



# Organoleptic Characteristics of Flavor Materials

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## Organoleptic Evaluation Panel

- Judith Michalski
- 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
- Tom Gibson, Creative Director, Silesia Flavors

### ***trans*-2-Undecenol, natural**

Source: Alfebros/Wild Flavors

FEMA# 4068, CAS# 37617-03-1, natural

Natural occurrence: Coriander.

Odor: @ 1%. Waxy, green, fatty, herbal, cilantrolike and slightly citrus peel-like.

Taste: @ 1 ppm. Green, fatty, waxy, cilantrolike, herbal and slightly soapy.

Taste: @ 2 ppm. Green, fatty, waxy, soapy, cilantrolike, herbal and slightly oxidized fatlike.

Possible applications: The green, herbal notes of this material make it a good candidate for use in herbal flavors, especially rue, cilantro and parsley. The waxy, fatty notes will enhance meat flavors like pork, chicken, beef, lamb and mutton and the fats thereof. At very low levels, it can also be considered for use in melon and cucumber flavors.

► **Alfebros**; [sales@alfebros.com](mailto:sales@alfebros.com); [www.wildflavors.com](http://www.wildflavors.com)

### **Propyl isovalerate, natural**

Source: SAFC

FEMA# 2960, CAS# 557-00-6, natural

Natural occurrence: Apple, banana, gruyere cheese and jackfruit.

Odor: @ 1%. Fruity, estery, ethereal and overripe with a slight cheese note.

Taste: @ 5 ppm. Sweet, fruity, fermented and slightly cheesy.

Taste: @ 10 ppm. Fruity, sweet, fermented, pulpy and slightly cheesy.

Possible applications: The non-specific fruitiness of this chemical makes it a good fit for many types of fruit flavors, including apple, banana, blueberry, pear, peach, grape, strawberry, pineapple and tropicals like jackfruit and durian. These same notes will also add to the fruity complex of aged cheeses like Parmesan, Asiago and Romano.

► **SAFC**; [www.safcglobal.com](http://www.safcglobal.com)

### **$\gamma$ -Methyl decalactone 96%**

Source: SAFC

FEMA# 3786, CAS# 7011-83-8

Not yet found in nature.

Odor: @ 10%. Creamy, waxy, melted butterlike, rich, slightly nut oil-like, slightly dairylike and coconutlike with an animal fat nuance.

Taste: @ 5 ppm. Creamy, oily, dairylike, waxy and lightly sweet.

Taste: @ 10 ppm. Waxy, oily, creamy mouthfeel and dairylike.

Possible applications: The profile of this product will certainly be a boon to most dairy flavors in which cream plays a major role, namely milk, butter, cream, ice cream, crême brûlée, cream cheese, cheese, etc. It can enlarge the fatty complex and add richness in coconut and nuts like pecan, macadamia, cashew and almond, as well as in meat fat flavors such as tallow, lard and schmaltz.

► **SAFC**; [www.safcglobal.com](http://www.safcglobal.com)

### **Vanillyl butyl ether 97%, natural**

Source: SAFC

FEMA# 3796, CAS# 82654-98-6, natural

Not yet found in nature.

Odor: @ 100%. Sweet, vanillalike, creamy, slightly phenolic, baked and slightly coumarinic.

Taste: @ 10 ppm. Delayed tongue-bite and heat with a hot pepper burn.

Taste: @ 15 ppm. Hot pepper burn.

Possible applications: By its name and aroma, one would assume that this material will taste of vanilla. And one would be wrong. Its trigeminal, burning, hot pepper nature will be very much at home in flavors of that particular ilk. Its use can be as broad as one's imagination. The material can be used in spice flavors like pepper, cinnamon and ginger, as well as blends of same for baked applications, including cookies. Flavors for alcoholic and nonalcoholic beverages like herbals, berries, vanilla, cola, ginger ale, root beer, hot chocolate, chai, ice tea and mints are also very interesting destinations for this product. The sky's the limit.

► **SAFC**; [www.safcglobal.com](http://www.safcglobal.com)

### **D-Dihydrocarvone, mixture of isomers, natural (synonym: dihydrocarvone)**

Source: SAFC

FEMA# 3565, CAS# 7764-50-3, natural

Natural occurrence: Caraway seed, celery seed, dill, patchouli, spearmint, buchu and pepper.

*Odor:* @ 1%. Cooling, minty, herbal, carawaylike, oily and woody.  
*Taste:* @ 2 ppm. Metallic, herbal, minty and slightly cooling with a low spice note.

*Taste:* @ 4 ppm. Herbal, minty, cooling, carawaylike and slightly spicy.

*Possible applications:* The dual, herbal-minty quality of this compound will add an interesting twist to mint flavors as well as to celery, caraway dill and herbal flavors, especially intended for cough drops and oral care products. At very low levels, it will add depth to tropical flavors like lychee, guava, passion fruit and rambutan.

►SAFC; [www.safcglobal.com](http://www.safcglobal.com)

#### **4-Acetoxy-2,5-dimethyl-3(2H)-furanone, natural (synonyms: caramel acetate, furaneol acetate)**

*Source:* SAFC

FEMA# 3797, CAS# 4166-20-5, natural.

*Natural occurrence:* Yellow passion fruit, strawberry and microwave-blanched peanuts.

*Odor:* @ 100%. Sweet, brown, caramellic, burnt sugarlike and slightly waxy with a baked note.

*Taste:* @ 20 ppm. Sugar sweet, caramellic, brown, baked note and slightly waxy.

*Taste:* @ 40 ppm. Sweet, brown, burnt sugar slightly waxy and slightly grainlike.

*Possible applications:* Most sweet, brown flavors will benefit from the addition of this product, including caramel, butter-scotch, molasses, brown sugar, chocolate mocha, coffee and toffee. It will add to the sweet caramellic notes of browned butter, custard, dulce de leche, strawberry and other fruit jams, BBQ, fried eggs and roasted meat and nuts and soy sauce flavors, to name a few.

►SAFC; [www.safcglobal.com](http://www.safcglobal.com)

#### **Methional 98%, natural (synonym: 3-(methylthio) propionaldehyde)**

*Source:* SAFC

FEMA# 2747, CAS# 3268-49-3, natural.

*Natural occurrence:* Asparagus, baked potato, beer, cheddar cheese, cooked chicken, tomato and pumpkin.

*Odor:* @ 1%. Metallic, fried potatoes, tomato, cooked vegetable-like, meaty and savory.

*Taste:* @ 0.5 ppm. Fried potatoes, tomato, metallic, cooked, cheesy, dairylike and earthy.

*Taste:* @ 1 ppm. Fried potatoes, tomato, meaty, cheesy, savory and sweet.

*Possible applications:* The toothsome nature of this compound will complement many savory flavors, including cooked vegetables like potato (boiled, french-fried, baked), mushroom, tomato, sauerkraut, asparagus, and onion; chicken, pork, bacon, fish, beef, stew, broth and gravy; soy sauce; and some aged cheeses, especially cheddar. At very low levels, it will add an appetizing, cooked quality to fruits like apple, pineapple and pear.

►SAFC; [www.safcglobal.com](http://www.safcglobal.com)

#### **Coffee oil, roasted, natural**

*Source:* SAFC

GRAS, CAS# 84600-00-0, natural, *Coffea arabica* L. (Rubiaceae)

*Odor:* @ 100%. Ashy, roasted, brown, burnt, nutty and slightly cocoalike.

*Taste:* @ 5 ppm. Coffee, ashy, roasted and brown.

*Taste:* @ 10 ppm. Coffee, ashy, roasted and burnt.

*Possible applications:* This coffee preparation will add roasted character to all coffee flavors and blends. It will add a dark note to chocolate and cocoa flavors. It can also be used in flavors requiring roasted or burnt notes like bacon, nut and toasted marshmallow.

►SAFC; [www.safcglobal.com](http://www.safcglobal.com)

#### **N-[(Ethoxycarbonyl)methyl]-p-menthane-3-carboxamide (Winsense<sup>1</sup> WS-5)**

*Source:* Renessenz

FEMA# 4309, CAS# 68489-14-5

*Not yet found in nature.*

*Odor:* @ 1%. No odor.

*Taste:* @ 5 ppm. Delayed cooling sensation, slightly bitter, clean, cold, fresh and slightly crisp.

*Taste:* @ 10 ppm. Coffee, ashy, roasted and burnt.

*Possible applications:* The non-mentholic cooling natural of this product will add a very interesting trigeminal dimension to potentially any flavor in many applications. Obvious uses are in all beverages, confections, chewing gum, oral care products, cough and cold syrups, and other pharmaceutical preparations. At levels well below 5 ppm, this material may lend a subtle fresh character to fruit, vegetable and herbal flavors.

►Renessenz; [www.renessenz.com](http://www.renessenz.com)

#### **(1R,2S,5R)-N-(4-Methoxyphenyl)-5-methyl-2-(1-methylethylethyl)cyclohexanecarboxamide (Winsense<sup>1</sup> WS-12)**

*Source:* Renessenz

FEMA# 4681, CAS# 68489-09-8

*Not yet found in nature.*

*Odor:* @ 1%. No odor.

*Taste:* @ 5 ppm. Delayed cooling sensation and very slightly minty nuance with a lingering tingling sensation.

*Possible applications:* As with the previous material, this product will also lend an interesting, cold, non-mentholic note to any flavor, leaving a long-lasting, cooling sensation in the mouth and throat.

►Renessenz; [www.renessenz.com](http://www.renessenz.com)

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<sup>1</sup>Winsense is a trademark of Renessenz.

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