



Organoleptic Characteristics of Flavor Materials

Gerard Mosciano

Gerard Mosciano is joined by Judith Michalski, senior creative flavorist, Edlong Flavors; Carl Holmgren, consulting flavor chemist.; and Douglas Young, principal flavorist, Symrise, in the organoleptic evaluations presented here.

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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 USA, telephone 630/653-2155, fax 630/653-2192, www.perfumerflavorist.com.

I have recently reviewed and updated my database. This process revealed many ingredients that were never included in my previous articles.*

Clary Sage Oil

Source: Robertet

FEMA# 2321, CAS# 8016-63-5, Natural

Odor: @ 1.0 percent. Green, sweet, floral, spicy, tea and hay-like with a fruity nuance.

Taste: @ 20 PPM. Green, sweet, spicy floral, woody, minty with hay and tobacco notes.

Possible applications: Fruit flavors, tea, tobacco, citrus nuances and honey flavors.

► **Robertet**; tel: 201-337-7100;
www.robertet.com

Coffee Extract (Colombian Medium Roast)

Source: Moore
Ingredients

Natural

Odor: Neat. Sweet brown, dark roasted

coffee, woody beany with slight ashy notes, slightly acidic and coffee/cocoa-like.

Taste: @ 0.05 percent. Sweet, clean mild roasted coffee, burnt sugar-like with a dry ashy finish.

Possible applications: Coffee, cocoa, malt, roast beef and pork, chocolate, baked goods, tobacco and peanut butter.

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

2-Ethyl-3,5(6)-Dimethyl Pyrazine

Source: Aldrich Chemical

FEMA# 3149, CAS# 55031-15-7, Nature identical

Natural occurrence: Burley and Virginia tobacco, cocoa, coffee, cooked beef, peanut, Swiss cheese.

Odor: @ 1.0 percent. Peanut nutty, caramel, coffee, musty cocoa, popcorn, pyridine, graham sweet with roasted undertones.

Taste: @ 5 PPM. Sweet, nutty, cooked caramel, coffee, corn, earthy, cocoa, potato-like with nut skin nuances.

Possible applications: Chocolate, caramel, corn, peanut, savory roasted nuances, popcorn, coffee.

► **Sigma-Aldrich**; tel: 800-325-5832;
www.sigmaldrich.com



* Natural occurrence data was obtained from Leffingwell;
www.leffingwell.com.

2-Ethyl-1,3,3-Trimethyl-2-Norboranol (Synonym: 2-Ethyl Fenchol)

Source: Alfrebro

FEMA# 3491, CAS# 18368-91-7, Artificial

Odor: @ 1.0 percent. Camphor cooling, citrus lime-like, fruity blueberry.

Taste: @ 10 PPM. Camphor-like cooling, citrus and fresh.

Possible applications: Lime, green tea, mint flavors, citrus nuances.

► **Alfrebro/Degussa**; tel: 33-49-309-3111;
www.alfrebro.com



Helipotropin

Source: Aldrich Chemical

FEMA# 2911, CAS# 120-57-0, Nature identical

Natural occurrence: Tahitian vanilla, camphor wood, violet flowers.

Odor: @ 1.0 percent. Sweet almond, vanilla, floral, cherry pit, creamy woody coumarin-like, hay, balsamic with marshmallow nuances.

Taste: @ 10-40 PPM. Almond macaroon, Jordan almonds, creamy vanilla, cream soda, coumarin with a fruity cherry nuance.

Possible applications: Wild cherry, vanilla, cola, rum, almond, coumarin, sherry, nut flavors, cream soda, maple and tutti frutti, vanilla confections, raspberry and blueberry.

► **Sigma-Aldrich**; tel: 800-325-5832;
www.sigmaaldrich.com

4-Heptanone (Synonym: Dipropyl Ketone)

Source: Aldrich Chemical

FEMA# 2546, CAS# 123-19-3, Nature identical

Natural occurrence: Baked potato, cabbage, coffee, papaya, roasted peanut.

Odor: @ 1.0 percent. Sweet ethereal, banana fruity, pungent, green apple with cheese nuances.

Taste: @ 5 PPM. Fruity, banana, green apple, blue cheese with nut-like nuances.

Possible applications: Apple, banana, pineapple, strawberry, blue cheese and other dairy applications.

► **Sigma-Aldrich**; tel: 800-325-5832;
www.sigmaaldrich.com

Iso Amyl Salicylate

Source: Elan Chemical

FEMA# 2084, CAS# 87-20-7, Nature identical

Natural occurrence: Burley tobacco, grape, rum.

Odor: @ 1.0 percent. Sweet, floral, soapy,

spicy with anise and wintergreen nuances.

Taste: @ 5 PPM. Floral, sweet, green, spicy anise and wintergreen-like.

Possible applications: Sen-Sen type scented confections, root beer, wintergreen.

► **Elan Chemical**; tel: 973-344-8014;
www.elan-chemical.com

2-(1-Methyl Propyl)-Thiazole (Synonym: 2-Secondary Butyl Thiazole)

Source: Aldrich Chemical
FEMA# 3372, CAS# 18277-27-5, Nature identical

Natural occurrence:

Tomato.

Odor: @ 1.0 percent.
Green pepper, onion, vegetative, musty and nutty, cocoa, coffee and potato.

Taste: @ 1 PPM. Musty nut skin, green, tobacco-like, cocoa and coffee-like.

Possible applications: Mushroom, vegetative notes for tomato, green pepper and potato, mint, nut and herbaceous nuances.

► **Sigma-Aldrich**; tel: 800-325-5832;
www.sigmaaldrich.com

T-2,T-4-Nonadienal

Source: Fontarome Chemical
FEMA# 3212, CAS# 5910-87-2, Nature identical

Natural occurrence: Avocado, Brazil nut, caviar, cooked beef, chicken and pork, cooked lamb/mutton, fish, milk and roasted peanut.

Odor: @ 1.0 percent. Green, fatty melon, cucumber and vegetative.

Taste: @ 2 PPM. Green, cucumber with fatty melon and chicken nuances.



Possible applications: Melon flavors, cucumber, chicken fat, tallow, cilantro, apple, fried notes, tomato, fish and milk flavors.

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

Oak Extract 16X (French Oak Toasted)

Source: Moore Ingredients
FEMA # 2794, CAS # 68917-11-3, Natural

Odor: Neat. Initially rum and fusel-like, wine-like, casky, alcoholic bourbon-like, astringent woody with a dry phenolic finish, smoky with a caramel and vanilla-like nuance, leathery with burnt sugar nuances.

Taste: @ 0.05 percent. Brown, whiskey-like, sweet vanilla with spicy eugenol-like notes, dry phenolic with a burnt smoky woody background.

Possible applications: Aging alcoholic beverages, smoke flavors, vanilla nuances, coffee, brown sugar, root beer, maple, bourbon and whiskey notes, cocoa, egg-nog, butterscotch and chocolate.

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

1-Octen-3-yl-1-Butyrate

Source: Aldrich Chemical
FEMA# 3612, CAS# 16491-54-6, Nature identical
Natural occurrence: Passion fruit.

Odor: @ 1.0 percent. Musty, earthy, mushroom and waxy.

Taste: @ 5 PPM. Tuna fish-like, amine and mushroom-like.

Possible applications: Potato, tomato, mushroom, tuna fish, blue cheese, mango.

► **Sigma-Aldrich**; tel: 800-325-5832;
www.sigmaaldrich.com

Pyruvic Acid

Source: Bedoukian
FEMA# 2970, CAS# 127-17-3, Nature identical
Natural occurrence: Asparagus, beef, sake, Virginia tobacco, wheat bread.

Odor: @ 1.0 percent. Acidic, sweet, caramellic and sour.

Taste: @ 5 PPM. Sharp acidic, sour fruity, with sour creamy and caramellic nuances.

Possible applications: Coffee, rum, cream, whiskey, caramel and maple flavors.

► **Bedoukian**; tel: 203-830-4000;
www.bedoukian.com

Sabinene Hydrate (Synonym: 4-Thujanol)

Source: Haldin International
FEMA# 3239, CAS# 546-79-2, Natural
Natural occurrence: Mandarin, nutmeg, peppermint, rosemary, scotch spearmint, sweet marjoram, tarragon and thyme.

Odor: @ 1.0 percent. Earthy camphoreous pine and

turpentine-like with citrus grapefruit nuances.
Taste: @ 5 PPM. Woody, citrus orange and grapefruit-like.

Possible applications: Raspberry, berry flavors, grapefruit, herbal and tropical nuances.

► **Haldin International**; *tel:* 201-784-2178;
www.haldin-natural.com

St. John's Bread Absolute, Super (Synonym: Carob Bean Extract)

Source: Danisco

FEMA# 2243, CAS# 9000-40-2, Natural

Odor: @ 1.0 percent. Sweet cocoa, fruity, tobacco-like, brown with a raisin-like nuance.

Taste: @ 10 PPM. Cocoa, brown, musty and fruity.

Possible applications: Raisin, date, fig, caramel, brown sugar, apricot, cooked apple, cocoa, raspberry, tobacco, maple and licorice flavors.

► **Danisco**; *tel:* 800-255-6837;
www.danisco.com

Terpinenol-4 (Synonym: 4-Carvomenthenol)

Source: Millennium Chemical

FEMA# 2248, CAS# 562-74-3,

Nature identical

Natural occurrence: Anise, basil, black currant, cocoa, coriander, cranberry, grapefruit, lemon, lime, marjoram, peppermint oil, nutmeg and spearmint.

Odor: @ 1.0 percent. Terpy, woody citrus, lemon/lime with a cooling camphoraceous nuance.

Taste: @ 30 PPM. Terpy, citrus, lemon/lime with a woody herbal nuance.

Possible applications: Lemon, lime, mandarin, grapefruit, herbal spicy notes, black currant.

► **Millennium Chemical**; *tel:* 800-231-6728;
www.millenniumchem.com

Treatarome Cucumber

Source: Treatt USA

Natural

Odor: Neat. Fresh green vegetative, melon-like with nonadienal fatty and waxy nuances.

Taste: @ 0.10 percent. Fresh seedy cucumber, green vegetative-like and waxy.

Possible applications: Green vegetative notes, salad dressings, melon and watermelon products.

► **Treatt USA**; *tel:* 800-866-7704;
www.treatt.com ■

Correction

In the June article "Organoleptic Characteristics of Flavor Materials" (pages 52-56), the source for the product Menthyl Mono Succinate was mistakenly identified as Alfrebro/Degussa. The material is offered by Mane; *tel:* 973-633-5533; *www.mane.com*. We regret the error.