



Organoleptic Characteristics of Flavor Materials

Judith Michalski, Senior Flavorist, Abelei Flavors; jmichalski@abelei.com

Flavorcon Panelists

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

Ginger oil fresh, LMR FLG

Source: Laboratoire Monique Remy/IFF

FEMA# 2522, CAS# 8007-08-7, natural, *Zingiber officinale*

Odor: @ 100%. Fresh ginger, sweet, citruslike, woody and slightly soapy.

Taste: @ 1 ppm. Sweet, spicy, fresh ginger, woody and citruslike.

Taste: @ 2 ppm. Fresh ginger and citruslike with a spicy bite.

Possible applications: This material will enliven ginger ale flavors and add spicy depth to cola and root beer. Its use in sweet and savory spice blends and citrus flavors will add character notes and interest, respectively.

►Laboratoire Monique Remy/IFF; www.iff.com

3,7-Dimethyl-6-octenoic acid, natural (synonym: citronellic acid)

Source: Sigma Aldrich

FEMA# 3142, CAS# 502-47-6, natural

Natural occurrence: Bitter orange, camphor, citronella and lemongrass.

Odor: @ 100%. Waxy, slightly citruslike, fatty, dirty and animalic.

Taste: @ 5 ppm. Fatty, waxy and slightly floral.

Taste: @ 10 ppm. Waxy, citruslike, fatty and bitter.

Possible applications: This material can be used to add waxy, rindy notes to citrus flavors, as well as body notes to fat replacer flavors like tallow and lard. It may also be considered for herbal flavors like cilantro and parsley.

►SAFC; www.sigmaaldrich.com/safc

cis-1-(1-Ethoxyethoxy)-3-hexene, mixture of isomers, natural (synonym: leaf acetal)

Source: Sigma Aldrich

FEMA# 3775, CAS# 28069-74-1, natural

Natural occurrence: Guava, plum and strawberry.

Odor: @ 100%. Green, musty, pungent, vegetablelike and slightly fatty, with a latent fruity note.

Taste: @ 1 ppm. Green, oily, vegetablelike and astringent.

Taste: @ 2 ppm. Green, musty, vegetablelike, pungent and astringent.

Possible applications: This component will be useful in many vegetable flavors like green pepper, jicama, bean sprouts, green beans, radish, wasabi and asparagus, where a musty, green note is appreciated as part of the profile. On the fruit side, it will lend fresh, raw, almost unripe notes to guava, strawberry, apple and pear.

►SAFC; www.sigmaaldrich.com/safc

Benzyl formate, natural

Source: SAFC

FEMA# 2145, CAS# 104-57-4, natural

Natural occurrence: Cranberry, *Osmanthus*, passion fruit, tobacco and tea.

Odor: @ 1%. Sweet, solventlike, chemical and fruity.

Taste: @ 2 ppm. Sweet, solventlike and fruity.

Taste: @ 4 ppm. Sweet, solventlike, chemical, fruity and cherrylike and berrylike.

Possible applications: Overdosing should be top-of-mind when using benzyl formate, lest it lend chemical off-notes. At low concentrations, it will enhance sweet notes in fruits like pear and apple, as well as berry flavors like raspberry, cherry, grape, cranberry, blackberry and blueberry. Black licorice and Swedish fish-type flavors are also good applications for its use.

►SAFC; www.sigmaaldrich.com/safc

Ethyl trans-2-butenate, natural (synonym: ethyl crotonate)

Source: SAFC

FEMA# 3486, CAS# 623-70-1, natural

Natural occurrence: Apple, grape, passion fruit, plum, quince and strawberry.

Odor: @ 100%. Acrid, pungent, slightly solventlike, fruity and rummy, with a whiff of wasabi.

Taste: @ 1 ppm. Green, slightly acrid and unripe fruitlike.

Taste: @ 2 ppm. Green, unripe fruitlike and astringent.

Possible applications: The green, unripe fruity notes of this material will complement the fresh complex in fruit flavors like apple, guava, pineapple, kiwi and strawberry. Other areas where it will add lift are rum, wine and cruciferous vegetable flavors like radish, watercress and wasabi.

►SAFC; www.sigmaaldrich.com/safc

2-Isopropyl-3-methoxypyrazine

Source: SAFC

FEMA# 3358, CAS# 25773-40-4

Natural occurrence: Asparagus, parsnips, tomato and spinach.

Odor: @ 1%. Slightly nutty, earthy, musty, green and vegetablelike.

Taste: @ 0.01 ppm. Green, vegetablelike, earthy, musty, nutty and slightly woody.

Taste: @ 0.02 ppm. Green, vegetablelike, earthy, nutty and slightly woody.

Possible applications: This very potent material will enhance earthy green notes in many vegetable flavors at trace levels, especially green and hot peppers, green beans, lettuce and other leafy greens, cucumber, celery, tomato, potato and peas. It may also be regarded for use in raw nut flavors to add earthiness.

►SAFC; www.sigmaaldrich.com/safc

Sichuan pepper CO₂ extract

Source: Charabot

GRAS, CAS# 97927-06-5, natural, *Zanthoxylum bungeanum*

Odor: @ 100%. Sweet, green, spicy, peppery, terpeny, citruslike and slightly cooling.

Taste: @ 1 ppm. Green, spicy and peppery.

Taste: @ 2 ppm. Fresh, green, peppery, spicy and citruslike.

Possible applications: Despite its name, this spice is not a member of the black or chili pepper families. It is widely used in Chinese cuisine and is an ingredient in the famous five-spice powder. This particular extract, with its interesting profile, will add a nice twist to sweet and savory spice blends, ginger ale, cola and root beer. It will also lend depth to citrus flavors, particularly lemon, lime and grapefruit. It will also enhance tropical fruits like mango and passion fruit.

►Charabot; www.charabot.com

Styrax resinoid LMR FLG

Source: Laboratoire Monique Remy/IFF

GRAS, CAS# 8046-19-3, natural, *Liquidambar styraciflua*

Odor: @ 100%. Sweet, vanillalike, floral, balsamic and fruity.

Taste: @ 2 ppm. Balsamic, sweet, fruity and astringent.

Taste: @ 4 ppm. Balsamic, sweet, slightly floral, fruity and berrylike.

Possible applications: The sweet, balsamic notes of this material will go very nicely into vanilla and honey flavors. Other flavors that will benefit from its use are raspberry, strawberry, cherry, cream soda and dried fruit flavors like raisin, prune, apricot and fig.

►Laboratoire Monique Remy/IFF; www.iff.com

Myrrh resinoid MD FLG

Source: Laboratoire Monique Remy/IFF

FEMA# 2765, CAS# 9000-45-7, *Commiphora* species, natural

Odor: @ 0.01%. Woody, sweet, brown, balsamic, smoky, honeylike and dried fruitlike.

Taste: @ 1 ppm. Balsamic, woody and oily.

Taste: @ 2 ppm. Balsamic, woody, sweet, licoricelike floral, slightly tropical and oily.

Possible applications: The balsamic notes of this ancient flavor material will complement sweet brown flavors like honey, brown sugar, molasses, licorice, anise and maple. It may also be used in cordial flavors to add sweetness, body and a touch of mystery.

►Laboratoire Monique Remy/IFF; www.iff.com

Neroli oil Tunisia LMR

Source: Laboratoire Monique Remy/IFF

FEMA# 2771, CAS# 8016-38-4, natural, *Citrus aurantium* L.

Odor: @ 100%. Floral, green, perfumey, citruslike and fruity, with a subtle barnyard note.

Taste: @ 1 ppm. Fresh, floral, fruity, green and citruslike.

Taste: @ 3 ppm. Floral, citruslike, fruity, sweet and tart.

Possible applications: The beautiful floral, citrus notes of this essential oil will certainly enhance most citrus flavors, especially orange, lime and bergamot. Yellow fruit flavors like peach, mango and apricot will be brightened by its addition, as well as fruit cocktail, bubble gum, blueberry, raspberry, white and purple grapes, lychee and rambutan.

►Laboratoire Monique Remy/IFF; www.iff.com

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