-2100; [www.fleurchem.com](http://www.fleurchem.com)

### **Ethyl Undecanoate**

*Source:* Aldrich  
FEMA# 3492, CAS# 627-90-7, Nature identical  
*Natural occurrence:* Apple, butter, grape brandy, rum, whiskey, wine, wheat bread.

*Odor:* @ 1.0 percent. Rum-like, estry, fatty and waxy, soapy with creamy nuances.

*Taste:* @ 15 PPM. Waxy creamy, cheesy, buttery, creamy, rum and cognac-like, with fruity apple and banana nuances.

*Possible applications:* Cream flavors, nut, rum and cognac, butter fat, coconut, butter nuances, fruity notes for banana, strawberry, apple and rum.

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

### **Green Pepper E.O. Natural**

*Source:* Danisco

Naturally occurring

*Odor:* @ 1.0 percent. Slightly green, peppery, slightly citrus lemon, with a linalool floral nuance and mildly galbanum on dry out.

*Taste:* @ 1.0 PPM. Dry, floral, woody and fruity with a waxy green rind note.

*Possible applications:* Grape, mandarin, cognac, chili peppers, citrus blends, grapefruit, ginger ale and tea flavor.

► **Danisco USA**; tel: 913-764-8100;  
[www.danisco.com](http://www.danisco.com)

### **Hearty Beef Key**

*Source:* Natural Advantage

Natural, Naturally derived

*Odor:* @ 1.0 percent. Impacting, sulfurous, alliaceous, savory roasted meaty, with a metallic nuance.

*Taste:* @ 5 PPM + 1.0 percent salt. Alliaceous onion and garlic-like, savory roasted meaty with a metallic nuance.

*Possible applications:* Roasted meat, savory alliaceous notes for sauces and gravies.

► **Natural Advantage**; tel: 732-274-9683;  
[www.natural-advantage.net](http://www.natural-advantage.net)

### **Honey Treattarome**

*Source:* Treatt

Natural

*Natural occurrence:* Honey.

*Odor:* @ 100 percent. Sweet rich potent honey, phenyl acetaldehyde-like, sugary with a strong floral rosey nuance.

*Taste:* @ 0.15 percent + 5 percent sugar. Sweet honey, phenyl acetaldehyde-like, slightly brown sugary with floral and fruity nuances.

*Possible applications:* Honey, molasses, brown sugar, sugary nuances, tea flavors, cocoa.

► **Treatt USA**; tel: 800-866-7704;  
[www.treatt.com](http://www.treatt.com)

### **Linalyl Benzoate**

*Source:* Givaudan

FEMA# 2638, CAS# 126-64-7, Nature identical

*Natural occurrence:* Cananga oil, tuber rose, ylang-ylang.

*Odor:* @ 1.0 percent. Green, floral bergamot, citrus-like, with woody and gin-like nuances.

*Taste:* @ 5.0 PPM. Woody, floral, with woody gin and citrus bergamot nuances.

*Possible applications:* Gin flavors, tea, guava, bergamot, citrus nuances, apricot, raspberry and spicy notes.

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

### **Methyl-2-Thiofuroate**

*Source:* Oxford Organics

FEMA# 3311, CAS# 13679-61-3, Nature identical

*Natural occurrence:* Coffee.

*Odor:* @ 1.0 percent. Strong fermented sulfurous, cooked cabbage and slightly cheesy.

*Taste:* @ 5.0 PPM. Vegetative cabbage, cauliflower, broccoli, asparagus, cheese with a slight pork fat nuance.

*Possible applications:* Vegetative notes for cabbage, cauliflower, broccoli and asparagus, cheese, pork fat and sausage.

► **Oxford Organics**; tel: 908-351-0002;  
[www.oxfordchemicals.com](http://www.oxfordchemicals.com)

### **Onion Oil Extender**

*Source:* Oxford Organics

Nature identical

*Odor:* @ 1.0 percent. Strong sulfurous onion-like.

*Taste:* @ 1 PPM. Sulfurous, alliaceous onion-like.

*Possible applications:* Onion, garlic, beef, vegetative nuances for broccoli, asparagus, cabbage, ripe nuances for cheeses.

► **Oxford Organics**; tel: 908-351-0002;  
[www.oxfordchemicals.com](http://www.oxfordchemicals.com)

### **Para Menth-1-en-3-ol (*trans*-Piperitol)**

*Source:* Silesia

FEMA# 3179, CAS# 491-04-3

*Natural occurrence:* Blackcurrant, dill, ginger, myrtle, berry, nutmeg, rosemary, sweet marjoram.

*Odor:* @ 1.0 percent. Cooling impact, fresh and clean minty body, candy cane confection-like.

*Taste:* @ 15 PPM. Slight latent cooling, trigeminal taste sensation, almost like sorbitol, but longer lasting.

*Possible applications:* Tropical and spicy nuances, black currant, oral care and confection nuances.

► **Silesia**; tel: 49-2137-7840; [www.silesia.de](http://www.silesia.de)

### ***trans*-3-Heptenyl 2-Methyl Propionate**

*Source:* Silesia

FEMA# 3494, CAS# 99999-26-7, Artificial

*Odor:* @ 1.0 percent. Sweet, fruity, slightly waxy green apple-like.

*Taste:* @ 10 PPM. Sweet, green fruity, unripe apple with a slight vegetative nuance.

*Possible applications:* Unripe apple and banana, vegetative nuances.

► **Silesia**; tel: 49-2137-7840;  
[www.silesia.de](http://www.silesia.de) ■