

Organoleptic Characteristics of Flavor Materials

Judith Michalski, Senior Flavorist, abelei flavors; jmichalski@abelei.com

Flavorcon Panelists

- Judith Michalski
- Cyndie Lipka, Senior Flavorist, Bell Flavors & Fragrances
- Gerard Mosciano, Consulting Flavor Chemist

• Robert Pan, Principal Development Scientist, Spicetech Flavors & Seasonings

- Deborah Barber, Senior Scientist, Kraft Foods
- Carl Holmgren, Consulting Flavor Chemist
- Tom Gibson, Creative Director, Silesia Flavors

Nat. cocoa dist. extract 35% vol., ID: S-702109

Source: Kerry Group

GRAS, natural, Theobroma cacao L.

Odor: @ 100%. Sweet, cocoa, dark chocolate and powdery with creamy notes.

Taste: @ 15 ppm. Cocoa, powdery and slightly roasted.

- *Taste:* @ 30 ppm. Cocoa, powdery, dark chocolate and slightly roasted.
- *Possible applications:* The clear, colorless quality of this extract will be valuable in all cocoa and chocolate flavors, especially those for beverages. Its very characteristic profile will also enhance mocha, red velvet, coffee and malt.

►Kerry Group; www.kerrygroup.com

Cocoa extract in PG, 00930839

Source: Robertet

GRAS, CAS# 84649-99-0, natural, Theobroma cacao L.

Odor: @ 100%. Sweet, cocoa, brown and dark chocolatelike, with an animalic nuance.

Taste: @ 30 ppm. Chocolatelike, slightly dried fruitlike and brown.

- *Taste:* @ 60 ppm. Dark chocolatelike, bitter and cocoalike, with a sweet, dried fruitlike undertone.
- *Possible applications:* Chocolate, cocoa, red velvet, mocha, fudge, brownie and coffee flavors are among the flavors that will be intensified by the rich, fruity notes of this product. At higher levels, the bitter dark chocolate notes become more prominent.
- ► Robertet; www.robertet.com

Clementine oil

Source: Ventos

FEMA# 2657, CAS# 8008-31-9, natural, *Citrus clementina Odor:* @ 100%. Fresh, juicy, citrus, orange/tangerinelike and slightly tangy.

Taste: @ 10 ppm. Fresh, juicy, slightly peely, orangelike and estery. *Taste:* @ 20 ppm. Fresh, juicy, sweet, orange/tangerinelike and slightly peely.

- *Possible applications:* It is a given that this oil will complement all citrus flavors by lending fresh, fruity, juicy top notes. Other flavors where it will add brightness are peach, passion fruit, apricot, mango, grape, papaya and tutti frutti.
- ►Ventos; www.ventos.com

2(3),5-Dimethyl-6,7-dihydro-5H-cyclopentapyrazine

Source: Charkit

FEMA# 4702, CAS# 38917-61-2

Natural occurrence: Coffee.

Odor: @ 100%. Cocoalike top note, nutty, musty, sweet, burnt sugar, popcornlike and toasted.

Taste: @ 5 ppm. Brown, nutty, musty, cereal-like and sweet.

Taste: @ 10 ppm. Nutty, cereal-like, nutty, caramellic, slightly earthy and sweet.

- *Possible applications:* This new FEMA GRAS compound can be used in a variety of nut and brown flavors. Its brown, caramellic notes will be important in caramel, toffee, burnt sugar, browned butter, praline, baked potato skin, coffee, caramel corn, cereal, granola, cocoa, chocolate and baked crust-type flavors. Nut flavors, especially peanut, peanut butter, hazelnut, pecan and walnuts, are also prime target for its use.
- ►**Charkit**; www.charkit.com

$\alpha\text{-Bisabolol}$

Source: Elixens

FEMA# 4666, CAS# 515-69-5 & 23089-26-1

Natural occurrence: Citrus oils, carrot seed, lavender and rosemary.

Odor: @ 100%. Soft, slightly woody, slightly spicy and floral.

Taste: @ 2 ppm. Slightly floral and mouth-numbing.

- *Taste:* @ 4 ppm. Perfumey, woody, oily, tingling and mouth-numbing.
- *Possible applications:* The floral, woody notes of this compound will fit nicely into berry flavors like raspberry, blackberry and

Read More about Peru balsam in "Peru Balsam: Getting to the Source, El Salvador" on page 36 of the February 2014 issue of *Perfumer & Flavorist; www.perfumerflavorist.com/magazine.*



blueberry. Its tingling and mouth-numbing effects can add an interesting dimension to mint and spice flavors, as well as flavors for liquor.

►Elixens; www.elixens.com

Vanilla absolute CO₂

Source: Charabot

GRAS, CAS# 8024-06-4, natural, Vanilla planifolia

Odor: @ 100%. Sweet, beany, vanilla, vanillin, creamy, slightly brown and lightly phenolic.

Taste: @ 2 ppm. Vanilla, vanillin, creamy and slightly brown.

- *Taste:* @ 4 ppm. Vanilla, vanillin, creamy, sweet, slightly phenolic and balsamic.
- *Possible applications:* This beautiful material will grace all flavors of its origin at very low levels of use. Cocoa, chocolate, cream soda, sweet dairy, sweet brown, dried fruit, rum, honey, "fruit 'n cream," black cow and cola are just a few of the flavors where it will add sweetness, richness and depth.
- ► Charabot; www.charabot.com

Pyrazine complex, natural, code# 11900227

Source: Robertet

FEMA# various, CAS# various, natural

Odor: @ 1%. Nutty, musty, earthy and roasted, with a slight amine nuance.

Taste: @ 1 ppm. Nutty, roasted, peanutlike and slightly burnt. *Taste:* @ 2 ppm. Peanutlike, cocoalike, earthy and burnt.

Possible applications: The combination of earthy and roasted pyrazine notes in this mixture makes it an intriguing candidate for use in many types of brown flavors. Nut flavors like peanut, hazelnut and walnuts, as well as coffee, cocoa, chocolate, baked potato, bread crust, cereal, Swiss cheese and meat char are all great applications, too.

► Robertet; www.robertet.com

Chamomile oil Roman

Source: Ventos

FEMA# 2275, CAS# 8015-92-7, natural, *Anthemis nobilis* L. *Odor:* @ 100%. Floral, oily, haylike and herbal, with a cooling lift.

Taste: @ 1 ppm. Herbal, floral, haylike, slightly green and slightly waxy.

Taste: @ 3 ppm. Herbal, haylike, floral, green and slightly waxy. *Possible applications:* Obviously, chamomile and other blends of herbs are the flavor targets for this essential oil. Its haylike quality will also be appreciated in flavors for tobacco and liqueurs, while its floral character will enhance apricot, apple, pear, mango, lychee, peach, raspberry and strawberry.

►Ventos; www.ventos.com

Ethanethioic acid, S-(2-methyl-3-furanyl) ester (synonym: 2-methyl-3-furanthiol acetate)

Source: Treatt

FEMA# 3973, CAS# 55764-25-5

Natural occurrence: Passion fruit and grape.

Odor: @ 0.1%. Gassy, meaty, sulfurous, alliaceous, savory and brothy.

Taste: @ 1 ppm. Meaty, metallic and sulfurous.

Taste: @ 2 ppm. Meaty, eggy, fatty and sulfurous.

Possible applications: Although this material occurs naturally in the fruits listed above, and might be used to fill in the sulfur complex, it is more suited to savory flavor applications. Among those to consider are meats, fried onion and/or garlic, and egg. At levels less than 1 ppm, it may also add a cooked note in condensed milk and custard flavors.

►**Treatt**; www.treatt.com

Peru balsam oil rectified

Source: Elixens

- FEMA# 2117, CAS# 8007-00-9, natural, *Myroxylon pereirae* Klotzsch
- *Odor:* @ 100%. Sweet, spicy, slightly bitter almondlike, balsamic and vanillalike.

Taste: @ 1 ppm. Woody, sweet, brown, balsamic and vanillalike. *Taste:* @ 2 ppm. Woody, sweet, balsamic and vanillalike.

- *Possible applications:* Traditionally, balsam Peru oil has been used in vanilla flavors, and this product is no exception. Other flavors that will benefit from its use are cherry, cream soda, marshmallow, clove, spice blends, fruit punch, apricot, peach, fig, balsamic vinegar and tobacco.
- ►Elixens; www.elixens.com

To purchase a copy of this article or others, visit www.PerfumerFlavorist.com/magazine.