



Organoleptic Characteristics of Flavor Materials

Judith Michalski, Senior Flavorist, Bell Flavors & Fragrances; jmichalski@bellff.com

Organoleptic Evaluation Panel

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

Methyl phenethyl ether (synonym: chrysanthemum oxide)

Source: Penta Manufacturing

FEMA# 3198, CAS# 3558-60-9

Natural occurrence: Tagetes species, lychee, Scotch spearmint oil.

Odor: @ 100%. Sweet, floral, honeylike, fruity and berrylike, with an earthy, mushroomlike undertone.

Taste: @ 1 ppm. Sweet, honeylike and fruity.

Taste: @ 2 ppm. Sweet, fruity, honeylike and waxy.

Possible applications: The sweet, floral, honey-like notes of this material will enhance floral flavors like rose and hibiscus and honey. Other flavors where it will shine are berry profiles like strawberry, raspberry and cherry, as well as apricot and peach. It will add ripe, full-bodied notes to tropicals like mango, lychee and rambutan, while the earthy part of its profile may even add an interesting twist to mushroom flavors.

►Penta Manufacturing; www.pentamfg.com

Pyruvic acid natural, ABT# 1070

Source: Advanced Biotech

FEMA# 2970, CAS# 127-17-3, Natural

Natural occurrence: Asparagus, beer, tobacco, bread, wine, cheese, cocoa, onion.

Odor: @ 100%. Pungent, acidic, vinegarlike and cheesy.

Taste: @ 40 ppm. Heavy and acidic.

Taste: @ 80 ppm. Acidic, slightly waxy, bready and tooth-etching.

Possible applications: The heavy, acidic profile of pyruvic acid will help round out the acidic character of many flavors, especially bread, rye bread, sour dough and cheese, as well as alcoholic flavors like beer and wine, and acidulant systems for cultured dairy products like sour cream.

►Advanced Biotech; www.adv-bio.com

Grapefruit flower oil

Source: Berjé

GRAS, 21 CFR 182.20, CAS# 8016-20-4 and 90045-43-5, Natural (*Citrus paradisi*)

Odor: @ 100%. Floral, peely, green, aldehydic, wood and nerolilike, with a citrus undertone.

Taste: @ 5 ppm. Floral, citruslike and peely.

Taste: @ 10 ppm. Peely, citruslike, green, floral and nerolilike.

Possible applications: With its floral, nerolilike notes and its citrus heart, this material will add lovely top notes to all citrus flavors, especially lime, orange and bergamot. Fruit flavors like grape, blackberry, raspberry, blueberry and floral tropicals, including lychee and rambutan, are all excellent applications, too, as well as flavors for cordials and gin.

►Berjé; www.berjeinc.com

3-2-Nonenone natural, 10% in ethanol

Source: Alfrebro

FEMA# 3955, CAS# 14309-57-0

Natural occurrence: Crayfish, peach, apricot, mushroom, asparagus, beef, chicken.

Odor: @ 10%. Waxy, earthy, fatty, fruity, cheesy and lactonelike.

Taste: @ 1 ppm. Waxy, oily, earthy, rich and dairylike.

Taste: @ 2 ppm. Waxy, creamy, oily, earthy, mushroomlike and cheesy.

Possible applications: This is a very nice product for the flavorist's dairy flavor arsenal. It will enrich almost any milky profile by complementing lactone complexes in melted butter, cream, sour cream, mold-ripened cheeses like blue, brie and St. André, and aged cheese like cheddar. Other flavors which will benefit are mushroom and the soup thereof, as well as fruit flavors, including peach, apricot, mango and strawberry.

►Alfrebro; sales@alfrebro.com

trans-2-Nonenal natural, 10% in ethyl acetate

Source: Alfrebro

FEMA# 3213, CAS# 18829-56-6, Natural

Natural occurrence: Artichoke, asparagus, beer, bread, carrot, cassie, cucumber, lychee, peanut, rice, tomato.

Odor: @ 10%. Green, fatty, oxidized, cucumber, vegetable, and chicken fatlike.

Taste: @ 0.2 ppm. Fatty, green, cucumberlike, oily and vegetablelike.

Taste: @ 0.5 ppm. Fatty, green, oily, cucumber, rancid and slightly cilantrolike.

Possible applications: The green, fatty profile of this compound will reinforce character notes in cucumber, watermelon cantaloupe and other melon flavors. At very low levels it can be

used to enhance the green complex in vegetable and herbal flavors, especially cilantro and parsley, and fruit flavors like guava and kiwi. Other considerations for this material are in savory-type flavors like fat replacers, chicken, lamb and dairy flavors, especially non-bovine milk and cheese flavors like Manchego, albeit at ultra-low concentrations.

► **Alfrebro**; sales@alfrebro.com

trans-2-Nonenal natural, 10% in ethanol

Source: Alfrebro

FEMA# 3379, CAS# 31502-14-4, Natural

Natural occurrence: Asparagus, cucumber, melon, passion fruit, nectarine, pumpkin, chicken fat, sudachi and prickly pear.

Odor: @ 10%. Fatty, waxy, green, and vegetablelike, with an old cucumber nuance.

Taste: @ 0.1 ppm. Green, fatty, cucumber/melonlike and waxy.

Taste: @ 0.2 ppm. Green, fatty, cucumber and vegetablelike, with a hint of cilantro.

Possible applications: Since this ingredient is another unsaturated C-9 material, it's not surprising that its main profile is intense, green and fatty. Again, it is a very good component for use in vegetable flavors like cucumber, and will add freshness to fruits like melons. Its fatty nature will also be appreciated in fat replacement flavors, chicken broth and lamb flavors.

► **Alfrebro**; sales@alfrebro.com

trans-2-Nonenyl acetate natural, 10% in ethanol

Source: Alfrebro

FEMA# 4552, CAS# 30418-89-4, Natural

Natural occurrence: Strawberry.

Odor: @ 10%. Waxy, green, earthy, fruity and cucumber/melonlike.

Taste: @ 0.5 ppm. Green, fatty, waxy, earthy and melonlike.

Taste: @ 1 ppm. Earthy, green, waxy, aged cheeselike, fruity and melonlike.

Possible applications: This material will not only add believability to cucumber and melon flavors, but its earthy notes will enhance flavors like bean and other sprouts, lettuce, mushroom, parsley, cilantro and mold-ripened cheese flavors as well.

► **Alfrebro**; sales@alfrebro.com

Pink pepper oil s.t. (*Schinus molle*)

Source: Berjé

FEMA# 3018, CAS# 68917-52-2, Natural

Odor: @ 100%. Terpeney, citruslike, peppery and woody.

Taste: @ 5 ppm. Woody, peppery, drying and biting.

Taste: @ 10 ppm. Peppery, terpeney, woody and green.

Possible applications: Although not a relative of *Piper nigrum* L., this product will add peppery interest to savory and sweet spice blends. Tropical fruit flavors like mango, where terpenes play a key role, are also good applications, as well as the citrus, parsley and green pepper.

► **Berjé**; www.berjeinc.com

Cardamom oil (*Elettaria cardamomum* L.)

Source: Berjé

FEMA# 2241, CAS# 8000-66-6, Natural

Odor: @ 0.2 ppm. Eucalyptuslike, cooling, spicy, sweet, terpeney and slightly floral, with a hint of citrus.

Taste: @ 2 ppm. Sweet, cooling, slightly floral, slightly citruslike and woody.

Taste: @ 4 ppm. Sweet, cooling, green, floral, woody, terpeney and spicy.

Possible applications: The complex profile of this spice oil will add interesting depth to many categories of flavors, namely spice flavors and blends of the Middle Eastern, Indian and Scandinavian sorts, as well as mints, citrus, gin and flavors for cordials. Another area where cardamom is very useful is in flavors for oral care, where it has been traditionally used as a breath cleaner.

► **Berjé**; www.berjeinc.com

Cascarilla bark oil (*Croton eluteria*)

Source: Berjé

FEMA# 2255, CAS# 8007-06-5, Natural

Odor: @ 100%. Woody, terpeney, spicy, balsamic and slightly phenolic.

Taste: @ 1 ppm. Woody, peppery and slightly phenolic.

Taste: @ 2 ppm. Woody, cooling, terpeney, peppery, slightly soapy and astringent.

Possible applications: The manifold profile of cascarilla bark oil will add an interesting twist to sweet spice flavors like cinnamon, clove, nutmeg, ginger, cardamom, anise, pepper and blends thereof. Other flavors which will benefit from it at very low levels are Sen-Sen types, vanilla, cola, root beer and cask-type flavors for wood-aged liquor.

► **Berjé**; www.berjeinc.com

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