



Organoleptic Characteristics of Flavor Materials

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- Deborah Barber, Senior Scientist, Kraft Foods

Lime heart fractions (*Citrus aurantiifolia*)

Source: Capua (distributed by Global Essence)

FEMA# 2631, CAS# 90063-52-8, natural

Odor: @ 100%. Juicy, distilled limelike, zesty and candylake.

Taste: @ 10 ppm. Sweet, citrus, oily and lemon-limelike.

Taste: @ 20 ppm. Limelike, sweet, oily, citrus, candylake and lemony.

Possible applications: This derivative from lime oil will certainly add “heart” to all lime flavors, especially those intended for confectionary, beverage and dessert applications. Other flavors that will benefit from its true fruit profile are almost all other citrus flavors and their combinations, as well as cola, punch, cherry, mint and herbal.

► **Global Essence;** www.globalessence.com

β-Sinensal

Source: Capua (distributed by Global Essence)

FEMA# 3141, CAS# 60066-88-8, natural

Natural occurrence: Orange, grapefruit, mandarin.

Odor: @ 100% Sweet, waxy, oxidized, oily, citrus, orange/mandarinlike and candylake.

Taste: @ 2 ppm. Waxy, oily, citrus, orange and slightly floral.

Taste: @ 5 ppm. Waxy, oily, slightly floral, orangelike, and albedolike with an oxidized note.

Possible applications: The heavy, waxy notes of this material will add depth to orange, mandarin, tangerine, grapefruit and other citrus flavors. Other flavor types in which it may add interest are white grape, fruit punches and tropicals like lychee, mangosteen and rambutan.

► **Global Essence;** www.globalessence.com

Apple essence, core key (synonym: *Malus domestica*)

Source: Cvista

GRAS, natural

Odor: @ 100%. Apple, fresh, fruity, ciderlike and alcoholic.

Taste: @ 0.015%. Fresh, fruity and apple pulplike.

Taste: @ 0.03% ppm. Fresh, fruity, apple pulplike and green with good body.

Possible applications: This very characteristic material has nicely balanced notes, which will reinforce the natural quality of all apple flavors. Pear, quince, kiwi, green grape, wine and guava are also very good applications for this product.

► **Cvista;** www.cvista.com

Valencene ex blood orange

Source: Capua (distributed by Global Essence)

FEMA# 3443, CAS# 4630-07-3, natural

Natural occurrence: Cocoa, grapefruit, mango, orange, kumquat, mastic, labdanum, tagetes.

Odor: @ 100%. Sweet, orangelike, citrus, woody, waxy and slightly oxidized.

Taste: @ 1 ppm. Orangelike, citrus, oily and astringent.

Taste: @ 2 ppm. Orange/mandarinlike, citrus, woody, oily and astringent.

Possible applications: This is another material which will add depth to orange, mandarin, tangerine, grapefruit, lime and other citrus flavors as well as their blends. Tropicals like mangosteen, rambutan and lychee are also good applications for its use.

► **Global Essence;** www.globalessence.com

Apple essence, ester key (Synonym: *Malus domestica*)

Source: Cvista

CAS# 73296-99-8

Odor: @ 10%. Fresh, herbal, slightly floral, cooling, sweet and green.

Taste: @ 0.015%. Apple, fruity, green and fresh.

Taste: @ 0.03%. Apple, ciderlike and winey.

Possible applications: This apple fraction will positively enhance the fresh, fruity notes of apple flavors as well as cider, vinegar, wine, pear and quince. It can also be useful in guava, green grape and kiwi flavors.

► **Cvista;** www.cvista.com

Apple essence, green key (Synonym: *Malus domestica*)

Source: Cvista

GRAS, natural

Odor: @ 100%. Slightly acidic, green, fruity, apple and waxy with a low floral note.

Taste: @ 0.015%. Fresh, green, fruity and apple.

Taste: @ 0.03%. Fresh, green, apple and waxy.

Possible applications: This is a very good product to anchor fresh notes in all apple flavors. The green notes will also help to establish sweet, crisp notes, especially in green apple types like Granny Smith, Ginger Gold, Golden Delicious and Pippin. Other flavor types in which this product will surely contribute are pear, Asian pear, quince, kiwi, guava, cider, vinegar, wine, whiskey and Calvados-type brandies.

►Cvista; www.cvista.com

Cocoa extract (Synonym: *Theobroma cacao* L.)

Source: Berjé

GRAS, CAS# 84649-99-0, natural

Odor: @ 100%. Sweet, dark cocoa, tobaccolike, roasted and creamy.

Taste: @ 0.005%. Cocoa, brown, dark and fudgy.

Taste: @ 0.01%. Cocoa, powdery, dry, dark and fudgy.

Possible applications: This powerful extract will deliver genuine cocoa character to all flavors in this category, namely cocoa, chocolate (dark, milk, bittersweet and all shades in between), fudge, mocha, etc. At lower levels, it also can be used as a mystery ingredient to give a dark depth to other flavors, especially browns, without screaming "chocolate."

►Berjé; www.berjeinc.com

Sulfurol replacer natural, type milk 954747

Source: Symrise

This product is a blend of proprietary natural FEMA compounds.

Odor: @ 1%. Sulfurous, meaty, eggy and brothy.

Taste: @ 2 ppm. Sulfurous, cooked milk, creamy and savory.

Taste: @ 5 ppm. Sulfurous, thiaminlike, cooked, creamy milky, savory and meaty.

Possible applications: At lower levels, this material will fit nicely into milk flavors of the scalded or cooked types, like condensed, clotted cream, dulce de leche and cajeta. In sweet brown flavors like toffee, praline and caramel, this product will lend a creamy depth. At higher dosages it should be considered for use in custard, flan, omelet, cream soup background notes and Alfredo flavors for its cooked, creamy, eggy notes.

►Symrise; www.symrise.com

Sulfurol replacer natural, type meat 954746

Source: Symrise

This product is a blend of proprietary natural FEMA compounds.

Odor: @ 1%. Meaty, brothy, sulfurous, roasted and oily.

Taste: @ 3 ppm. Meaty, savory, sulfurous.

Taste: @ 5 ppm. Meaty, roasted, savory and fatty.

Possible applications: The roasted, oily quality of this offering will help augment those same notes in savory flavors, namely fish, chicken, turkey, duck, bacon, pork, beef, stew, and animal fat replacers like tallow and lard.

►Symrise; www.symrise.com

Black currant absolute (Synonym: *Ribes nigrum* L.)

Source: Berjé

FEMA# 2346, CAS# 968606-81-5, natural

Odor: @ 1%. Green, slightly cooling, piney, fresh, tropical fruity and catty.

Taste: @ 1 ppm. Fresh, green, fruity and peach/berrylike.

Taste: @ 2 ppm. Fresh, green, fruity, tropical and berrylike.

Possible applications: This powerful absolute will add interest and depth to not only black currant flavors, but to other berry flavors like strawberry, raspberry and grape. It will reinforce fresh skin notes in peach, and tropical and piney, terpeney notes in mango. Other areas that will benefit from this material are mint, herbal and alcoholic flavors, especially kir, crème de cassis, cider and black and liqueurs of the monkish type.

►Berjé; www.berjeinc.com

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