



Organoleptic Characteristics of Flavor Materials

Gerard Mosciano

Gerard Mosciano is joined by Judith Michalski, chief 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 60188-2787 USA, telephone 630-653-2155; fax 630-653-2192, www.perfumerflavorist.com.

3-Acetyl-2,5-Dimethylfuran

Source: Bedoukian Research Inc.

FEMA# 3391, CAS# 10599-70-9, Artificial

Natural occurrence: Coffee.

Odor: @ 1.0 percent. Musty, earthy, nutty, raw potato, slightly green with a roasted almond nuance.

Taste: @ 2 PPM. Musty, earthy raw potato, nutty and coal-like with almond, corn and savory nuances.

Possible applications: Potato, various nut nuances, such as pecan, almond and hazelnut, corn, coffee, popcorn, seafood nuances, vanilla.

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

Ambrettolide (synonym: Omega 6-Hexadecenolactone)*

Source: Charabot

FEMA# 2555, CAS# 7779-50-2, Artificial

Natural occurrence: Oil of ambrette seed.

Odor: @ 0.1 percent. Sweet perfume-like, floral with fruity citrus, powdery berry and seedy nuances.

Taste: @ 5 PPM. Sweet, woody, soapy, musky fruity and powdery berry nuance reminiscent of raspberry and strawberry.

Possible applications: Raspberry, strawberry, citrus nuances, fruit punch flavors, blueberry, blackberry, pear, grape and tropical fruit notes.

► **Charabot;** *tel: 33-493093333; www.charabot.fr*

Baies Roses Oil (synonym: Pink Peppercorns)

Source: Artiste Flavor/Essence Inc.

Natural

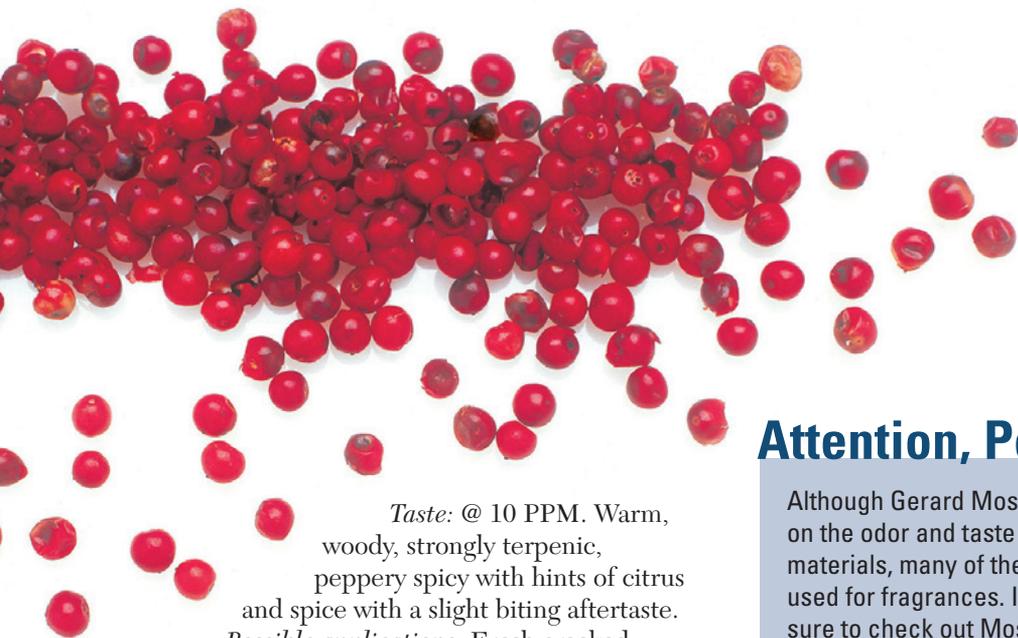
Odor: @ 1.0 percent. Warm, woody, strongly spicy terpenic, black pepper with cardamom and incense nuances.

*This material also can be used in fragrance formulations.

Correction

In the May issue (page 51), we listed the wrong phone number for **Danisco's Vetiver CO₂ Extract**. The correct contact phone number is: 800-255-6837. We regret the error.





Taste: @ 10 PPM. Warm, woody, strongly terpenic, peppery spicy with hints of citrus and spice with a slight biting aftertaste.

Possible applications: Fresh cracked black pepper, seasoning blends, savory flavor nuances.

► **Artiste Flavor/Essence Inc.;** tel: 201-244-0403; www.artisteflavoressence.com

Attention, Perfumers

Although Gerard Mosciano's column focuses on the odor and taste characteristics of flavor materials, many of these ingredients also can be used for fragrances. If you are a perfumer, make sure to check out Mosciano's column in every issue of *P&F* magazine for unique ingredients to be used in the fragrance field! These materials will be noted with an asterisk.

Cinnamon (Korintje) Extract

Source: Moore Ingredients
Natural

Odor: Neat. Sweet spicy, warm cinnamon bark, woody, resinous, leathery, slightly balsamic with a bubble gumlike after note.

Taste: @ 0.05 percent. Sweet spicy, cinnamon bark, dry, warm, woody and slightly astringent, slightly coumarinic and balsamic with a lingering Dentyne-like aftertaste.

Possible applications: Breath mints, confections and chewing gums, spicy herbal nuances for teas and oral care products, sweet spice notes for bakery applications, cola, catsup and apple pie spice blends.

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

Coffee Extract (French Roast)

Source: Moore Ingredients
Natural

Odor: Neat. Rich roasted, slightly burnt coffee with some buttery caramel nuances.

Taste: @ from 0.01-0.05 percent. Roasted and slightly burnt coffee with cocoa nuances.

Possible applications: Coffee, cocoa, mocha, chocolate and butterscotch, caramel, nuances for roasted beef and port wine.

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

Cyclopentanone (synonym: Dumasine)

Source: SAFC

FEMA# 3910, CAS# 120-92-3, Artificial

Natural occurrence: Roasted onion, baked potato, tomato, Gruyère cheese, butter, heated chicken, boiled beef, heated pork, roasted pecan, yellow passion fruit juice.

Odor: @ 2.0 percent. Musty, slightly toasted bitter almondlike nutty, solventlike with a powdery nuance.

Taste: @ 20 PPM. Musty, toasted nutty with a slight meaty nuance.

Possible applications: Nut, cocoa, coffee, savory and roasted nutty nuances.

► **SAFC;** tel: 800-244-1173; www.safcsupplysolutions.com

2,4-Dimethyl Acetophenone, artificial

Source: SAFC

FEMA# 2387, CAS# 89-74-7, Nature identical

Natural occurrence: Dried bonito, tea and wine.

Odor: @ 1.0 percent. Sweet chemical, slightly fruity cherry and powdery coumarinlike, anisic, slightly camphoraceous with a hint of coconut.

Taste: @ 5 PPM.

Naphthyl phenolic, coumarin, coconut, oily and chemical.



Possible applications: Broom, hay, vanilla, grape, coconut, coumarin, cherry and almond.

► **SAFC**; tel: 800-244-1173;
www.safcsupplysolutions.com

2,5-Dimethyl-2,5-Dihydroxy-1,4-Dithiane (synonym: Cyclodithalfarol 706), artificial

Source: IFF
FEMA# 3450,
CAS# 55704-78-4,
Nature identical
Natural occurrence:

Heated pork.

Odor: @ 0.10 percent.

Eggy, hydrogen sulfide-like, lychee, catty, roasted meaty, vegetative, onion and garlic with chicken brothy nuances.

Taste: @ 2 PPM. Roasted meaty, lychee tropical fleshlike, brothy and yeasty, eggy, bready cocoa and tomatolike.

Possible applications: Roasted pork meat, horseradish, onion and garlic, chicken nuances, lychee tropical notes, seafood, liver, yeast and bread, tomato and egg notes.

► **IFF**; tel: 732-329-4600; www.iff.com

2,5-Dimethylfuran-3-Thiol

Source: Charkit/Oxford Chemicals
FEMA# 3451, CAS# 5764-23-3, Artificial
Not reported found in nature.

Odor: @ 0.10 percent. Sulfurous, meaty, green onion, brown and roasted, brothy, rubbery, HVP-like, fatty and slightly tomatolike.

Taste: @ 2 PPM. Meaty, metallic, beefy, savory drippings, sulfurous, rubbery and roasted, chicken skin, tomato, tropical sulfurous, meaty brothy.

Possible applications: Turkey, chicken, pork, beef, tropical nuances such as mango, vegetative notes for onion and tomato.

► **Charkit/Oxford Chemicals**; tel: 44-1429-863555; www.oxfordchemicals.com

Ethyl Acetoacetate

Source: SAFC
FEMA# 2415, CAS# 141-97-9, Artificial
Natural occurrence: Passion fruit, sherry and strawberry.

Odor: @ 10 percent. Sweet fruity apple, fermented, slightly fusel-like and rummy, fruity banana with tropical nuances.

Taste: @ 100 PPM. Fruity banana, apple and white grape with slightly green estery and tropical nuances.

Possible applications: Apple, strawberry, raspberry, white grape, banana and other fruity nuances, rum.

► **SAFC**; tel: 800-244-1173;
www.safcsupplysolutions.com

Honey Distillate #02-036-01

Source: Moore Ingredients
Natural

Odor: Neat. Sweet clover honey, syrupy, phenyl acetaldehyde-like, floral, rosy with slightly brown hay and strawlike nuances.

Taste: @ 0.1 percent. Sweet phenyl acetaldehyde honeylike, slightly coumarinic with a slight brown lingering after note.

Possible applications: Honey, chocolate and cocoa, malt, nut flavors, tea, beer flavors, liquor nuances.

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

D,L-Iso Menthone

Source: Citrus & Allied Essences Ltd.
FEMA# 3460, CAS# 491-07-6, Artificial

Natural occurrence: Buchu oil, celery, geranium oil, pennyroyal oil and peppermint oil.

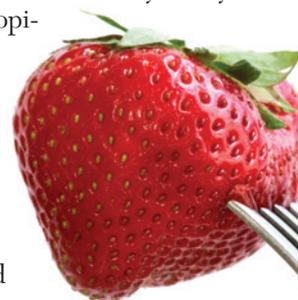
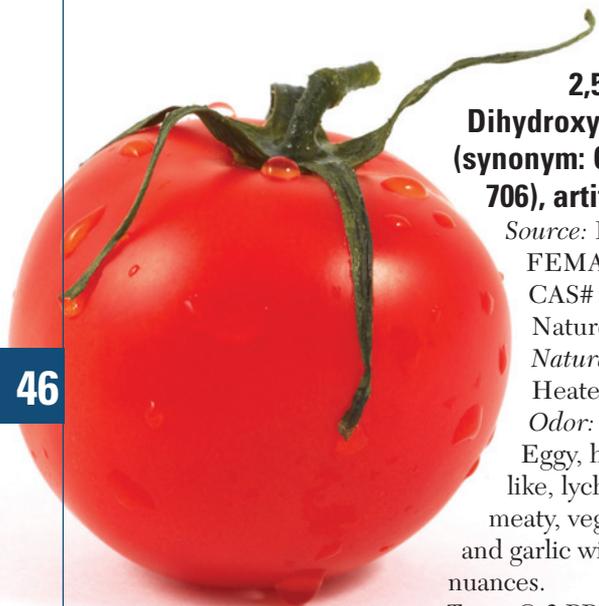
Odor: @1.0 percent. Sweet peppermint, minty, fresh, powdery and ethereal with a lift of green spearmint.

Taste: @ 30 PPM.

Cooling minty peppermint, sweet ethereal herbal spearmint.

Possible applications: Oral care and confection products containing spearmint and/or peppermint for impacting and lifting cooling notes.

► **Citrus & Allied Essences Ltd.**;
tel: 718-343-0030;
www.citrusandallied.com



2-Methyl Tetrahydrothiophen-3-One, artificial

Source: Vigon International

FEMA# 3512, CAS# 12679-85-1, Nature identical

Natural occurrence: Butter, coffee, corn, roasted peanut, whiskey and wine.

Odor: @ 1.0 percent. Pungent, alliaceous, coffee with a gasoline nuance.

Taste: @ 5 PPM. Horseradish and onion with a slight bite and a milky nuance.

Possible applications: Onion, radish, savory meats and sauces, garlic, mustard, coffee and dairy nuances.

► **Vigon International**; tel: 877-844-6693; www.vigoninternational.com

Nonanol

Source: Advanced Biotech

FEMA# 2789, CAS# 143-08-8, Natural

Natural occurrence:

Apricot, cooked cauliflower, grapefruit, lemon, lime, mandarin oils, mushroom, orange, raspberry, strawberry, tobacco, wheat bread.

Odor: @ 1.0 percent.

Intensely waxy, sweet green citrus orangelike, creamy with fruity nuances of tamarind and melon.

Taste: @ from 0.5-1.0 PPM. Waxy, green, coconut, cheese, milky and creamy with citrus orange nuances.

Possible applications: Tallow flavors, milk and cream, coconut, grape, blue cheese, floral nuances, fruity nuances for citrus and tamarind.

► **Advanced Biotech**; tel: 973-357-0577; www.adv-bio.net

Nonyl Acetate*

Source: Advanced Biotech

FEMA# 2788, CAS# 143-13-5, Natural

Natural occurrence: Apple, beer, cheese, grape, grapefruit, lemon and orange, milk.

Odor: @ 1.0 percent. Waxy citrus, earthy mushroom, creamy milky, estery with ripe apple pulp notes.

Taste: @ 5 PPM. Waxy, stale milk, earthy mushroom, slightly metallic with cheesy nuances.

Possible applications: Apricot, peach, pineapple, coconut, tropical nuances, condensed milk, cream sauces, apple, tropical mango and cheese nuances.

► **Advanced Biotech**; tel: 973-357-0577; www.adv-bio.net



2-Pentanethiol, artificial

Source: SAFC

FEMA# 3792, CAS# 2084-19-7, Nature identical

Natural occurrence: Yellow passion fruit and guava.

Odor: @ 0.1 percent. Sulfurous, ripe fruity, pineapple and tropical fruitlike with a sautéed and roasted savory nuance.

Taste: @ 0.1 PPM. Sulfurous coffee and bacon with roasted savory and tropical pulpy pineapplelike notes.

Possible applications: Pineapple, passion fruit, hazelnut, roasted sesame and other savory notes, fermented tropical fruit nuances, such as durian and guava.

► **SAFC**; tel: 800-244-1173; www.safcsupplysolutions.com

2-Pentyl Pyridine, artificial

Source: Treatt USA

FEMA# 3383, CAS# 2294-76-0, Nature identical

Natural occurrence: Cooked beef, chicken, lamb and mutton, roasted filbert, peanut and sesame seed.

Odor: @ 0.1 percent. Strong fresh green vegetative, peppery, mushroom, herbal and oily.

Taste: @ 1 PPM. Green pepper vegetative, mushroomlike, musty, oily, meaty and MSG-like.

Possible applications: Green pepper, fish, mushroom, MSG notes, spicy and hot notes, savory fatty and oily nuances.

► **Treatt USA**; tel: 863-688-9500; www.treatt.com



5,6,7,8-Tetrahydroquinoxaline (synonym: Cyclohexyl Pyrazine)

Source: Charkit/Oxford Chemicals

FEMA# 3321, CAS# 34413-35-9, Artificial

Natural occurrence: Pork and pork liver, cocoa, coffee, roasted filbert, peanut and sesame seed, wheat bread.

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

Taste: @ from 5-10 PPM. Roasted nutty, corn and popcorn, toasted grain and corn chip, taco fatty, basmati rice, hazelnut and roasted coffeelike.

*This material also can be used in fragrance formulations.

Possible applications: Nut flavors such as hazelnut, peanut, walnut and butter pecan, corn and roasted corn notes for taco chips, nutty notes for popcorn, rice, coffee, savory nuances, chocolate, fried notes and graham cracker nuances.

► **Charkit/Oxford Chemicals;**
tel: 44-1429-863555;
www.oxfordchemicals.com

Treattarome Roasted Bell Pepper #9810

Source: Treatt USA

Natural

Odor: Neat. Roasted and burnt pepper, vegetative, smoky with slight vegetative nuances.

Taste: @ 0.1 percent. Pepper, slight roasted and grilled vegetative.

Possible applications: V8 beverage types, sauces and salsa notes.

► **Treatt USA;** *tel: 863-688-9500; www.treatt.com*



2,3,6-Trimethyl Phenol

Source: SAFC

FEMA# 3963, CAS# 2416-94-6,
Artificial

Natural occurrence: Coffee.

Odor: @ 1.0 percent.

Sharp smoky phenolic,
latakia tobaccolike,
tarlike, spicy eugenol and
slightly cooling.

Taste: @ 5 PPM. Phenolic,
tobaccolike, tarry, medicinal
with burnt and woody
nuances.

Possible applications: Dark
roasted coffee, smoke flavors
and burnt woody casky
nuances.

► **SAFC;** *tel: 800-244-1173;*
www.safcsupplysolutions.com

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