



Organoleptic Characteristics of Flavor Materials

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Panelists

- Judith Michalski
- Cyndie Lipka, Senior Flavorist, Bell Flavors & Fragrances
- Gerard Mosciano, Consulting Flavor Chemist
- Robert Pan, Senior Flavorist, Consulting Flavor Chemist
- Deborah Barber, Senior Scientist, Kraft Foods
- Carl Holmgren, Consulting Flavor Chemist
- Tom Gibson, Creative Director, Silesia Flavors

2-Methyl-3-tetrahydrofuranthiol (mixture of *cis* and *trans*)

Source: SAFC

FEMA# 3787, CAS# 57124-87-5

Odor: @ 0.1%. Meaty, savory, alliaceous, sulfurous and slightly bloody with a hint of coffee.

Taste: @ 0.05 ppm. Meaty, savory, roasted, sulfurous, slightly bloody and brothy.

Taste: @ 0.1 ppm. Meaty, savory, bloody, sulfurous and brothy.

Possible applications: At very low levels, this material will lend roast meatlike savory notes to beef, pork, chicken, turkey, duck, au jus, gravy and soup flavors. It should also be considered for use in fat replacement flavors to add a touch of meat character.

►SAFC; www.sigmaaldrich.com/safc

Carvacrol, natural 99% FG

Source: SAFC

FEMA# 2245, CAS# 499-75-2, natural

Natural occurrence: Basil, dill, thyme, oregano, pepper, mint, tea and licorice.

Odor: @ 100%. Herbal, spicy, green, dry, woody, and slightly cooling and terpeney.

Taste: @ 1 ppm. Herbal, green, woody, bitter, spicy and oregano/thyme-like.

Taste: @ 3 ppm. Herbal, green, dry, bitter, spicy and oregano/thyme-like.

Possible applications: The powerful herbal notes of this compound will reinforce character profiles in oregano, thyme, marjoram, cumin and tarragon flavors, as well as in Italian and Mexican seasoning blends. Other flavor areas where it

can add an interesting twist, albeit in concentrations below 1 ppm, are mint, monkish cordials, black licorice, anise and “black” cough drop types.

►SAFC; www.sigmaaldrich.com/safc

Levulinic acid, natural 99% FG

Source: SAFC

FEMA# 2627, CAS# 123-76-2, natural

Odor: @ 100%. Faint, baked breadlike and acidic, with a hint of caramel.

Taste: @ 30 ppm. Acidic and slightly flourlike

Taste: @ 50 ppm. Acidic and slightly breadlike.

Possible applications: This ingredient can certainly support many flavors by adding a warm tart note, especially to sourdough bread, rum, molasses, brown sugar and dried fruits like raisin, tamarind, prune and apricot.

►SAFC; www.sigmaaldrich.com/safc

Rum CO₂ extract

Source: Charabot

GRAS, natural

Odor: @ 100%. Rum, sweet, whiskeylike, estery, brown and dried fruitlike with a vanilla nuance.

Taste: @ 2 ppm. Sweet, brown sugarlike, fruity, rum, woody and slightly phenolic.

Taste: @ 5 ppm. Rum, brown, brown sugar/molasseslike, woody, fruity, vanilla and whiskeylike, with a touch of smoke.

Possible applications: The rich, complex profile of this extraordinary extract will enhance all rum flavors, as well as most brown liquors, especially whiskey and sherry. Brown sugar and vanilla flavors will benefit as well, as will dried fruits like raisin and fig. Flavor complexes for bananas Foster and fruitcake are also good applications for this material.

►Charabot; www.charabot.com

Savory oleoresin

Source: Lionel Hitchen (Essential Oils) Ltd.

GRAS, CAS# 977029-75-6, natural, *Satureja hortensis*

Odor: @ 100%. Herbal, green oreganolike, spicy and terpeney, with an underlying savory note.

Taste: @ 2 ppm. Herbal, green, slightly bitter and oreganolike.

Taste: @ 5 ppm. Herbal, green, cumin and oreganolike, with a hint of brothiness.

Possible applications: What came first, the herb or the adjective? According to the Online Etymology Dictionary (www.etymonline.com), the descriptor came about 200 years before the herb was (possibly) named after it. At any rate, this material will reinforce herbal and spice flavors, including its namesake, as well as oregano, cumin, thyme and blends thereof. Other flavors where it can be used are in monkish cordials, olive, salad dressing and soup mix blends.

► **Lionel Hitchen (Essential Oils) Ltd.;** www.ltheo.co.uk

Cinnamon oleoresin

Source: Lionel Hitchen (Essential Oils) Ltd.

GRAS, CAS# 8015-91-6, natural, *Cinnamomum verum*

Odor: @ 100%. Sweet, spicy, slightly woody and “baked” cinnamonlike.

Taste: @ 2 ppm. Sweet, spicy, cinnamon, warm and brown, with a slight bite.

Taste: @ 5 ppm. Cinnamon, sweet, spicy, sweet, woody, warm and cassialike, with a slight bite.

Possible applications: This particular cinnamon preparation lacks the aggressive, cinnamic aldehyde bite of the oils. Its mellow, brown, spicy notes make it a very good candidate for spice flavors intended for baking or to simulate a baked spice in a non-baked application.

► **Lionel Hitchen (Essential Oils) Ltd.;** www.ltheo.co.uk

Oil kaffir lim

Source: Citrus and Allied Essences Ltd.

GRAS, CAS# 91771-50-5, natural, *Citrus hystrix*

Odor: @ 100%. Sweet, peely, waxy, terpeney, aldehydic, citrus and floral

Taste: @ 2 ppm. Waxy, citruslike, aldehydic, floral, terpeney and oily.

Taste: @ 5 ppm. Citrus, floral, peely, terpeney, slightly limelike and soapy.

Possible applications: Although much more floral than a West Indian lime, this essential oil will add variety to all citrus oils and blends. Fruit flavors that have floral notes, like berry, lychee and rambutan, are good applications for this material, as well as melons, especially honeydew.

► **Citrus and Allied Essences Ltd.;** www.citrusandallied.com

Coffee CO₂ extract

Source: Charabot

GRAS, CAS# 84650-00-0, natural, *Coffea arabica*

Odor: @ 100%. Roasted, ashy, burnt, tobacco-like, brown, coffee and cocoalike.

Taste: @ 5 ppm. Brown, cocoalike, coffee, ashy and caramellic.

Taste: @ 10 ppm. Coffee, brown, cocoalike, woody, smoky, tobacco-like and dried fruitlike.

Possible applications: The rich, deep profile of this lovely extract can act as a brown flavor modifier. It will also enrich and improve many brown flavors, namely dark chocolate, cocoa, mocha, caramel, toffee, rum, dried fruit and hazelnut.

► **Charabot;** www.charabot.com

cis-3-Octen-1-ol

Source: Bedoukian

FEMA# 3467, CAS# 20125-84-2

Natural occurrence: Muskmelon, banana, passion fruit, peas, strawberry and apple.

Odor: @ 1%. Waxy, green, fruity, and slightly vegetablelike with an earthy undertone.

Taste: @ 2 ppm. Fresh, green, fruity and melonlike.

Taste: @ 5 ppm. Fresh, slightly unripe, fruity, green and melonlike.

Possible applications: Unlike its cousin, 1-octen-3-ol, this material has nowhere near the earthy, mushroom notes. Its green, fruity notes will reinforce the fresh complex of many fruits like watermelon, honeydew, muskmelon, kiwi, apple, pear, Asian pear, guava, raspberry, strawberry and some vegetables, like cucumber and green pepper.

► **Bedoukian;** www.bedoukian.com

Oil lemon Meyer (cold-pressed)

Source: Citrus and Allied Essences Ltd.

FEMA# 2625, CAS# 8008-56-8, natural

Odor: @ 100%. Sweet, terpeney, aldehydic, lemon/limelike and citrus.

Taste: @ 10 ppm. Oily, fresh, limelike and citrus.

Taste: @ 20 ppm. Lemon, oily, sweet and citrus, with a juice note.

Possible applications: This essential oil will impart juicy character notes to lemon and lime flavors and add interest to almost all other citrus flavors and their blends, including cola and butter-lemon-orange-vanilla (BLOV).

► **Citrus and Allied Essences Ltd.;** www.citrusandallied.com

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